University of Arkansas Catalog of Studies, 2004-2005

University of Arkansas, Fayetteville
Welcome to the University of Arkansas

This catalog of studies is a comprehensive reference for your years of study – a list of courses and degrees 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 page opposite this one. If your major is “undeclared,” 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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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 reserve 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 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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2004 Academic Calendar

SUMMER SESSION I 2004 (29 CLASS DAYS)
May 3-18 Open Registration
May 17 Classes begin
May 18 Last day to register, add a course, or change
from audit to credit
May 20 Last day to drop without a mark of “W”
or change from credit to audit
May 31 Memorial Day Holiday
June 14 Last day to drop a Session I class
June 25 Last day to officially withdraw from Session I
June 25 Last day of classes for Session I

SUMMER SESSION II 2004 (29 CLASS DAYS)
May 3-June 29 Open Registration
June 28 Classes begin
June 29 Last day to register, add a course, or change
from audit to credit
July 1 Last day to drop without a mark of “W”
or change from credit to audit
July 5 Independence Day Holiday
July 26 Last day to drop a Session II class
August 6 Last day to officially withdraw from Session II
August 6 Last day of classes for Session II

SUMMER SESSION III 2004 (58 CLASS DAYS)
May 3-20 Open Registration
May 17 Classes begin
May 20 Last day to register, add a course, or change
from audit to credit
May 31 Memorial Day Holiday
May 26 Last day to drop without a mark of “W”
or change from credit to audit
July 5 Independence Day Holiday
July 13 Last day to drop a Session III class
August 6 Last day to officially withdraw from Session III
August 6 Last day of classes for Session III

SUMMER SESSION IV 2004 (49 CLASS DAYS)
May 3-June 4 Open Registration
June 1 Classes begin
June 3 Last day to register, add a course, or change
from audit to credit
June 9 Last day to drop without a mark of “W”
or change from credit to audit
July 5 Independence Day Holiday
July 16 Last day to drop a Session IV class
August 6 Last day to officially withdraw from Session IV
August 6 Last day of classes for Session IV

SUMMER SESSION V 2004 (24 CLASS DAYS)
May 3-June 2 Open Registration
June 1 Classes begin
June 2 Last day to register, add a course, or change
from audit to credit
June 3 Last day to drop without a mark of “W”
or change from credit to audit
June 23 Last day to drop a Session V class
July 2 Last day to officially withdraw from Session V
July 2 Last day of classes for Session V

SUMMER SESSION VI 2004 (25 CLASS DAYS)
May 3-July 7 Open Registration
June 28 Classes begin
July 6 Last day to register, add a course, or change
from audit to credit
July 8 Last day to drop without a mark of “W”
or change from credit to audit
July 28 Last day to drop a Session VI class
August 6 Last day to officially withdraw from Session VI
August 6 Last day of classes for Session VI

FALL 2004 (73 CLASS DAYS; 43 MWF, 30TT)
April 13-Aug 11 Open Registration for currently enrolled students
August 18-27 Open Registration for all students
August 23 Classes begin
August 27 Last day to register, add a course, or change
from audit to credit
September 3 Last day to drop without a mark of “W”
or change from credit to audit
September 6 Labor Day Holiday
October 29 Last day to drop a fall semester class
November, Early Priority Registration for Spring 2005 — dates
not available at publication time
November 24 Fall Break (administrative offices will be open.)
November 25-26 Thanksgiving Holiday
December 7 Last day to officially withdraw from fall classes
December 7 Last day of classes for fall semester
December 8 Dead Day
December 9-15 Final Exams

The University’s official five-year academic calendar is located on
# 2005 Academic Calendar

## SPRING 2005 (73 CLASS DAYS; 43 MWF, 30 TT)
- **January 12-24**: Open Registration
- **January 17**: Martin Luther King Holiday
- **January 18**: Classes begin
- **January 24**: Last day to register, add a course, or change from audit to credit
- **January 31**: Last day to drop without a mark of “W” or change from credit to audit
- **March 14-18**: Spring Break Week
- **April 1**: Last day to drop a spring semester class
- **May 5**: Last day to officially withdraw from all classes
- **May 6**: Dead Day
- **May 7-13**: Final exams
- **May 14**: All-University Commencement
- **May 21**: Law School Commencement

## SUMMER SESSION I 2005 (29 CLASS DAYS)
- **May 23**: Classes begin
- **May 30**: Memorial Day Holiday
- **July 1**: Last day of classes for Session I

## SUMMER SESSION II 2005 (29 CLASS DAYS)
- **July 5**: Classes begin
- **August 12**: Last day of classes for Session II

## SUMMER SESSION III 2005 (58 CLASS DAYS)
- **May 23**: Classes begin
- **July 4**: Independence Day Holiday
- **August 12**: Last day of classes for Session III

## SUMMER SESSION IV 2005 (49 CLASS DAYS)
- **June 6**: Classes begin
- **July 4**: Independence Day Holiday
- **August 12**: Last day of classes for Session IV

## SUMMER SESSION V 2005 (24 CLASS DAYS)
- **June 6**: Classes begin
- **July 4**: Independence Day Holiday
- **July 8**: Last day of classes for Session V

## SUMMER SESSION VI 2005 (25 CLASS DAYS)
- **July 11**: Classes begin
- **August 12**: Last day of classes for Session VI

## FALL 2005 (73 CLASS DAYS; 43 MWF, 30 TT)
- **August 22**: Classes begin
- **September 5**: Labor Day Holiday
- **November 23**: Fall Break (administrative offices will be open.)
- **November 24-25**: Thanksgiving Holiday
- **December 6**: Last day of classes for fall semester
- **December 7**: Dead Day
- **December 8-14**: Final exams

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### UNIVERSITY OF ARKANSAS, FAYETTEVILLE

5
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  Robert V. Smith, B.S., M.S., Ph.D. (Interim)
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  Doyle Z. Williams, B.B.A., 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  Richard B. Atkinson, B.A., M.Div., J.D.
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, 133-year history, one that has produced more than 124,000 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
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 Arkansas scholars.

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 130 years, the University has developed into a mature institution with nine schools and colleges, nearly 850 faculty members, and 16,449 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 at the University can 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 over 200 academic programs and offers 83 bachelor’s degrees in 74 fields of study. In addition, students may 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 Extensive” institution. This classification places the U of A in the top 10 percent of universities nationwide and in a class by itself within the state of Arkansas. Faculty perform cutting-edge research for which they annually win prestigious grants and awards. Further, the University encourages students, undergraduate and graduate alike, 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. And 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.

Finally, the University provides extensive technical and professional services to varied groups and individuals throughout the state, helping to further Arkansas’ economic growth. The Fayetteville campus 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 serves as home to the 345 acres and 130 buildings that comprise the University of Arkansas campus. Located in the heart of the Ozark Mountains, the city boasts a lively cultural scene and easy access to outdoor recreation. In 2003, “Outdoor” magazine named Fayetteville 23rd out of the top 40 college towns in America. With a population of approximately 60,000, Fayetteville was heralded as one of Business Week’s 2002 “Dazzling Dozen” small cities in the U.S., based on its low unemployment rate and its ability to create jobs. In addition, the city’s location in Northwest Arkansas places it in the sixth-fastest-growing region in the nation, according to the U.S. Census. Northwest Arkansas was recently included among the top four “Best Places for Work” by CNN/Money and rated the strongest regional economy in the country by the Milken Institute. Fayetteville’s temperate climate ensures beautiful seasons year-long, and its central location puts it within easy driving distance of metropolitan areas, including Dallas, Kansas City, Little Rock, Memphis, Oklahoma City, St. Louis, and Tulsa.
Undergraduate Fields of Study

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
- Sociology
- Spanish

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

**School of Social Work**
- *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 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.

ACCREDITATIONS
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 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).

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 childhood
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 M.S. 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 M.S. 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 Systems Engineering (B.S.C.S.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 Bumpers College of Agricultural, Food and Life Sciences 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 including interactions with students in honors programs in other colleges. The results of the student’s original research or creative project is 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 GPA 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 Sam M. Walton College of Business honors program 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/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 College of Education and Health Professions honors program is designed to enable 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 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. For more information, see the College of Engineering chapter of this catalog.

Campus-Wide 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 3.50 grade-point average (GPA).

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 3.50 minimum GPA 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 3.85 minimum GPA.

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 2.00 minimum cumulative GPA, completion of 85 credit hours, and at least two full semesters attendance at the University of Arkansas, Fayetteville, prior to application.

Campus-Wide 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 2.75 minimum GPA 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 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, Waterman Hall 107, 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 Memorial Hall, Room 319, 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 and 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 – sophomore status, 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 Director, Cooperative Education, 411 Arkansas Union, telephone 479-575-2550.
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, HOTZ 307, 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 complete a short readmission form or may call the Office of Admissions to reactivate registration privileges by phone.

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 116 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
1 University of Arkansas
Fayetteville, AR 72701
Telephone: 479-575-5346 or 1-800-377-8632
http://admissions.uark.edu/

When to Apply

High school students are encouraged to apply immediately after completing the junior year of high school. Early applicants will be given priority when applying for New Student Orientation and University Housing. A February 15 preferential application deadline applies to students wishing to enroll for the upcoming fall term; preferential application deadline for the spring term is November 1. Applications received after these deadlines will be considered on a space-available basis. We strongly encourage students wishing to be considered for any University scholarship to meet this preferential deadline. Completed applications received by these deadlines are guaranteed a decision on admission by April 1 for fall term and December 1 for spring term. Applications received after that time will be evaluated in as timely a manner as possible.

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

1. Submit a completed application for undergraduate admission and a $30 non-refundable application fee to the Office of Admissions. This $30 fee is not required of returning University students. You may apply for admission on the World Wide Web at <http://admissions.uark.edu/app>.
2. Request that all required transcripts be sent to the Office of Admissions. Only officially signed transcripts, sent directly from the issuing institution and submitted in a sealed school envelope, will be accepted for evaluation.

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 courses.

College transcripts must be provided from each college or university attended. To be considered official, transcripts must be sent directly from the issuing institution. Hand-carried transcripts are not considered official unless submitted in a sealed school envelope. 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. A note to transfer students: We cannot accept proof of immunization from your previous institution.
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
Admission

Applications are reviewed on an individual basis with consideration given to the applicant’s overall grade-point average (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>
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<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Social Studies</td>
<td>4</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>1 unit general sciences</td>
<td>3</td>
</tr>
<tr>
<td>2 units lab sciences</td>
<td></td>
</tr>
</tbody>
</table>
| 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 showing 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.

PREPARATORY CURRICULUM FOR ENTERING FRESHMEN, ACADEMIC YEAR 2004-2005

Applications are reviewed on an individual basis with consideration given to the applicant’s overall grade-point average (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>
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<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Social Studies</td>
<td>4</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>1 unit general sciences</td>
<td>3</td>
</tr>
<tr>
<td>2 units lab sciences</td>
<td></td>
</tr>
</tbody>
</table>

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 applicant 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 attended 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, including courses that may have been repeated.

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 determine whether State of Arkansas requirements for developmental course placement have been met. (See page 30.)

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,
   b. have an overall grade-point average of at least 2.00 on all college course work attempted, and
   c. have maintained a grade-point average (if any) of at least 2.00 on the last semester of work.
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 showing 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 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 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 43.)

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 Admissions. 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.

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 Admissions.

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 (freshman- 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 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 43. For more information you may contact the University of Arkansas Office of Admissions.

ADMISSION 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 should verify admission to the Teacher Education Program prior to registration. Special students may not enroll for more than nine hours
of courses in a term without approval of the student’s academic dean. Unless otherwise specified, students with special status who wish to be admitted into a degree program at the University of Arkansas must apply for admission as such prior to the beginning of the term for which the change of status is requested. All requirements for admission to regular status must then be met. No more than 24 semester hours earned while in a non-degree seeking status will apply to a degree at the University.

**When to Apply**

Special students must meet the same application deadlines as other students with the exception of students participating in the senior citizens’ registration. For further information consult the online schedule of classes [www.uark.edu/registrar/classes/soc.html](http://www.uark.edu/registrar/classes/soc.html).

**How to Apply**

The following students may be considered for special status:

1. Visiting students from other colleges or universities who wish to enroll at the University to earn credits that they plan to transfer back to their home institution. It is the student’s responsibility to verify with his or her college that courses taken here will be acceptable as transfer credit.

   Application procedure: Submit a completed application, a non-refundable application fee, and a letter of good standing verifying eligibility to return to the home institution.

2. Students who want to take courses of special interest for personal or professional development, but who are not interested in working toward a degree. Applicants in this category are normally expected to have been out of high school for three or more years.

   Application procedure: Submit a completed application and non-refundable application fee. Students who have been out of high school less than five years should submit a transcript verifying that admission requirements have been met.

   The application fee is not required for students 60 years and older.

3. Students who already have a college degree and who want to take credit classes, but not toward another degree at this time. Credits earned under this classification will not count toward a graduate degree.

   Application procedure: Submit a completed application and non-refundable application fee. Students who wish to enroll for successive terms should submit a transcript showing the degree.

4. Dually enrolled students must have at least a 20 ACT score and a 3.00 high school GPA to enroll. Dually enrolled students are ineligible to enroll in remedial courses.

   Application procedure: Submit a completed application, a non-refundable application fee, ACT or SAT scores, high school transcript, letter of intent, and a letter of recommendation from the high school principal. Admissions applications should be submitted at least one month in advance of the term and must be submitted by the application deadlines.

   Dually enrolled high school seniors who plan to enroll in the fall as a regular freshman must submit a separate application for regular admission for the fall.

**READMISSION OF RETURNING UA STUDENTS**

Any former student who wishes to return to the University after missing a fall or spring semester should call the Admissions Office to reactivate registration privileges. Students enrolled in UA correspondence courses during their absence must be readmitted. The $30 application fee is not required for former students. (Any applicable late application fees, however, will be assessed.)

**When to Apply**

An early readmission will enable you to register during priority telephone registration. You should submit your application and all appropriate credentials at least one month prior to the time you plan to register. For registration dates and procedures, you may view the schedule of classes on the Internet at [http://www.uark.edu/classes/soc.html](http://www.uark.edu/classes/soc.html) or request a copy from the Office of Admissions (available in March for summer and fall terms and in October for spring term).

**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.

**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. Students on academic warning will be readmitted with the same probationary status. Course work taken at another institution will not affect a student’s probationary status or UA grade-point average. Students with a probationary status are readmitted into the college of last enrollment. Permission to change colleges can only be granted by the college you wish to enter. Students who have not satisfied their initial provisions of admission (but are still eligible to return) will be required to satisfy those conditions upon their return.

2. Students with transfer work: Students who have attended another institution while away from the University will be considered for admission for the fall as a regular freshman and must meet those requirements, including either a 2.00 grade-point average on all college work attempted and/or a 2.00 on all course work attempted since last UA attendance. Official transcripts of all course work attempted since last attendance at the University must be submitted (see Admission of Transfer Students).

3. Former special students: Students who previously attended the University as special students and wish to return as degree-seeking candidates must apply for admission as freshmen or transfer students, furnishing all appropriate admission credentials, including any required test scores. All requirements for admission to regular status must be met. (See appropriate section of this catalog for requirements.)

4. Former students who are submitting petitions to either the Academic Standards Committee or the Faculty Committee on Admissions and Transfer of Credit to request readmission must have on file all required documents with the Office of Admissions by the application deadlines. (See the schedule of classes for deadlines for submitting petitions.)

**ADMISSION OF INTERNATIONAL STUDENTS**

All international students must present officially certified academic credentials, evidence of adequate financial support, and, for non-native English speakers only, a minimum TOEFL score of 550 (paper based), 213 (computer based), or a minimum score of 6.5 on the IELTS, taken within the preceding two years.

Applicants who meet the academic and financial requirements but who do not meet the English proficiency requirement of the University will be offered conditional admission and are required to attend an intensive English program through the Spring International...
Language Center. Students will be eligible to enroll in academic courses upon successful completion of the highest level of the intensive English program with a 3.00 grade average and recommendation of the director of Spring International.

An entering freshman who has completed secondary school at either U.S. or foreign institutions must a) have the equivalent of a final cumulative grade-point average of at least 2.75 in English and three years each of mathematics, natural sciences, and social studies, and b) competency equivalent to that developed by taking four years of English and foreign language study as described in the General Education categories.

Non-native speakers of English admitted to undergraduate study at the University of Arkansas are required to present an acceptable language assessment score to demonstrate English proficiency. Depending upon exam scores, a student may be advised to enroll in EASL courses. Courses are offered by the Department of Foreign Languages for non-native speakers of English who need to improve their English skills. Students will be eligible to enroll in academic courses upon successful completion of the highest level of intensive English program with a 3.00 grade average and recommendation of the Director of the Language Center. Students who graduate from a foreign high school in which English is taught as a second language must present evidence of English proficiency.

1. Undergraduate students who transfer at least 24 hours of credit from U.S. institutions, including courses that meet the freshman composition requirement;
2. International undergraduate students who graduate from a high school in the United States;
3. Graduate students who earned bachelor’s or master’s degrees in U.S. institutions or in 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.

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 recommendations into English as a Second Language (EASL) courses. Courses are offered by the Department of Foreign Languages for non-native speakers whose language skills are diagnosed as insufficient for college-level study at the University of Arkansas. Students whose language skills are diagnosed as insufficient for their level of study will not be recommended to enroll in EASL courses.

The ELPT is administered by Testing Services during New Student Orientation. Recommendations for EASL course work made as a result of the ELPT will be advisory to students and their program advisers, with undergraduates further advised to take the recommended courses before taking the required freshman composition courses and graduate students advised to take a writing course to support initial course work taken in their fields.

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.
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.

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.

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 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.
2. Permission to take the examination must be obtained from the faculty of the department offering the course.

### CLEP Examination

<table>
<thead>
<tr>
<th>General Examinations</th>
<th>UA Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Mathematics</td>
<td>MATH 0003</td>
<td>520</td>
<td>3</td>
</tr>
<tr>
<td>English Composition¹</td>
<td>ENGL 1013</td>
<td>490</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENGL 1013 &amp; ENGL 1023</td>
<td>540</td>
<td>6</td>
</tr>
</tbody>
</table>

**Approved Subject Examinations**

| American Government | PLSC 2003 | 47 | 50 | 3 |
| American Literature | ENGL 3313 | 55 | 58 | 3 |
|                      | ENGL 3313 & ENGL 3323 | 65 | 68 | 6 |
| Biology              | BIOL 1543/1541L | 49 | 50 | 4 |
| Calculus             | MATH 2554 | 55 | 60 | 4 |
| College Algebra      | MATH 1203 | 50 | 54 | 3 |
| College Algebra – Trigonometry | MATH 1285 | 55 | 56 | 5 |
| English Literature   | ENGL 2113 | 55 | 57 | 3 |
|                      | ENGL 2113 & ENGL 2123 | 65 | 66 | 6 |
| Freshman College Composition¹ | ENGL 1013 | 52 + acceptable essay | 57 + acceptable essay | 3 |
|                      | ENGL 1013 & ENGL 1023 | 62 + acceptable essay | 66 + acceptable essay | 6 |

**Chemistry**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1103/1101L &amp; CHEM 1123/1121L</td>
<td>50</td>
<td>55</td>
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</tbody>
</table>

**History of United States I**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
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</thead>
<tbody>
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<td>HIST 2003</td>
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<td>50</td>
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</tbody>
</table>

**History of United States II**

<table>
<thead>
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<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
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</thead>
<tbody>
<tr>
<td>HIST 2013</td>
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<td>50</td>
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**Human Growth & Development**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
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</thead>
<tbody>
<tr>
<td>HESC 1403</td>
<td>63</td>
<td>63</td>
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</table>

**Information Systems & Computer Applications**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
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<tbody>
<tr>
<td>ISYS 2232</td>
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**Introduction to Educational Psychology**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
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<tbody>
<tr>
<td>PSYC 4033</td>
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**Introductory Psychology**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 2003</td>
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<td>55</td>
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</tbody>
</table>

**Introductory Sociology**

<table>
<thead>
<tr>
<th>UC Course</th>
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</thead>
<tbody>
<tr>
<td>SOCI 2013</td>
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**Principles of Accounting**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
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</thead>
<tbody>
<tr>
<td>ACCT 2013 &amp; ACCT 2023</td>
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**Principles of Macroeconomics**

<table>
<thead>
<tr>
<th>UC Course</th>
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</thead>
<tbody>
<tr>
<td>ECON 2013</td>
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</table>

**Principles of Microeconomics**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 2023</td>
<td>48</td>
<td>54</td>
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</tbody>
</table>

**Principles of Marketing**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
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</thead>
<tbody>
<tr>
<td>MKTT 3433</td>
<td>48</td>
<td>50</td>
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</table>

**Trigonometry**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1213</td>
<td>55</td>
<td>55</td>
</tr>
</tbody>
</table>

**Western Civilization I**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCIV 1003</td>
<td>50</td>
<td>60</td>
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</table>

**Western Civilization II**

<table>
<thead>
<tr>
<th>UC Course</th>
<th>Minimum Score for Credit</th>
<th>Maximum Credit Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCIV 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.
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 Admissions, 232 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 20

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 academic departments 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.

Visit the Web at <http://www.uark.edu/admin/admiss/transfer/apclepib.htm> for the minimum score for credit for CLEP examinations. 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 22

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. UA departments have authorized credit and/or placement for students who present qualifying scores in the AP courses listed on page 22.

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 Admissions. 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) Course</th>
<th>Minimum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry CHEM 1103/1101L &amp; CHEM 1123/1121L</td>
<td>5 Higher Level</td>
</tr>
<tr>
<td>Economics ECON 2013 &amp; ECON 2023</td>
<td>5 Higher Level</td>
</tr>
<tr>
<td>English ENGL 1013</td>
<td>5 Higher Level</td>
</tr>
<tr>
<td>Geography GEOG 1123</td>
<td>5 Higher Level</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5 Subsidiary</td>
</tr>
<tr>
<td>Philosophy PHIL 2003</td>
<td>5 Higher Level</td>
</tr>
<tr>
<td>Physics PHYS 2013/2011L</td>
<td>4 Higher Level</td>
</tr>
<tr>
<td>PHYS 2033/2031L</td>
<td>4 Higher Level</td>
</tr>
</tbody>
</table>

May qualify for up to 8 hours of credit and/or placement in higher-level courses as determined by the Department of Mathematics.

Placement and Proficiency Tests

ACT Assessment, SAT I, and ACT ASSET 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 30.) Credit earned in such courses does not count toward degrees in all colleges. (See Courses That Do Not Count Toward Degrees, page 30.)

Freshman Composition Placement:

• Students with ACT English scores lower than 20, or SAT I verbal scores lower than 480, or ACT ASSET writing skills scores lower than 45 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, or ACT ASSET writing skills scores of 45 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, or ASSET 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.

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, 119 Ozark Hall, 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 school admissions office, 119 Ozark Hall, 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>.

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 an overall cumulative grade-point average of 2.70 or better on all courses undertaken 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 who are admitted to the special six-year program. All applicants for admission are required to take the law school admission test. (See page 99 for the Fulbright College Pre-Law Program).

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://www.uark.edu>.

Advanced Placement Program (AP) – see page 21

<table>
<thead>
<tr>
<th>Advanced Placement Examination</th>
<th>UA Course</th>
<th>Minimum Score for Placement and/or Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>ARHS 1003</td>
<td>3C</td>
</tr>
<tr>
<td></td>
<td>ARHS 1003H &amp; ARHS 2913</td>
<td>4C</td>
</tr>
<tr>
<td>Biology</td>
<td>BIOL 1543H/1541M</td>
<td>3P</td>
</tr>
<tr>
<td></td>
<td>BIOL 1543/1541L</td>
<td>4C</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>MATH 2554</td>
<td>3C</td>
</tr>
<tr>
<td></td>
<td>MATH 2554H</td>
<td>5C</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>MATH 2554 &amp; MATH 2564</td>
<td>3C</td>
</tr>
<tr>
<td></td>
<td>MATH 2554H &amp; MATH 2564H</td>
<td>5C</td>
</tr>
<tr>
<td>AB Subscore</td>
<td>MATH 2554</td>
<td>4C</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CHEM 1103/1101L &amp; CHEM 1123/1121L</td>
<td>4C</td>
</tr>
<tr>
<td></td>
<td>CHEM 1103/1101L &amp; CHEM 1123H/1121M</td>
<td>5C</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>CSCE 1023/CSCE 1021L</td>
<td>4C</td>
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<tr>
<td></td>
<td>CSCE 1023H/1021M</td>
<td>5C</td>
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<tr>
<td>Computer Science AB</td>
<td>CSCE 1123/CSCE 1121L</td>
<td>4C</td>
</tr>
<tr>
<td></td>
<td>CSCE 1123H/CSCE 1121M</td>
<td>5C</td>
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<tr>
<td>English Composition and</td>
<td>ENGL 1013 (exempt)</td>
<td>3E</td>
</tr>
<tr>
<td>Literature or English</td>
<td>ENGL 1013</td>
<td>4C</td>
</tr>
<tr>
<td>Language and Composition</td>
<td>ENGL 1013 &amp; ENGL 1023</td>
<td>5C</td>
</tr>
<tr>
<td>Environmental Sciences</td>
<td>ENSC 1003</td>
<td>3C</td>
</tr>
<tr>
<td>European History</td>
<td>WCIV 1013</td>
<td>3C</td>
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</tbody>
</table>

Advanced information and procedures for making application to the Graduate School are included in the Graduate School Catalog.
<table>
<thead>
<tr>
<th>Advanced Placement Examination</th>
<th>UA Course</th>
<th>Minimum Score for Placement and/or Credit</th>
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</thead>
<tbody>
<tr>
<td>French Language</td>
<td>FREN 1013</td>
<td>2Pq, 3C</td>
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<tr>
<td></td>
<td>FREN 2003</td>
<td>4C</td>
</tr>
<tr>
<td></td>
<td>FREN 2013</td>
<td>5C</td>
</tr>
<tr>
<td>French Literature</td>
<td>FREN 2013</td>
<td>2Pq</td>
</tr>
<tr>
<td>German Language</td>
<td>GERM 1013</td>
<td>2Pq, 3C</td>
</tr>
<tr>
<td></td>
<td>GERM 2003</td>
<td>4C</td>
</tr>
<tr>
<td></td>
<td>GERM 2013</td>
<td>5C</td>
</tr>
<tr>
<td>Government and Politics: Comparative</td>
<td>PLSC 2015</td>
<td>3C</td>
</tr>
<tr>
<td>Government and Politics: U.S.</td>
<td>PLSC 2003</td>
<td>3C</td>
</tr>
<tr>
<td></td>
<td>PLSC 2003H</td>
<td>5C</td>
</tr>
<tr>
<td>Human Geography</td>
<td>GEOG 1123</td>
<td>4C</td>
</tr>
<tr>
<td>Latin: Virgil</td>
<td>LATN 1013</td>
<td>2Pq, 3C</td>
</tr>
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<td></td>
<td>LATN 2003</td>
<td>4C</td>
</tr>
<tr>
<td></td>
<td>LATN 2013</td>
<td>5C</td>
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<tr>
<td>Latin: Literature</td>
<td>LATN 1013</td>
<td>2Pq, 3C</td>
</tr>
<tr>
<td></td>
<td>LATN 2003</td>
<td>4C</td>
</tr>
<tr>
<td></td>
<td>LATN 2013</td>
<td>5C</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>ECON 2013</td>
<td>3Pq</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>ECON 2023</td>
<td>3Pq</td>
</tr>
<tr>
<td>Music Theory</td>
<td>MUTH 1603 &amp; MUTH 1621</td>
<td>2P, 3Cq, 4C</td>
</tr>
<tr>
<td></td>
<td>MUTH 1003</td>
<td>2Cq, 3C</td>
</tr>
<tr>
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<td>MUTH 1631 &amp; MUTH 2603</td>
<td>4Cq, 5C</td>
</tr>
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<td>3 Cq, 4C</td>
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<td>Physics C, E &amp; M</td>
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<td>3C</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.
FINANCIAL AID

The University of Arkansas annually awards over $90 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 weeks, 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 Office of Academic Scholarships is part of the Honors College and is housed in Old Main, Room 518.

The University of Arkansas, Fayetteville, awards over 5,000 scholarships totaling more than $14 million for students each year. This total does not include funds that support such 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.

SCHOLARSHIPS FOR NEW STUDENTS

Distinguished Fellowships

The University of Arkansas offers four distinguished Fellowships. The Sturgis Fellowship (est. 1985), the Bodenhamer Fellowship (est. 1998), the Boyer Fellowship (est. 2000), and the Honors College Fellowships (est. 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 <www.honorscollege.uark.edu>. One application is used for all four Fellowships.

The Bodenhamer Foundation, acting through its trustee, Lee Bodenhamer (B.S.B.A. ’57, M.B.A. ’61), established the Bodenhamer Fellowships to encourage Arkansas’ brightest and best high school students to pursue any course of study that leads to a baccalaureate degree at the University of Arkansas. Students outside of Arkansas are also encouraged to apply. Ten Bodenhamer Fellowship offers are made to entering freshmen each year. Contact information: Gary Standridge, Director, Bodenhamer Fellowship Program, 479-575-3593, cgs@uark.edu or Kelly Carter, Director, Academic Scholarship Office, 479-575-4464, bhamer@uark.edu.

The Boyer Fellowships were established by Tommy (B.S.B.A. ’64) and Sylvia (B.S.E. ’63) Boyer to assist an outstanding student from Arkansas who also demonstrates financial need and selects a major in the Sam M. Walton College of Business. One Boyer Fellowship offer is made to an entering freshman each year. Contact information: Karen Boston, Managing Director, Boyer Fellowship, 479-575-4622, connect@walton.uark.edu.

The Sturgis Fellowship established by the Roy & Christine Charitable Trust Fund was created to attract students from the state and across the country who are interested in majoring in areas in the Fulbright College of Arts and Sciences. Ten Sturgis Fellowship offers are made to entering freshmen each year. Contact information: Sidney Burris, Director, Sturgis Fellowship, 479-575-2509, sburris@uark.edu. In 2002, the Walton Family Charitable Support Foundation established the Honors College Fellowships to assist in attracting outstanding students from Arkansas and throughout the country. Honors College Fellowship applicants have a minimum of a 32 ACT or 1420 SAT or are National Merit Semi-Finalists and have a strong academic record. Up to 75 Honors College Fellowship offers are made to entering freshmen each year. Contact information: Suzanne McCray, Associate Dean, Honors College, 479-575-7678, honors@uark.edu.

Distinguished Scholarships

The Silas Hunt Distinguished Scholarships are named in honor of the first African-American admitted to the University of Arkansas in modern times. Recipients of this award will be selected from an applicant pool of accepted students from underrepresented communities who have demonstrated outstanding academic leadership qualities and potential. Underrepresented communities will include, but are not limited to, membership in an underrepresented ethnic or minority group, a student with a demonstrated interest in a particular field of study that does not traditionally attract members of that student’s ethnic or gender group, residence of underrepresented counties in the state, or status as a first-generation college student. These awards are made in amounts of $5,000 to $8,000 per year.

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, quality and quantity of courses taken, and other pertinent factors.

Academic Scholarships are either general University scholarships or those awarded by a specific academic area (college, department, or program). The general scholarships are awarded to new students by the Office of Academic Scholarships in conjunction with the University Scholarship Review Committee. Scholarships that are more specific are awarded to upper-class students whose scholastic performance at the University serves as a criterion for the awards.

The Honors College Academy Scholarships (up to $16,000 for four years) are awarded competitively to students in Arkansas from under-represented areas with a minimum of a 28 ACT and a 3.5 GPA. To apply for the Honors College Academy Scholarships only the admissions application is needed. To view the admissions application, visit the following Web site: <http://admissions.uark.edu>.

Special skill and interest scholarships are awarded to new or continuing students on the basis of skills and performance in music (normally based on ensemble participation) and athletics, or on the basis of an interest in a military career (Army and Air Force scholarships).

Information about scholarship opportunities at the University is available from the Office of Academic Scholarships. Students may also obtain specific information about scholarship opportunities from the University departments that award them. The following listing of scholarship programs is provided to demonstrate the scope of scholarship opportunities at the University of Arkansas. Space in this catalog does not permit an all-inclusive listing.

See <http://scholarships.uark.edu> for more information.

UA SCHOLARSHIPS—GENERAL INFORMATION

The following regulations govern the general University scholarships described below:

1. FEBRUARY 15 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 Chancellor’s and general University scholarships is determined at the end of the spring semester each “year.” For this purpose, a “year” is defined as an academic year composed of summer sessions, fall semester, and spring semester, in this order. Students may “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. 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/A Spolicy.html> for a full description.

Chancellor’s Scholarships

There are three levels of Chancellor’s Scholarships, which are applied toward tuition, fees, and room and board (double occupancy) in designated residence halls. Greek House room and board allowances began with the freshmen class of Fall 2003. Chancellor’s Scholarships are awarded on a competitive basis.

• The Chancellor’s Merit Scholarship, for National Merit or Achievement finalists who designate the University of Arkansas as their first-choice institution to the Merit or Achievement organization;

• The Chancellor’s Distinguished Governor’s Scholarships, for Arkansas residents who apply and qualify for the Arkansas Distinguished Governor’s Scholarship when funds are available from the State of Arkansas; and

• The Chancellor’s Scholarship: Consideration will be given to students in the top 5 percent of the University’s applicant pool and who have demonstrated outstanding leadership skills and examples of community service.

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

See Appendix A.

Non-Resident Tuition Grant

The Non-Resident Tuition Grant is for entering freshmen from neighboring states with a 3.00 or higher GPA and a minimum 24 ACT/1090 SAT test score. This award will pay the out-of-state tuition differential. Neighboring states include Kansas, Louisiana, Missouri, Mississippi, Oklahoma, Tennessee, and Texas. The University also makes this award available to transfer students from neighboring states if the student has 24 or more transferable hours and at least a 3.00 transfer GPA. Please contact the Office of Academic Scholarships at 479-575-4464 for more information.

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

Herbert Thomas Memorial Academic Scholarship is available to an entering freshman with outstanding high school records and ACT (or SAT) scores. This scholarship carries an annual stipend of $1,900. It is renewable annually to the recipient who maintains a 3.00 cumulative grade-point average in the Bachelor of Architecture, the Bachelor of Landscape Architecture, or the Bachelor of Science in Architectural Sciences degree programs and makes satisfactory progress toward the degree. (Recipients must carry a minimum of 14 hours of work each semester.) Upon graduation or forfeiture by the recipient, another scholarship is awarded.

Mary Pipkin Johnson Memorial Scholarship is available to a freshman entering the School of Architecture in the amount of $2,000. This funding is based on high school performance and promise of professional ability. The scholarship continues as long as the recipient in the architecture or landscape architecture program maintains a 3.00 grade-point average. Upon graduation or forfeiture by the recipient, another scholarship is awarded.

Professional Advisory Board Freshman Scholarship: The recipient of this award is chosen by past academic success. He or she must show promise as a future professional in the fields of architecture or landscape architecture. It is open to any freshman entering the School of Architecture who is interested in either architecture or landscape architecture in the amount of $1,000.

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 April 15. 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>.

Two 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.

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/dbscai/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 a limited number of scholarships at various amounts. Applicants are selected on the basis of promise, character, leadership skills, scholarship, and financial need.

Scholarship applications are available in December of each year. We strongly encourage all current and future COEHP students to take advantage of these scholarship opportunities.

For further information regarding scholarship opportunities within the college, contact the Boyer Center for Student Services, 8 Peabody Hall, 479-575-4205 or visit the Web at <http://www.uark.edu/depts/coehp/Scholarships.htm>.

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 and their dependents who 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

The Arkansas Alumni Association through its members and chapters, sponsors five scholarship and grant programs. February 15 is the application deadline for scholarships.

The Alumni Endowed Scholarship

Alumni four year scholarships are awarded annually to two incoming freshmen through the competitive review of ACT score, high school grade-point average, extracurricular involvement and leadership skills. The minimum eligibility requirements are a 3.60 cumulative grade point average and 24 ACT or 1090 SAT score.

The License Plate or “Roads” Scholarship

The “Roads” recipients are automatically considered from applicants for the Arkansas Alumni Scholarship. Candidates are selected from various regions across the state, therefore the recipients must be Arkansas residents. The number of scholarships awarded depends on funds made available by the sale of the Razorback Collegiate License Plates. This scholarship may be renewable.

Arkansas Alumni Chapter Scholarships

Chapter scholarships are funded by participating alumni chapters across the country to encourage high school seniors from their geographical areas to attend the University of Arkansas. Recipients are considered from applicants for the Arkansas Alumni Scholarship.

Alumni Legacy Scholarships

The Alumni Legacy Scholarship will pay the out-of-state tuition differential for non-resident students who are admitted with a 3.00 high school GPA and 24-36 ACT/1090-1600 SAT. The student must also have a parent with a degree from the University of Arkansas, Fayetteville, who is a current member of the Arkansas Alumni Association. Please contact the Alumni Scholarship Administrator at 479-575-2253 for more information.

Alumni Legacy Tuition Reduction Grant

The Alumni Legacy Tuition Reduction Grant will pay 50 percent of the out-of-state tuition differential for non-resident students who are admitted. The student must have a parent with a degree from the University of Arkansas, Fayetteville, who is a current member of the Arkansas Alumni Association. Please contact the Alumni Scholarship Administrator at 479-575-2253 for more information.

Selection criteria includes national test scores (ACT or SAT) and grade-point average.

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.

University of Arkansas, Fayetteville
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.”
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, 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 Registrar’s Web site at [http://www.uark.edu/registrar/](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 Registrar Web site at [http://www.uark.edu/registrar/](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 three-day registration session 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.

**Proper Address of Students**

It is the responsibility of all students to maintain and correct their addresses with the University and to report any change of address promptly to the Registrar’s Office or on the Web site. Failure to do so may result in undelivered official correspondence and announcements. Many important announcements are sent to the students through University assigned email accounts, which should be checked regularly.

**Identification Cards**

Identification cards are made by the Division of Student Affairs during each registration period and at the ID Card Office during the year. Several privileges on campus require an I.D. 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 adviser and student with the purpose of providing students information and direction to make their educational experience relevant, coherent, and meaningful. It is a process that helps students connect to the U of A, make thoughtful academic decisions, and maximize their educational opportunities. Informed and supportive academic advising is essential to the vision for a “student-centered research university serving Arkansas and the world.”

Procedures may vary among schools and colleges; however all academic advising should demonstrate the following characteristics:
- Be a developmental and educational process that occurs over time;
- Be a collaborative effort to connect students to campus resources;
- Include consideration of individual students’ interests, abilities, and needs;
- Include recommendation of required and appropriate courses;
- Provide interpretation of University, college, and department rules and regulations;
- Support and make possible a student’s understanding of and progress toward meeting academic requirements;
- Provide for reasonable availability and accessibility of advisers to students;
- Make available general information regarding career options and opportunities, with appropriate referrals;
- Be based upon shared responsibilities of adviser and student, the adviser being responsible for making available timely and accurate advice, information, and referrals, and the student being responsible for acting upon the advice, information, and referrals to complete requirements for the chosen degree.

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 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 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. However, 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: ANTH 0003, PHSC 0003, ENGL 0003, MATH 0003, and RDNG 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” was recorded.

- 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 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. However, 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.

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 semester. Students who drop classes by the end of the first week of classes in the fall and spring 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 the 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
semester. Drop-add deadlines for partial semester courses and summer classes are listed on the schedule of classes Web site.

Withdrawal from Registration

Withdrawing 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 semester or summer term 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 in the summer schedule of classes; 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 Treasurer’s Office Web site for the deadlines and percentages.

Student Standing

Definitions of undergraduate student classification are as follows:
- Freshman – a student who has passed fewer than 30 semester hours of course work
- Sophomore – a student who has passed more than 29 semester hours and fewer than 60 semester hours
- Junior – a student who has passed more than 59 semester hours and fewer than 90 semester hours
- Senior – a student who has passed 90 or more semester hours.

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).

Number of Hours Allowed Per Semester

1. Students who wish to carry more than 17 hours per semester must first obtain the permission of their academic advisers.
2. Students who wish to carry more than 18 hours per semester must first obtain the permission of their academic dean(s).
3. Students who wish to carry more than 21 hours per semester must first request and receive favorable action from the Academic Standards Committee.
4. Students on academic warning may not carry more than 12 hours per semester.
5. Students on academic suspension who choose the limited enrollment option may not carry more than 9 hours for that semester.
6. Students who wish to exceed the normal summer school load must have the approval of their academic dean(s) 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.
7. For disabled students, less than 12 hours may be certified as full-time with the approval of the appropriate dean and the concurrence of a physician or a licensed examiner.
Fee and Cost Estimates for 2004-05

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:81/TuitionCalc/>.

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 please visit the Treasurer’s Office Web site at <http://avcf.uark.edu/TREAWeb/>.

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

ESTIMATED NECESSARY EXPENSES PER SEMESTER

<table>
<thead>
<tr>
<th>Undergraduate</th>
<th>Undergraduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>Non-Resident</td>
</tr>
<tr>
<td>Tuition$</td>
<td>$2,057.25 ($137.15/hr)</td>
</tr>
<tr>
<td>University Fees$</td>
<td>$375.15</td>
</tr>
<tr>
<td>COLG Fee$</td>
<td>$134.85</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>$2,567.25</strong></td>
</tr>
<tr>
<td>Room and Board$</td>
<td>$2,963.50</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$5,530.75</strong></td>
</tr>
</tbody>
</table>

Other variable costs per year:
- *Books, supplies, and lab fees $500 to 1,500
- *Personal expenses and travel $1,500 to 2,500

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 Hunt Hall, University of Arkansas, Fayetteville, AR 72701. In Arkansas call 1-800-377-8632; from outside of Arkansas call (479) 575-5346.

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.

Academic Year

Undergraduate students are assessed tuition fees of $137.15 per credit hour. Students with out-of-state residency status are assessed additional tuition fees of $243.00 per credit hour.

Summer Sessions

Undergraduate students are assessed tuition fees of $137.15 per credit hour. Undergraduate students with out-of-state residency status are assessed additional tuition fees of $243 per credit hour.

1. Students enrolled in the Walton College of Business courses are charged differential tuition at $17.85 per credit hour more than standard undergraduate, in-state tuition.

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
- and the following student-initiated and student-approved fees:
  - Student Activity fee $12.00
  - Student Health fee, calculated at $6.00/credit hour, $90.00
  - Associated Student Government fee $9.00
  - Media fee $10.35
  - Arkansas Union fee, calculated at $2.57/credit hour, $38.55
  - Fine Arts Activity fee $4.05
  - Technology fees are calculated at $2/credit hour $30.00
  - Transit fee $29.10
  - Network Infrastructure and Data Systems fee $75.00
  - Safe Ride fee $3.30
  - Distinguished Lecture fee $6.75

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/rateschedule.asp>.

4. Average expenses for living in a residence hall, double occupancy, with an unlimited meal plan. Actual room and board fees vary from $2,605 to $2,795 per semester.
WALTON COLLEGE OF BUSINESS COURSE FEES

All Academic Semesters
Any student taking any undergraduate course in the Walton College of Business will be assessed differential tuition of $17.85 per credit hour.

ARKANSAS ASSESSMENT OF GENERAL EDUCATION FEE

This is a Board of Trustees approved fee supporting the assessment requirements mandated by Act 874 of the General Assembly in the 1993 Regular Session.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, undergraduate students are assessed $.34 per credit hour.

HEALTH, PHYSICAL EDUCATION, AND RECREATION FEE

This is a 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.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed $3.28 per credit hour.

STUDENT ACTIVITY FEE

University Programs
University Programs are funded by the student activity fee. Students are admitted free to numerous programs presented throughout the year, except for major, promoted concerts.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed $.80 per credit hour for the student activity fee.

STUDENT HEALTH FEE

The student health fee 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.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed $6.00 per credit hour.

STUDENT HEALTH DEBT FEE

The student health debt fee is charged to pay the debt service for the construction of the new Student Health Center.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed $.85 per credit hour for the student health debt.

ASSOCIATED STUDENT GOVERNMENT FEE

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed $.60 per credit hour. These funds are allocated to registered student organizations.

MEDIA FEE

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.

All Academic Semesters
During the regular fall and spring academic semesters, students are assessed $.69 per credit hour.

ARKANSAS UNION FEE

The Arkansas Union fills the role of the community center of the campus. This fee supports the renovation, expansion, and partial operational costs of the Union.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed a fee of $2.57 per credit hour.

FINE ARTS ACTIVITY FEE

This fee supports cultural events free of charge, or with minimal charge, to students. These events include presentations in music, theater, drama, opera, visual arts, creative writing (poetry and fiction), and public speaking. Most of the events are held on campus or at the Walton Arts Center. The fee makes cultural presentations possible and encourages students to take advantage of activities. Fulbright College allocates the proceeds of the fee to support cultural programming.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed $.27 per credit hour.

TECHNOLOGY FEE

This fee provides improvements in computer access for students: increasing dial-up ports, network access, lab support, training programs, and improvements in computing facilities.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed a fee of $2.00 per credit hour.

TRANSIT FEE

The transit fee helps fund the Razorback Bus Transit System, which services the campus and neighboring community year round.

All Academic Semesters
During the regular fall, spring, and summer academic semesters, students are assessed $1.94 per credit hour.
NETWORK INFRASTRUCTURE AND DATA SYSTEMS FEE

The network infrastructure and data systems fee 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. It also provides support for upgrades and replacement of the student information system.

All Academic Semesters

During the regular fall, spring, and summer academic semesters, students are assessed a fee of $5.00 per credit hour.

SAFE RIDE FEE

The Associated Student Government has initiated a fee that 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.

All Academic Semesters

During the regular fall, spring, and summer academic semesters, students are assessed $.22 per credit hour for the safe-ride program fee.

DISTINGUISHED LECTURE FEE

The Distinguished Lecture fee specifically pays for two speakers, one in the spring semester and one in the fall semester. Speakers represent two groups: 1) Arts and Entertainment Industry and 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.

All Academic Semesters

During the regular fall, spring, and summer academic semesters, students are assessed $.45 per credit hour for the distinguished lecture fee.

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.

College or School Per Credit Hour Fee

- Agricultural, Food and Life Sciences, Bumpers College of - $ 7.25
- Architecture, School of - 14.41
- Arts and Sciences, Fulbright College of - 8.99
- Business, Walton College of - 14.58
- Education and Health Professions - 7.25
- Engineering - 22.67

SPECIAL COURSE AND PROGRAM FEES

International Study Fee for Architecture and Landscape Architecture Academic Plans (due initial Semester of enrollment, paid in semester installments, and retroactive to 8/15/2003) - $2,720.00

College of Education and Health Professions fees:

- PEAC 1481 Beginning Archery - $5.00 per hour
- PEAC 1811 Beginning Canoeing - $25.00 per hour
- PEAC 1821 Beginning Sailing - $25.00 per hour
- PEAC 1831 Beginning Scuba Diving - $130.00 per credit hour
- RECR 1001 Fall Outdoor Recreation - $10.00 per credit hour
- RECR 1023 Spring Outdoor Recreation - $3.40 per credit hour
- KINS 2223 Motor Development - 15.00 per credit hour

Communication Disorders
- CDIS 548V Clinical Practicum - $50.00 per semester

Fifth-year Internship Fee (M.A.T.) - 200.00
(education majors only)

Internship Program in Education Administration
- EDAD 574V, 674V - 40.00

Internship for Communication Disorders
- CDIS 578V Public School Site - $100.00 per semester

Mal-practice liability insurance
- NURS 3022 and NURS 4242 - $14.50 per semester

Special Education Lab fee, Practicum
- CIED 532V - 25.00

College of Agricultural, Food and Life Sciences
- Apparel Studies Laboratory Fees - $15.00 per credit hour
- HESC 1023, HESC 1053, HESC 2053, HESC 2013, HESC 3003, HESC 4063, HESC 4033

Equine Behavior & Training Fee:
- ANSC 2304 - $25.00 per credit hour

Horticulture Laboratory Fees - $3.50 per credit hour

Infant Development Center and Nursery School fee:
- HESC 2402 and 2401L, HESC 3402 and 3401L - $15.00 per credit hour

Interior Design fee:
- HESC 1034/1031L, 1044/1041L, 2803, 2813, 3803, 3813, 4803, 4863 - $15.00 per credit hour

PROGRAM/SERVICE SPECIFIC FEES

English Language Placement Test fee (ELPT) - $10.00
Graduation fee for baccalaureate degree - $25.00
LD Card fee
- First card - 20.00
- Each replacement card - 18.00

Infant Development Center for UA Student Families: (40 hrs/week)
- Materials per semester - 25.00
- Infants and Toddlers per week - 200.00

Installment Payment Plan fee - 25.00

International student (non-immigrant) application fee - $50.00
International student per semester service fee (non-immigrants) .......................... 55.00
Late payment fees:
  On fifth day of classes if balance has not been paid .......................... 50.00
  Additional fee at Nov. 30, April 30, and July 31
    for fall, spring, and summer, respectively,
    if payment has not been made ........................................ 50.00
Mandatory international stdnt health insurance ..............810.00 per year
New student orientation fees:
  First Year Experience (New Admits Only) ..................... 80.00
  Parents .......................................................... 40.00
Nursery School in Home Economics fee .............800.00 per semester
Parking Permit (per vehicle)
  Off campus .................................................. 37.00
  On campus ................................................ 55.00
Residence Hall nonrefundable application fee
  (new students only) ........................................... 20.00
Study Abroad Service fee ..............................10.00 per credit hour
Testing Fees (Actual Cost Plus Handling Fee Listed) ........ 15.00
Transcript Fee - Official Copy .......................... 5.00
Undergraduate application for admission fee ........... 30.00
Undergraduate late application for admission fee .......... 25.00
Withdrawal from the University fee ...................... 45.00

**FEE ADJUSTMENTS**

**Academic Year**

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 as follows, less an Administrative Withdrawal fee of $45.00:

*100% adjustment of tuition and fees before the first day of the semester*

*90% adjustment of tuition and fees through the first 10% of days in the semester*

*80% adjustment of tuition and fees through the second 10% of days in the semester*

*70% adjustment of tuition and fees through the third 10% of days in the semester*

*60% adjustment of tuition and fees through the fourth 10% of days in the semester*

*50% adjustment of tuition and fees through the fifth 10% of days in the semester*

*40% adjustment of tuition and fees through the sixth 10% of days in the semester*

**Summer Sessions**

Students who officially withdraw from a summer session or who drop classes in the summer receive a cancellation of fees as follows:

*100% adjustment of tuition and fees before the first day of the session*

*90% adjustment of tuition and fees through the first 10% of days in the session*

*80% adjustment of tuition and fees through the second 10% of days in the session*

*70% adjustment of tuition and fees through the third 10% of days in the session*

*60% adjustment of tuition and fees through the fourth 10% of days in the session*

*50% adjustment of tuition and fees through the fifth 10% of days in the session*

*40% adjustment of tuition and fees through the sixth 10% of days in the session*

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**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 2003 and spring 2004 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 one week 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 pick up an address form in the Student Accounts Office, Hunt Hall 101 or 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 2004-2005 academic year range from $2,605 to $2,795 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 $26 laundry run-free operation fee for residence hall tenants.
Housing for married students, students with family status, nontraditional, graduate, and law students is limited and requires early application. Carlson Terrace, two-bedroom, unfurnished units with utilities paid cost $408 per month.

Summer rates for room and board in University residence halls with unlimited meal plans during summer sessions are $22.03 per day for double-occupancy room and $26.84 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 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 all other fees, charges, and refunds, contact the Treasurer’s Office at 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 $37 to $291 for each vehicle, depending upon the parking option selected.
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 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.

Testing Services, 730 Hotz Hall, mails exam registration packets to a student’s local address. For more information on the AAGE, contact Testing Services at 479-575-2824.

(See also “Advanced Composition” on page 43.)

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 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 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.)

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 B 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 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. Edificative 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

(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). The grade of “A” is given for outstanding achievement to a relatively small number of excellent scholars. The grade of “B” represents good achievement. The grade of “C” is given for average achievement, and the grade of “D” for poor but passing work. The grade of “F” denotes failure and is given for unsatisfactory work. (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 to a student who has not completed all course requirements, if the work completed is of passing quality. 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 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.

A mark of “CR” (Credit) is given for a course (for example, practice 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.

For numerical evaluation of grades, “A” is assigned 4 points for each semester hour of that grade; “B,” 3 points; “C,” 2 points; “D,” 1 point; and “F,” 0 points. “I,” “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 School of Architecture – see page 87. 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 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 the policy, indicating which course(s) he/she chooses to grade forgive. 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.

SEMIESTER 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 student is recognized for having achieved a cumulative grade-point average of 4.00 on all course work completed at the time selection is made 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 Dean of the college in which the student is enrolled. In determining the cumulative grade-point average for the purposes of such awards, grade-renewal 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>ACADEMIC STANDING CHART</th>
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<tr>
<td>CUMULATIVE HOURS EARNED</td>
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<tr>
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<td>61 hours +</td>
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* 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 below for the required performance levels. The student’s academic standing governs his or her reenrollment status and determines any conditions associated with reenrollment 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 page 42)

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 table on page 42.

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

Freshman Composition

Every undergraduate student at the University of Arkansas is required to submit six hours of freshman composition for graduation. 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 require credit in composition, and students should confer with their advisers before choosing exemption.

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.

Continued on page 43...
### University Core (State Minimum Core)

<table>
<thead>
<tr>
<th>Areas</th>
<th>Minimum Hours</th>
<th>University Courses</th>
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| English                | 6             | ENGL 1013 Composition I  
                          |               | ENGL 1023 Composition II                                                      |
| Mathematics³           | 3             | MATH 1203 College Algebra  
                          |               | Any higher-level mathematics course required by major                          |
| Science³               | 8             | ASTR 2003/2001L  
                          |               | Survey of the Universe                                                        |
|                        |               | ANTH 1013/1011L  
                          |               | Biological Anthropology/Lab                                                   |
|                        |               | BIOL 1543/1541L  
                          |               | Principles of Biology                                                        |
|                        |               | BIOL 1613/1611L  
                          |               | Plant Biology                                                                |
|                        |               | CHEM 1023/1021L  
                          |               | Basic Chem/Health Science                                                     |
|                        |               | CHEM 1053/1051L  
                          |               | Chem in Modern World                                                          |
|                        |               | CHEM 1074/1071L  
                          |               | Fundamentals of Chemistry                                                     |
|                        |               | CHEM 1103/1101L  
                          |               | University Chemistry I                                                        |
|                        |               | CHEM 1123/1121L  
                          |               | University Chemistry II                                                       |
|                        |               | CHEM 1213/1211L  
                          |               | Chemistry for Majors I/Lab                                                     |
|                        |               | CHEM 1223/1221L  
                          |               | Chemistry for Majors II/ Lab                                                   |
|                        |               | GEOL 1113/1111L  
                          |               | General Geology                                                               |
|                        |               | GEOL 1133/1131L  
                          |               | Environmental Geology                                                         |
|                        |               | PHYS 1023/1021L  
                          |               | Physics and Human Affairs                                                      |
|                        |               | PHYS 1044 Phys for Architects I                                                   |
|                        |               | PHYS 1054 Phys for Architects II                                                  |
|                        |               | PHYS 2013/2011L  
                          |               | College Physics I                                                             |
|                        |               | PHYS 2033/2031L  
                          |               | College Physics II                                                            |
|                        |               | PHYS 2054 Univ Physics I                                                         |
|                        |               | PHYS 2074 Univ Physics II                                                        |
|                        |               | BIOL 1603/1601L  
                          |               | Principles of Zoology                                                         |
|                        |               | BIOL 2213/2211L  
                          |               | Human Physiology                                                              |
|                        |               | BIOL 2443/2441L  
                          |               | Human Anatomy                                                                 |
| Fine Arts, Humanities⁴ | 6             | a) Fine Arts:  
                          |               | ARCH 1003 Architecture Lecture                                                |
|                        |               | ARHS 1003 Art Lecture                                                            |
|                        |               | ARTS 1003 Art Studio                                                             |
|                        |               | COMM 1003 Film Lecture                                                           |
|                        |               | DANC 1003 Basic/Movement & Dance                                                 |
|                        |               | DRAM 1003 Theater Lecture                                                        |
|                        |               | HUMN 1003 Introduction to the Arts and Aesthetics                               |
|                        |               | LARC 1003 Basic Course in the Arts: The American Landscape                      |
|                        |               | MLIT 1003 Music Lecture                                                          |
|                        |               | b) Humanities:  
                          |               | PHIL 2003 Intro to Philosophy                                                  |
|                        |               | PHIL 2103 Intro to Ethics                                                        |
|                        |               | PHIL 2203 Logic                                                                  |
|                        |               | PHIL 3103 Ethics and the Professions                                             |
| U.S. History           | 3             | HIST 2003 History of Amer. People or Government to 1877                         |
|                        |               | HIST 2013 History of Amer. People 1877 to Present                               |
|                        |               | PLSC 2003 American National Government                                           |
| Social Sciences⁵        | 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 Civilization I                                          |
|                        |               | HIST 1123H Honors World Civilization II                                         |
|                        |               | HIST 2003 History of Amer. People to 1877                                       |
|                        |               | HIST 2013 History of Amer. People 1877 to Present                               |
|                        |               | 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                                               |

Footnotes on page 43.
Footnotes for the State Minimum Core on page 42:
2 Some students majoring in math, engineering, science and business may be required to take a higher math as part of the State Minimum Core.
3 Some students majoring in math, engineering, science, education and health-related professions may be required to take higher or specific science courses as part of the State Minimum Core.
4 Some students majoring in engineering may be required to take either six hours of humanities or social sciences at the junior/senior level or substitute an additional six hours of higher math and/or additional science as part of the State Minimum Core.
5 Students may choose any intermediate-level foreign language course numbered 2003. See Foreign Languages.
6 Some students majoring in engineering may be required to take either six hours of humanities or social sciences at the junior/senior level or substitute an additional six hours of higher math and/or additional science as part of the State Minimum Core.
7 Students who transfer from institutions with articulation agreements with the University may also be allowed to meet the program requirements specified in a catalog for statements of additional requirements.

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.

Continued from page 41...
Academic Regulations

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.

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 3.0.
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.

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:

Fall 1997 Graduating, Bachelor, Degree-Seeking Freshmen

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Graduates</td>
<td>477</td>
<td>543</td>
<td>1020</td>
</tr>
<tr>
<td>Percent of Total</td>
<td>47%</td>
<td>51%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Fall 1997 Graduating Student Athletes
Who Received Athletically Related Aid

Percent of Total: 49%

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 notify the Office of the Registrar, Hunt 146, in writing before the end of the first week of classes each semester. The request will be honored for all publications and communications undertaken during the remainder of any semester when notification has been received.

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 arbitration. 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 be made 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

“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 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 Vice Chancellor for Academic Affairs of the University. The Vice Chancellor for Academic Affairs 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.
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 four branch libraries: the Robert A. and Vivian Young Law Library, the Fine Arts Library, the Chemistry Library, and the Physics Library. The combined holdings of the libraries total over 1.6 million volumes of books and bound periodicals and over three million items in microform. The Libraries currently receive over 17,000 separate journal and serial publications by subscription, gift, and exchange. Other resources in the collections include over 24,000 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 (GWLA), the Center for Research Libraries (CRL), AMIGOS Bibliographic Council, and the state consortium ARKnet. Through OCLC, the libraries share cataloging and interlibrary loan information with hundreds of libraries all over the world. The University Libraries’ records are computerized on the InfoLinks library system. Holdings information may be accessed and searched electronically within the library, as well as from computers in homes, offices, or dorm rooms via modem or network connection. General and specialized indexing and abstracting databases, as well as electronic full-text resources, may be accessed through InfoLinks or through the libraries’ electronic home page (accessed through the University home page or directly at <http://uark.edu/libinfo>), which provides a wide variety of other information services as well.

Anyone with a University ID card may check out materials through the libraries’ convenient electronic checkout system. Students may also renew library materials and request holds electronically, without assistance, by using their University ID numbers to access their circulation records. Loan periods are of varying lengths as defined by circulation policies, which are available at the Circulation Desk or through the library home page. When faculty members or graduate students need items that are not available in the University Libraries, the items may be obtained by filling out the online interlibrary loan form on the libraries’ home page. Requested materials will then be delivered—often electronically to student and faculty desktops—from other cooperating libraries.

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

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 (Internet, CD-ROM, DVD) formats and are arranged according to the Superintendent of Documents classification numbering system (SuDoc).

The Libraries’ Special Collections acquires and preserves material for research in the history, literature, and culture of Arkansas and surrounding regions. Scholars 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 viewing rooms, reserve policies, carrel space for graduate students, computer laptop loans for in-house use, group study rooms, and book and journal ordering procedures, please inquire at 479-575-4104. For inquiries regarding seminar rooms, faculty studies, gifts and donations, or any other library matter, please contact the Dean’s Office 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>.

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 consultants 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.
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), computing 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 academic 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 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 check-out 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.

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://www.uark.edu/campus/comperv>.

### 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.
University Centers and Research Units

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 advisors 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.

**AGRICULTURAL EXPERIMENT STATION**
http://www.uark.edu/admin/aes/

Richard A. Roeder, associate director
AFLS E108
479-575-4446

**ARKANSAS ARCHEOLOGICAL SURVEY**
http://www.uark.edu/campus-resources/archinfo/

Thomas Green, director
ARAS 147
479-575-3556

**ARKANSAS CENTER FOR ORAL AND VISUAL HISTORY**
http://www.uark.edu/misc/arohist/main/

Jeannie Whayne, director
MAIN 416
479-575-5895

**ARKANSAS COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT**
http://biology.uark.edu/Coop/home/coophome.htm

David Krementz, unit leader
SCEN 632
479-575-6709

**ARKANSAS LEADERSHIP ACADEMY**
http://www.arkansasleadershipacademy.org/

Beverly Elliott, director
WAAX 300
479-575-3030

**ARKANSAS – OKLAHOMA CENTER FOR SPACE AND PLANETARY SCIENCES**
http://www.uark.edu/csaps/

Derek Sears, director
Space & Planetary Sciences Bldg, Dickson St.
479-575-4272
csaps@uark.edu

**ARKANSAS WATER RESOURCES CENTER**
http://www.uark.edu/depts/awrc/

Ralph K. Davis, director
OZAR 112
479-575-4403
awrc@uark.edu
<table>
<thead>
<tr>
<th>University Centers and Research Units</th>
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<tbody>
<tr>
<td><strong>BESSION MOORE CENTER FOR ECONOMIC EDUCATION</strong></td>
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<tr>
<td><a href="http://ceed.uark.edu/home/default.htm/">http://ceed.uark.edu/home/default.htm/</a></td>
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<tr>
<td>Rita Littrell, director</td>
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<tr>
<td>RCED 205</td>
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<tr>
<td>479-575-2855</td>
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<tr>
<td><strong>CENTER FOR ADVANCED SPATIAL TECHNOLOGIES</strong></td>
</tr>
<tr>
<td><a href="http://www.cast.uark.edu/">http://www.cast.uark.edu/</a></td>
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<tr>
<td>Fred Limp, director</td>
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<tr>
<td>OZAR 12</td>
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<tr>
<td>479-575-6159</td>
</tr>
<tr>
<td><a href="mailto:info@cast.uark.edu">info@cast.uark.edu</a></td>
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<tr>
<td><strong>CENTER FOR ARKANSAS AND REGIONAL STUDIES</strong></td>
</tr>
<tr>
<td><a href="http://www.uark.edu/misc/carsinfo/">http://www.uark.edu/misc/carsinfo/</a></td>
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<tr>
<td>Robert Cochran, director</td>
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<tr>
<td>MAIN 506</td>
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<td>479-575-7708</td>
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<tr>
<td><strong>CENTER FOR BUSINESS AND ECONOMIC RESEARCH</strong></td>
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<td><a href="http://cber.uark.edu/">http://cber.uark.edu/</a></td>
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<tr>
<td>Jeffery T. Collins, director</td>
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<tr>
<td>RCED 217</td>
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<tr>
<td>479-575-4151</td>
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<tr>
<td><a href="mailto:cberinfo@cavern.uark.edu">cberinfo@cavern.uark.edu</a></td>
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<tr>
<td><strong>CENTER FOR COMMUNICATION AND MEDIA RESEARCH</strong></td>
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<tr>
<td>Robert H. Wicks, director</td>
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<tr>
<td>KIMP 417</td>
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<tr>
<td>479-575-3046</td>
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<tr>
<td><a href="mailto:comm@uark.edu">comm@uark.edu</a></td>
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<tr>
<td><strong>CENTER FOR ENGINEERING LOGISTICS AND DISTRIBUTION</strong></td>
</tr>
<tr>
<td><a href="http://celdi.ineg.uark.edu/">http://celdi.ineg.uark.edu/</a></td>
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<tr>
<td>John R. English, executive director</td>
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<tr>
<td>BELL 4207</td>
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<tr>
<td>479-575-2124</td>
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<tr>
<td><strong>CENTER FOR MANAGEMENT AND EXECUTIVE DEVELOPMENT</strong></td>
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<tr>
<td><a href="http://cmdu.uark.edu/">http://cmdu.uark.edu/</a></td>
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<tr>
<td>Tim Kizer, director</td>
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<tr>
<td>RCED 210</td>
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<tr>
<td>479-575-2856</td>
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<tr>
<td><a href="mailto:cmd@walton.uark.edu">cmd@walton.uark.edu</a></td>
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<tr>
<td><strong>CENTER FOR MATHEMATICS AND SCIENCE EDUCATION</strong></td>
</tr>
<tr>
<td>Lynne Hehr, director</td>
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<tr>
<td>OZAR 106</td>
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<tr>
<td>479-575-3875</td>
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<tr>
<td><strong>CENTER FOR PROTEIN STRUCTURE, FUNCTION, AND DYNAMICS</strong></td>
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<tr>
<td>Frank Millett and Roger Koepp, co-directors</td>
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<tr>
<td>CHEM 101</td>
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<td>479-575-4601</td>
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<td><strong>CENTER FOR RETAILING EXCELLENCE</strong></td>
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<tr>
<td><a href="http://cre.uark.edu/">http://cre.uark.edu/</a></td>
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<tr>
<td>Claudia B. Mobley, director</td>
</tr>
<tr>
<td>WCOB 246F</td>
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<tr>
<td>479-575-2643</td>
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<tr>
<td><strong>CENTER FOR SEMICONDUCTOR PHYSICS IN NANOSTRUCTURES</strong></td>
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<tr>
<td><a href="http://www.cspin.net/">http://www.cspin.net/</a></td>
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<tr>
<td>Greg Salamo and Paul Calleja, co-directors</td>
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<tr>
<td>PHYS 226</td>
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<tr>
<td>479-575-5931 or 479-575-3670</td>
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<tr>
<td><strong>CENTER FOR SENSING TECHNOLOGY AND RESEARCH</strong></td>
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<tr>
<td>Charles Wilkins, director</td>
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<td>CHEM 101</td>
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<td>479-575-3160</td>
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DEPARTMENT OF REHABILITATION
EDUCATION AND RESEARCH
http://www.uark.edu/depts/coehp/RHAB.htm
Brent T. Williams, coordinator
GRAD 100
479-575-8696

Regional Continuing Education Center in Rehabilitation
http://www.rcep6.org/
Jeanne Miller, director
PO Box 1358, Building 35
Hot Spring, AR 71902
501-623-7700

Rehabilitation Research and Training Center for People Who are Deaf or Hard of Hearing
http://www.uark.edu/depts/rehabres/
Douglas Watson, project director
4601 W. Markham
Little Rock, AR 72205
501-686-9691 (v/tty)

DIANE D. BLAIR CENTER OF SOUTHERN POLITICS AND SOCIETY
Todd Shields, director
MAIN 428
479-575-3356

FAMILY AND COMMUNITY INSTITUTE (THE)
http://www.uark.edu/depts/social/jones_center.htm
The Jones Center for Families
922 E. Emma Ave.
Springdale, AR 72765
479-965-8090

FULBRIGHT INSTITUTE OF INTERNATIONAL RELATIONS
http://www.uark.edu/~fiir/
Donald R. Kelley, director
FIIR
479-575-2006

GARVAN WOODLAND GARDENS
http://www.garvangardens.org/
David Davies, director
550 Arkridge Road, PO Box 22240
Hot Springs National Park, AR 71903
1-800-366-4664
info@garvangardens.org

GREAT EXPECTATIONS OF ARKANSAS
http://www.geaonline.org/
Marie Parker, director
WAAX 311
479-575-5404

HEALTH EDUCATION PROJECTS OFFICE
http://www.uark.edu/depts/hepoinfo/hepo.html
Michael Young, director
HPER 326A
479-575-5639

HIGH DENSITY ELECTRONICS CENTER
http://www.hidec.engr.uark.edu/
Carmen Hamilton
HiDEC/ENRC 700
479-575-3009

HUMAN PERFORMANCE LABORATORY
http://www.uark.edu/admin/hplweb/
Ro DiBrezzo, director
HPER 321
479-575-6762

INFORMATION TECHNOLOGY RESEARCH CENTER
http://itrc.uark.edu/
Bill Hardgrave, director
WCOB 246
479-575-4261

INSTITUTE OF FOOD SCIENCE AND ENGINEERING
http://www.uark.edu/depts/ifse/
Justin R. Morris, director
FDSC Farm
479-575-4040

INTERNATIONAL CENTER FOR THE STUDY OF EARLY ASIAN AND MIDDLE EASTERN MUSICS
http://www.uark.edu/ua/eeam
Rembrandt Wolpert, director
MUSC 201
479-575-4701
KING FAHD CENTER FOR MIDDLE EAST AND ISLAMIC STUDIES (THE)
http://www.uark.edu/depts/mesp/
Vincent Cornell, director
MAIN 202
479-575-4157

MACK-BLACKWELL NATIONAL RURAL TRANSPORTATION STUDY CENTER
Melissa Tooley, director
BELL 4190
479-575-6026
mbtc@engr.uark.edu

NATIONAL AGRICULTURAL LAW CENTER
http://www.NationalAgLawCenter.org/
Michael T. Roberts, director
WATR 107
479-575-7646
nataglaw@uark.edu

OFFICE FOR STUDIES ON AGING
http://www.uark.edu/aging/
Ro DiBrezzo and Barbara Shadden, co-directors
HPER 321X
479-575-5262
aging@cavern.uark.edu

OFFICE OF RESEARCH, MEASUREMENT AND EVALUATION
http://orme.uark.edu/orme2/index.html
Ronna Turner, director
WAAX 302
479-575-5593
orme@cavern.uark.edu

SMALL BUSINESS DEVELOPMENT CENTER
http://sbdc.waltoncollege.uark.edu/
Gary McLaughlin, director
RCED 140
479-575-5148

SPEECH AND HEARING CLINIC
http://www.uark.edu/depts/coehp/SPCL.htm
Barbara Shadden, director
SPCL 201
479-575-4509

SUPPLY CHAIN MANAGEMENT RESEARCH CENTER
http://scmr.uark.edu/
Jim Crowell, director
WCOB 246
479-575-6107

SURVEY RESEARCH CENTER
http://www.uark.edu/admin/src/
Molly Longstreth, director
HOTZ 123
479-575-4222
src@uark.edu

UNIVERSITY OF ARKANSAS COMMUNITY DESIGN CENTER
http://www.uark.edu/depts/uacdc/
Stephen Luoni, director
104 Northeast Ave.
Fayetteville, AR  72701
479-575-5772
uacdc@uark.edu

UNIVERSITY OF ARKANSAS ECONOMIC DEVELOPMENT INSTITUTE
http://uaedi.cast.uark.edu/
Otto J. Loewer, director
226 Engineering Hall
479-575-5118
Student Affairs

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 Dean of Students offers a wide variety of educational programming, as well as advising and referral services for individual students and many student organizations. 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 mission 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 one-on-one academic counseling. Services offered at the ELC are available to all UA students.

The center is a collaboration of several academic support programs: Student Support Services, Commuter and Non-Traditional Student Services, the Quality Writing Center, SOAR Centers, and the Math Resource 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 checkouts, 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 or her education, works or has worked full-time, is married, or is a parent or has dependents. Recent figures indicate that approximately 25 percent of undergraduate students at the University of Arkansas are non-traditional. The mission of the Office for Non-Traditional & Commuter Students is to provide prospective and currently enrolled non-traditional and commuter students with support, services, information, and resources to meet their unique needs.

The office will assist individuals with problem solving and provide information and referrals. For more information, visit us in Walton Hall (south end), telephone 479-575-7351, or e-mail onts@uark.edu.

In addition, several Student Affairs areas provide programs for older students. Orientation has two summer sessions for transfer and adult students. Campus Dining Services offer individual meals or meal ticket programs for off-campus students. Career Services has extended office hours beyond 4:30 p.m. Counseling and Psychological Services (CAPS) provides a number of workshops and support groups designed to meet the special needs of adult learners.

Information on childcare services is available from the Office for Non-Traditional & Commuter Students.

Student Support Services

Student Support Services is available to students who need academic or counseling support to successfully pursue a college degree. Services include assistance in securing financial aid, tutoring, wellness counseling, cultural enrichment opportunities, and college survival skills training. Students’ needs are determined by an interview with a counselor and a personal career-abilities assessment. To qualify for the program, a student must be either the first in their family to pursue a
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, yearly seminars for immigration attorneys, and an International Student Support Group each semester. 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 events such as the International Bazaar and an annual banquet.

The Office of International Students and Scholars is in Holcombe Hall, Room 104; phone 479-575-5003; 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, a representative 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 improve processes that may inadvertently create conflicts, or inhibit informal resolution. Our hope 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 A677A; 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, and the Panhellenic Council.

The Interfraternity Council (IFC), Panhellenic Council (PHC), and National Pan-Hellenic Council (NPHC) are the governing bodies for 10 national sororities and 16 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 exists to enhance the University of Arkansas academic experience by preparing students for life in a pluralistic society. The staff seeks to provide a “home away from home” atmosphere for African American, Latino/a, Native American, and Asian American students; to provide an environment that promotes cross-cultural interaction; and to collaborate with the University community in providing educational, cultural, social programs, and resources to assist in the development and advancement of a diverse community. The center also offers a large gallery area for programming, displays, and exhibits, a small resource library, and an informal lounge. The center is in the Arkansas Union, Suite 404; phone 479-575-2064; Web: <http://www.uark.edu/studorg/samec>.

Multicultural Student Services

The Office of Multicultural Student Services seeks to develop and use existing programs to provide for the social, cultural, and academic presence of students of color on campus. In addition, we strive to educate and sensitize the campus community concerning diversity and to provide resources to help each individual and University department to acquire the skills and knowledge needed to make the University campus a place that truly respects and appreciates diversity. For more information, contact the office of Multicultural Student Services in the Arkansas Union, Suite 404 or call 479-575-2064.

Reasonable Accommmodations for Students with Disabilities

The Center for Students with Disabilities (CSD), 104 Arkansas Union, serves as the central campus resource for students with disabilities. Working in partnership with students, faculty, and staff, the goal of the CSD is to ensure a physically and educationally accessible University environment. CSD staff work individually with students and assist academic and non-academic units to determine reasonable accommodations that will enable every student to have access to the full range of programs, services, and activities offered through the University.

For more information contact the CSD at Center for Students with Disabilities, 1 University of Arkansas, 104 ARKU, Fayetteville, AR
Office of Community Standards and Student Ethics

The mission of the Office for Community Standards and Student Ethics (OCSSSE) 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 Conduct Code infractions of University rules, regulations, and/or laws by students. This system is informal, non-adversarial, and is intended to be a part of the total educative 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, telephone 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, and First Year Experience Seminar courses. First Year Experience Seminar courses are guided by an advisory board of Student Affairs professionals and associate deans from each academic college. U of A 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 promotes their academic growth and supports 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 Youth Opportunities Unlimited. 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 is an early intervention project. Serving 1,200 students in grades 6-12, the program promotes 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 program prepares 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. A second Educational Talent Search program, College Project, was funded in 2002. College Project serves 600 Native American students attending school in specified districts eligible to receive Indian Education funds.

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 tuition for up to six hours of college credit. A second Upward Bound program, R.E.A.L. (Reaching Educational Aspirations of Latinos/as), was funded in 2003. R.E.A.L. serves 50 Latino/a students in the Rogers and Springdale Public School districts.
University of Arkansas, Fayetteville

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.

Youth Opportunities Unlimited (Y.O.U.)

Youth Opportunities Unlimited (Y.O.U.) is a statewide, comprehensive program designed to encourage 14- and 15-year-old students to remain in school by providing experiences for the development and enhancement of basic educational and vocational skills. A summer residential component combines a University work-based program with a wide range of support services encompassing health care, counseling, and enrichment courses. Students participating in the program receive ongoing follow-up services including monthly telephone contacts, supplemental newsletters, and regular mailings.

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 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/>.

UNIVERSITY HEALTH CENTER

The University 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, University Health Center services and programs support the education and development of each individual. University 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 University 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 University 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.

Pat Walker Health Center

By December 2004, the Pat Walker Health Center will open at 525 North Garland Avenue. The University Health Center will relocate to the Pat Walker Health Center 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 Student Health Insurance office, located at the University Health Center.

The University Health Center welcomes inquiries about specific services at 479-575-4451; TTY 479-575-4124. More information is available on the Web at <http://www.uark.edu/depts/healthinfo>.

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 Exemption Requirement will 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 University apartments, in response to personal, social, academic, and developmental needs. Assistant Directors are full-time, master’s degree level, Residence Life professionals. They live on campus and are each responsible for three to six residence halls. Access to residence halls is controlled by electronic card readers, which allow only residents and their escorted guests to enter.

Residential living offers several options: male, female, graduate, or co-ed. 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, nursing, business and technology are also available to students. 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 for those living in a graduate-only facility or 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 University community life, the Union complements the academic experience through an extensive variety of cultural, educational, social, and recreational programs. These programs provide opportunities 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 University. 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 Union Market offers Chick Fil A®, Burger King®, salads, soups, Trattoria® pizza/pasta, Upper Crust® submarine sandwiches, Austin Blues Bar-B-Que®, hot rotisserie foods, Mexican specialties, baked items, Southern Tsunami Sushi, and a Mongolian Wok. RZ’s Coffeehouse® and a Stop Gap “grab and go” convenience store are located in the east 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 Cutters, First Security Bank, Union Copy Center, Razorback Shop, and Computer Store.

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 provides office space for many Registered Student Organizations and Student Support offices. The Office for Student Involvement and Leadership provides resources for student organizations. Over 250 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. The Student I.D. Card Office, Razorback$ program, and the Information Center are administered by the Arkansas Union. Offices for Student Involvement and Leadership, First Year Experience, Minority Student Services, Greek Affairs, Orientation, Non-Traditional Students, Assistant Vice Chancellor for Student Affairs, Multicultural Center, University Career Development Center, Center for Students with Disabilities, and other programs are in the Union. For more information, visit the Arkansas Union Web site at <http://www.uark.edu/campus-resources/union>.

**Office for Student Involvement and Leadership**

The Office for Student Involvement and Leadership, in the Arkansas Union, is the central location for student organizations and activities for the University of Arkansas. The main goal of the office is to provide all students with opportunities for involvement and to enable students to learn and practice leadership and management skills that complement classroom learning. The Office for Student Involvement and Leadership is responsible for the oversight and administration of five major areas:

**Student Organizations**

All student organizations, must register annually with the Office for Student Involvement and Leadership. This registration information is kept on file to assist students and administrators in learning more about particular organizations. The Office for Student Involvement and Leadership provides student organizations with assistance and services to help them succeed, including the annual Student Involvement Fair, facility reservations and fund-raising assistance, trademark forms, mailboxes, and locker space.

The office also assists student organizations in event planning and presentation. Limited office space in the Arkansas Union is awarded annually to organizations by the Arkansas Union Advisory Council.

**Leadership Development and Volunteer Programs**

The Leadership Development Programs are designed to help students gain and refine leadership and management skills and to network with other campus leaders. Some of the programs and retreats require a minimal registration fee. Programs include: Emerging Leaders, The University Leadership Retreat, and the Leadership Resource Library. Student team members and mentors are utilized to help plan and implement each of
these programs. This experience serves as a part of the educational process for the students involved. The Volunteer Action Center encourages community service and service learning. A student e-mail list acts as a clearinghouse for volunteer and community service opportunities within the surrounding area. Large-scale volunteer events such as “Make A Difference Day” and “Students' Day of Caring” are also sponsored by this area. Both of these programs perform multiple volunteer projects on a particular day, one in the fall and the other in the spring.

**University Programs**

University Programs is a volunteer student organization responsible for coordinating and planning over 350 events annually for the campus community. Staff members serve as advisers to University Programs. University Programs provides UA students with cultural and educational experiences, entertainment, and fun. Eight committees, committee chairpersons, and three executive officers select, schedule, and produce events such as concerts, movies, lectures, fine arts performances, gallery exhibits, and much more for the UA community. University Programs provides excellent opportunities to develop leadership skills and to gain practical experience in a variety of areas. Supported by an activity fee instituted in 1988, University Programs events, with the exception of major concerts, are free to students.

**Associated Student Government (ASG)**

See Campus Governance in the Code of Student Life, available in room 325 of the Administration Building.

**Friday Night Live (FNL)**

Late night weekend programming at the University of Arkansas is a collaborative retention effort designed to assist students in developing new and diverse relationships, participating 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.

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**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.

**Organizations**

Student organizations vary from those in professional fields to those representing co-curricular activities. They 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. Twenty or more religious organizations conduct programs of spiritual guidance and social activity at the University of Arkansas, and many have student centers near campus.

**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, Aux Arc 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 STATEMENT

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, coordination of honors programs and curricula, and coordination of related services.

ORGANIZATION AND FACILITIES

The Dean’s Office for the Honors College is housed on the fourth floor of the Administration Building. Large, newly renovated 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 dollar 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 Bodenhamer Scholarship, the Chancellor’s 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 NSF, 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
Gloria Flores, College of Education and Health Professions
Peabody Hall 8
Carol Gattis, College of Engineering
Bell Engineering 4184

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

ADMISSION TO THE HONORS COLLEGE

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).

HONORS 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 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.

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.

HONORS DEGREES

The Honors College does not confer degrees. Honors degrees are conferred by the college of major.
Dale Bumpers College of Agricultural, Food and Life Sciences

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

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

Dean
Gregory J. Weidemann, Ph.D.
University of Wisconsin

Associate Dean
Donna L. Graham, Ph.D.
University of Maryland

Associate Director/Associate Dean
Richard A. Roeder, Ph.D.
Texas A&M

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

E-Mail: dbcafls@uark.edu

MISSION

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 developed 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 ACTA should contact the dean’s office.

COLLEGE SCHOLARSHIPS

In addition to the scholarships awarded by the University, there are a number of scholarships available to students in agricultural and human environmental sciences made possible by generous gifts from many firms and individuals. During the 2003-2004 school year, the college awarded approximately 450 scholarships for over $650,000. 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 March 1 each year (priority deadline for new freshmen is February 15). 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, BUMPERS COLLEGE

Agricultural Business Club is a student organization for those 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.

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 and/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.

All human environmental sciences majors are eligible for student membership in the American Association of Family and Consumer Sciences (AAFCS). 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 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 Association for the Education of Young Children (NAEYC) 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.

HONOR SOCIETIES

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 fraternity 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 sen-
iors, 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 their 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.

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 including interactions with students in honors programs in other colleges.

The results of the student’s original research or creative project is 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 honor graduate of the college. 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. Honors graduates will be recognized as graduating with Honors distinction. Students must maintain a GPA of 3.25 to remain in the program.

COLLEGE ACADEMIC AND DEGREE REQUIREMENTS

General Residency Requirement

For the Bachelor of Science in Agricultural, Food and Life Sciences degree, a student may choose one of 15 majors that satisfies his or her interests and goals for educational achievement. Some programs have concentrations, and most allow students to select a minor.

For the degree of Bachelor of Science in Agricultural, Food and Life Sciences, students must complete a minimum of 30 semester hours within the Bumpers College.

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.

Grade-Point Requirement

A grade-point average of 2.00 (“C” average) on all work attempted at the University of Arkansas is required for graduation.

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: 3.50–3.74
   (b) Magna Cum Laude: 3.75–3.89
   (c) Summa Cum Laude: 3.90–4.00
4. Students may graduate with honors without participating in the Honors Program.

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 problem may be counted for degree credit.
3. Elective courses used for degree credit may be chosen from any department in the University and are subject to the approval of the academic adviser.
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:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band and/or chorus</td>
<td>4</td>
</tr>
<tr>
<td>Drama and/or debate</td>
<td>4</td>
</tr>
<tr>
<td>Judging teams</td>
<td>4</td>
</tr>
<tr>
<td>Physical education activities or athletics</td>
<td>4</td>
</tr>
</tbody>
</table>
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 applies regardless of the school from which the course is taken.

Additional Requirements

In addition to the University requirements for graduation, including the University Core requirements (page 42), a student must complete a prescribed degree curriculum in accordance with the rules and regulations of the Dale Bumpers College of Agricultural, Food and Life Sciences to be eligible for a baccalaureate degree from the college.

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 42.

DEGREES OFFERED

All entering students (including freshmen, international and transfer 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.)

Non-Degree Training

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 or unclassified students.
COLLEGE CURRICULA

The B.S.A., B.S.H.E.S., and B.I.D. degrees will be conferred upon students who have met all the general University and college requirements for a degree, and who have completed 124 semester hours in accordance with the college requirements.

Students, with the assistance of a faculty adviser, will plan a program best suited to their own background, training, and objectives. The program of study will be decided after consideration of a student’s preparation, aptitudes, test scores, and other information. Undeclared students will work with an adviser as they explore program opportunities within the college. Students must inquire about specific requirements in the department or school where the major is located. Students are responsible for meeting all requirements for graduation.

Selection of a Major

A student who elects to major in some area of agricultural, food and life sciences or human environmental sciences 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.

Degree Requirements:

<table>
<thead>
<tr>
<th>REQUIREMENTS</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A total 124 semester hours with a minimum 2.0 cumulative grade-point average</td>
<td>124</td>
</tr>
<tr>
<td>2. University Core Requirements: See page 42 Check requirements for each major; some require specific core courses</td>
<td>35</td>
</tr>
<tr>
<td>3. Other University Requirements ENGL 2003, Advanced Composition or ENGL 2013 (See page 41 for details.)</td>
<td>3</td>
</tr>
<tr>
<td>4. College Requirements COMM 1313 Communications Intensive Elective See majors for specific requirement.</td>
<td>6</td>
</tr>
<tr>
<td>5. A minimum of 39 hours of courses at the 3000-level and above.</td>
<td>39+</td>
</tr>
<tr>
<td>6. Electives May be used to develop a minor</td>
<td>1-32</td>
</tr>
<tr>
<td>7. Departmental Requirements See specific majors and concentrations Bumpers College courses outside of major may be included in departmental requirements</td>
<td>33-59</td>
</tr>
</tbody>
</table>

MAJORS AND MINORS IN 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, Communications and Technology (AECT)

- Agricultural Education (AGED)
- Extension and Industry Education (EXIE)
- Agricultural Systems Technology Management (ASTM)
- Agricultural Communications (ACOM)

Animal Science (ANSC)

Crop Management (CPMG)

Environmental, Soil, and Water Science (ESWS)

- Food Science (FDSC)
- Food Technology (FDTN)

Horticulture (HORT)

- Horticulture Management and Production (HMAP)
- Horticulture Science (HSCI)
- Horticulture Merchandising (HMER)

Poultry Science (POSC)

Turf & Landscape Horticulture (TLHT)

- Turf Management (TMGM)
- Landscape Horticulture (LHRT)

MINORS OFFERED

- Agricultural Business (AGBS)
- Agricultural Education (AGED)
- Agricultural Systems Technology Management (ASTM)
- Animal Science (ANSC)
- Crop Management (CPMG)
- Entomology (ENTO)
- Environmental, Soil, and Water Science (ESWS)
- Extension and Industry Education (EXIE)
- Food Science (FDSC)
- Global Agricultural, Food and Life Sciences (AFLS)
- Horticultural Production (HORT)
- Journalism (JOUR)
- Landscape Design and Urban Horticulture (LHRT)
- Pest Management (PMGT)
- Plant Pathology (PLPA)
- Poultry Science (POSC)
- Turf Management (TURF)

MAJORS AND MINORS IN THE 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 Foods and Nutrition (GFNU)
  - 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 Studies (HDFS)
- Human Nutrition (GFNU)
- Global Agricultural, Food and Life Sciences (AFLS)
- Journalism (JOUR)

Minor in Global Agricultural, Food and Life Sciences

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.
Requirements for a minor in Global Agricultural, Food and Life Sciences (AFLS):
18 semester hours to include AGEC 2003;
3 to 6 hours study abroad;
AGEC 4163 or AGEC 4613 or AGEC 402V (international topic approved by student’s adviser and IAP director);
6 hours to be selected from the following:
ANTH 1023 ANTH 3123 ANTH 4253
FIIR 2813 GEOG 2023 GEOG 4783
GEOG 4033 GEOG 4243 GEOG 4793
HIST 3043 HIST 3203 HIST 4103
PLSC 2813 PLSC 3803 PLSC 3813
And 3 hours of elective from the following (for students only taking
3 hours study abroad):
AGEC 4163 AGEC 4613 AGEC 402V
COMM 4343 ECON 4633 ECON 4643
ECON 4653 FINN 3703 PLSC 3853
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. Preston Laffey of International Agriculture Programs, AGRI Building, room 216.

Minor in Journalism

This 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.

Requirements for a minor in journalism:
Students interested in a journalism minor may choose from one of three areas:
Print Journalism (18 semester hours)
JOUR 1023, JOUR 1033, JOUR 2013, JOUR 3013,
JOUR 3123 and JOUR 3633
Broadcast Journalism (18 semester hours)
JOUR 1023, JOUR 1033, JOUR 2032/2031L,
JOUR 3072/3071L, JOUR 3633 and JOUR 4863/4860L
Print and Broadcast Journalism (18 semester hours)
JOUR 1023, JOUR 1033, JOUR 2013,
JOUR 2032/2031L, JOUR 3072/3071L and JOUR 3633

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.

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.

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 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 most 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 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 fall 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_classes.htm>.

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 nine departments and in one 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.

Departments, Degree Programs and Courses

AGRICULTURAL AND EXTENSION EDUCATION (AEED)

Don R. Herring
Head of the Department
205 Agriculture Building
479-575-2035

• Emeritus University Professor Hardy
• Professors Graham, Herring, Johnson, Wardlow
• Adjunct Professors Lyles, Baker
• Professors Emeriti Braker, Ferguson, Love, Rolloff
• Associate Professors Arthur, Scott
• Associate Professor Emeritus Scanlon
• 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 four 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 be certified to teach agricultural science in public schools. Students may choose one of two options for teacher certification: either a four-year certification program or a five-year certification program that culminates in a master’s degree (M.A.T.). The department of agricultural and extension education has information about both programs. Admission and graduation requirements for the M.A.T. program are listed in the College of Education and Health Professions section of this catalog.

Extension and Industry Education Concentration (EXIE)

This concentration is designed for students who desire employment as professional educators/change agents with either the Cooperative Extension Service or in agricultural business and industry. Graduates from this program are in demand because it combines strong leadership, team management, communication, and human relations skills with a broad base of competencies in agricultural sciences.

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 42 for University Core and page 64 for B.S.A. requirements.)

35 hours of University Core requirements to include:
ENGL 2003 (exemption possible)
MATH 1203 (College Algebra or higher)
BIOL 1543/1541L Principles of Biology/Lab
CHEM 1074/1071L Fundamentals of Chemistry/Lab, or CHEM 1103/1101L and CHEM 1123/1121L
WLIT 1113 or WLIT 1123 (required for AGED concentration)
AGEC 1103 Principles of Agricultural Microeconomics, or AGEC 2103 Principles of Agricultural Macroeconomics
PSYC 2003 General Psychology

College Requirements
COMM 1313 Fund. of Communication
AGED 3142/3141L Agricultural Communications

Departmental Requirements 83
(see concentration for course selection):
AGED 1001 Orientation to Agricultural & Extension Education
AFLS 1011 Freshman Orientation
AGED 3133/3130L Methods in Agricultural Education/Lab, or EXED 4173 Principles of Extension Teaching
AGED 4012 Program Development, or AGED 3153 Leadership Development in Agriculture, or EXED 3023 Intro. to the Coop Extension Service
AGED 4003 Issues in Agriculture
AGME 1613/1611L Fundamentals of Ag Systems Tech/Lab
AGME 2903 Application of Microcomputers
AGME 4011 Senior Seminar
ANSC 1032 Introductory Animal Science
ANSC 1051 Intro. to the Livestock Industry
CHEM 2613–2613/2611L Organic Physio Chemistry
BIOL 2013/2011L General Microbiology, or PHYS 1044 Physics for Architects
CSES 2203 Soil Science
CSES 2201L Soil Science/Lab, or CSES 355 V Soil Profile Description
CSES/HORT 1203 Intro. to Plant Sciences
CSES 2013 Pest Management
EXED 475V (3 hrs.) Internship in Extension, or AGED 475V (3-6 hrs.) Internship in Agricultural Education (for teacher certification)
Biological Science or Math electives (3-4 hours)
Electives: 7-26 hours selected in conjunction with adviser

Additional Requirements for Agricultural Education Concentration (AGED):
For teacher certification
Agricultural electives 6-11 hours – selected in conjunction with adviser plus the following courses:
AGED 1122 Agricultural Youth Organizations
AGED 3133 Methods in Ag Ed
AGED 4012 Program Development
AGED 4632 Teaching Diverse Populations in Agriculture
AGED 4843 Methods in Ag. Labs
AGME 2123 Metals and Welding
AGME 3102/3101L Small Power Units/Turf Equipment/Lab, or AGME 3173/3170L Electricity in Agriculture, or AGME 4203 Mechanized Systems Mgmt.
AGME (two hours JR/SR elective)
CIED 1002 Intro. to Education
AGED 1031 Intro. to Early Field Experience
CIED 3023 Survey of Exceptionalities
CIED 3033 Classroom Learning Theory
ETEC 2001/2002L Educational Technology/Lab, or AGME 2903 Applications of Microcomputers
HLSC 3633 First Responder/First Aid
HORT 3 elective hours

Additional Requirements for Extension and Industry Education Concentration (EXIE) (14–21 hrs).
EXED 4173 Principles of Extension Teaching
AGED 3153 Leadership Development in Agriculture
EXED 3023 Intro. to Coop Extension Service
EXED 4183 Management of Volunteer Programs
5-6 hours from the following:
COMM 3303 Small Group Communication
RSOC 4623 Intro. Community Dev., or RSOC 2603 Rural Sociology
AGED 1122 Agricultural Youth Organizations
VAED 3113 Skills/Strategies in HRD
VAED 3123 Intro. to Human Resource Dev.
AGED 4113 Theory and Principles of Adult Education
MGMT (3 elective hours)

Additional requirements for Agricultural Systems Technology Management Concentration (ASTM) (14 to 21 hours).
Select from:
AGME 2123 Metals and Welding
AGME 3153 Surveying in Agriculture and Forestry
AGME 3102/3101L Small Power Units/Turf Equipment/Lab
AGME 3173 Electricity in Ag.
AGME 4203 Mechanized Systems Management
AGME 4973 Irrigation
ENSC 3263 Environmental Soil and Water Conservation
PHYS 220V Intro. Electronics I
PHYS 320V Intro. Electronics II
GEOG 4523 Computer Mapping
GEOG 4543 Geographic Info. Sys.
GEOG 4593 Intro. to Global Positioning Systems

Additional requirements for Agricultural Communications (ACOM) (14–21 hours)
COMM 2303 Public Speaking
JOUR 1033 Fundamentals of Journalism
JOUR 1023 Media and Society
Select 5 hours from the following:
AGED 4143 Electronic Communications in Agriculture
AGED 4243 Publication Production
AGED 3942 Professional Development in Agri. Communication
COMM 3703 Organizational Communication
COMM 3303 Small Group Communication
JOUR 2013 News Reporting I
JOUR 3023 News Reporting II
JOUR 2032/2031L Broadcast News Reporting I
JOUR 3072/3071L Broadcast News Reporting II
JOUR 2332/2331L Photojournalism I
JOUR 3743 Public Relations Principles

Requirements for a minor in Agricultural Education (AGED):
22 hours to include the following:
CIED 1002, AGED 1031, ETEC 2002L/2001, or AGME 2903, CIED 3023, CIED 3033, AGED 1122, AGED 3133, AGED 4843, and AGED 4012.
A student completing the requirements for this minor meets the education hours required for entry into the master of arts in teaching (M.A.T.). Students interested in being certified to teach must contact the department of agricultural and extension education for additional requirements to enter the M.A.T. program.
Requirements for a minor in agricultural systems technology management (ASTM):
18 hours to include AGME 1613 and AGME 2903 and 12 hours selected from the following:
AGME 1611L, AGME 2123, AGME 3153, AGME 3102/3101L, AGME 3173, AGME 4203, AGME 4973, ENSC 3263
Students planning to minor in ASTM should contact the department of agricultural and extension education.

Requirements for a minor in extension and industry education (EXIE):
18 hours to include AGED 1122, AGED 1001, EXED 3023, AGED 3133 or EXED 4173, EXED 475V, and Management elective or EXED 4183 or RSOC 4623.
Select 3 additional hours from COMM 2303, COMM 3303, and JOUR 1033 or AGED 3142/3141L.
Students planning to minor in EXIE should contact the department of agricultural and extension education.

Requirements for a minor in journalism (JOUR):
18 hours. See page 65 for specific requirements.

SEE PAGES 239, 278, AND 240 FOR AGRICULTURAL AND EXTENSION EDUCATION COURSES (AGED, EXED, OR AGME).

AGRICULTURAL ECONOMICS AND AGRIBUSINESS (AEAB)

M. J. Cochran
Head of the Department
221 Agriculture Building
479-575-2256

• University Professor LaFerney
• Professors Cochran, Dixon, Redfern, Wailes
• Adjunct Professors Millager, Miller
• Professors Emeriti Berry, Headley, Jackson, Meenen, Morrison, Price
• Associate Professors Ahrendsen, Goodwin, Parsch, Popp (M.)
• Assistant Professors Fuller, McKenzie, Popp (J.), Rainey, Thomsen, Watkins
• Adjunct Assistant Professor Bryant
• 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).

Requirements for a B.S.A. degree with a major in Agricultural Business:
(See page 42 for University Core and page 64 for B.S.A. requirements).
35 hours of University Core requirements to include the following:
PSYC 2003 or SOCI 2013 or RSOC 2603
AGEC 1103
AGEC 2103

University Advanced Composition Requirement:
ENGL 2003 (exemption possible)

College Requirements:
COMM 1313 and
3 hours communication elective selected from:
AGED 3142/3141L, COMM 2303, COMM 2373, COMM 3303, COMM 3383, or ENGL 3053
General Electives – 20 hours
College Broadening Electives – 9 hours

Departmental Requirements (51-52 hours)
Concentrations A and B:

Agribusiness management and marketing, and pre-law:
AGEC 2303 Intro. to Agribusiness
AGEC 3403 Farm Business Mgmt.
AGEC 3503 Agricultural Law I
AGEC 4613 Domestic & International Agricultural Policy
ECON 3033 Microeconomics
ECON 3133 Macroeconomics
MATH 2053 Finite Math
MATH 2043 Survey of Calculus
WCOB 1023 Business Foundations
WCOB 1033 Data Analysis and Interpretation, or STAT 4003/4001L Statistical Methods
WCOB 2033 Human Resources

For Concentration A, Agricultural Management and Marketing:
Select one of the three groups below:

1. Agribusiness Management
AGEC 3303 Food and Agriculture Marketing
AGEC 4143 Agricultural Finance
AGEC 4313 Agricultural Business Management
9 hours of upper–level AGEC or College of Business courses

2. Farm Business Management
AGEC 3373 Futures and Options Markets
AGEC 4143 Agricultural Finance
AGEC 4403 Advanced Farm Business Management
9 hours of upper-level AGEC courses or WCOB of which 6 hours are upper-level AGEC courses.

3. Agricultural Marketing
AGEC 3303 Food and Agricultural Marketing
AGEC 3373 Futures and Options Markets
AGEC 4303 Advanced Agricultural Marketing Management
AGEC 4113 Agricultural Prices and Forecasting
AGEC 4373 Advanced Price Risk Management
3 hours of upper-level AGEC or Walton College of Business courses
For Concentration B, Pre-Law:
AGEC 3373 Futures and Options Markets
AGEC 3413 Principles of Environmental Economics
AGEC 4143 Agricultural Finance
AGEC 4313 Agricultural Business Mgmt.
6 upper-level hours from AGEC, ACCT, FINN, MGMT or MKTT, TLOG, ECON, or PLSC approved by adviser

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. a 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.

Departmental Requirements (51 hours) for Concentration C, Agricultural Economics:
AGEC 2303 Intro. to Agribusiness
AGEC 3503 Agricultural Law I
ECON 3033 Microeconomic Theory
ECON 3133 Macroeconomic Theory
MATH 1213 Plane Trigonometry, or MATH 1285 (in lieu of MATH 1203 and MATH 1213)
MATH 2053 Finite Math
MATH 2554 Calculus I
MATH 2564 Calculus II
STAT 4003/4001L Statistical Methods
ECON 4743 Intro. to Econometrics
MATH 3083 Linear Algebra
WCOB 1023 Business Foundations
WCOB 2033 Human Resources
3 hours AGEC or WCOB elective course and 6 hours upper-level AGEC courses

Requirements for a minor in agricultural business (AGBS):
18 semester hours to include AGEC 1103 and AGEC 2303;
6 hours from AGEC 3303, AGEC 3373, AGEC 3403, AGEC 3413, or AGEC 4313; and
6 hours to be selected from the following:
AGEC 2103 AGEC 3303 AGEC 3373
AGEC 3403 AGEC 3413 AGEC 3503
AGEC 4113 AGEC 4143 AGEC 4303
AGEC 4313 AGEC 4373 AGEC 4403
AGEC 4413 AGEC 4613 AGME 2903
ECON 3033 ECON 3133 ECON 3533
ECON 4633 FINN 3043 FINN 3623
ISYS 3603 MGMT 3563 MGMT 3933
MGMT 4403 MGMT 4433 MKTG 3433
MKTG 3533 MKTG 4033 MKTG 4553
MKTG 4933 MKTG 4943 STAT 4003/4001L
WCOB 1023 WCOB 1033

Additional upper-division courses in the Sam M. Walton College of Business may be substituted with approval, provided prerequisites for those courses have been satisfied outside the minor. Students interested in postgraduate study in agricultural economics may obtain adjustments to these requirements to accommodate graduate admission requirements.

SEE PAGE 238 FOR AGRICULTURAL ECONOMICS AND AGRIBUSINESS (AGEC) COURSES.

AGRICULTURAL, FOOD AND LIFE SCIENCES (AFLS)

Director of Honors Program
E108 Dale Bumpers College of Agricultural, Food, and Life Sciences Building
479-575-2252

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 including interactions with students in honors programs in other colleges. Students must maintain a GPA of 3.25 to remain in the program.

Honors courses in the college may be chosen from the following:
AFLS 1011H Honors Orientation
AFLS 102VH Honors Special Topics for Freshmen
AFLS 400H Honors Thesis
AFLS 401VH Honors Special Topics

Other college-wide courses include:
AFLS 1011 Freshman Orientation
AFLS 300V Study Abroad

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 Emeritus Brown (C.J.)
- Professors Brown (A.H.), Kellogg, Coffey, Lusby, Maxwell, McNew, Roeder, Rorie, Yazwinski
- Professors Emeriti Daniels, Lewis, Lo, Noland, Perkins, Rakes, Piper, Westing
- Adjunct Professors Brown (M.A.), Baird, Burke, Chevning, Friesen, Jennings, Looper, Nugent, Pennington, Troxel
- Associate Professors Apple, Coblenz, Gunter, Johnson, Keegley, Kreider, Pohlman, Rosenkrans
- Assistant Professor Powell
- Assistant Professors Emeriti Heck, Peterson
- Instructors Jack, 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, 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.

Requirements for a B.S.A. degree with a major in Animal Science:
(See page 42 for University Core and page 64 for B.S.A. requirements)
35 hours of University Core requirements to include the following:
BIOL 1543/1541L
CHEM 1074/1071L
University Advanced Composition Requirement:
ENGL 2003 (exemption possible)

College Requirements:
COMM 1313 and
3 hours communication elective (See adviser for approved course.)
Electives: 20 hours

Departmental Requirements:
58 hours to include the following:
CHEM 2613/2611L
BIOL 2013/2011L and the following animal science courses:
ANSC 1001L Intro. Animal Science Lab
ANSC 1032 Intro. Animal Sciences
ANSC 1041 Intro. Companion Animal Industry
ANSC 1051 Intro. Livestock Industry
ANSC 2252L Intro. to Livestock and Meat Evaluation
ANSC 2781 Career Preparation and Development
ANSC 3133 Animal Breeding/Genetics
ANSC 3143 Principles of Animal Nutrition
ANSC 3433 Reproductive Physiology
Select 7 hours from the following:
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
Select 13 hours from the following:
ANSC 3032 Animal Physiology I
ANSC 3042 Animal Physiology II
ANSC 3123 Principles of Genetics
ANSC 3151L Applied Animal Nutrition Lab
ANSC 3152 Applied Animal Nutrition
ANSC 3613 Meat Science
ANSC 3003 Applied Animal Parasitology
ANSC 3013 Parasitisms of Domestic Non–Herbivores
ANSC 3333 Diseases of Livestock
Select 15 hours from the following discipline-related electives:
ANSC 2003, ANSC 2213, ANSC 2304, ANSC 2482,
ANSC 3282, ANSC 3291, ANSC 3491, ANSC 3691,
ANSC 3723, ANSC 400V, ANSC 401V, ANSC 410V,
ANSC 4291
WCOB 1023, WCOB 1012
AGEC 1103, AGEC 2103, AGEC 2303

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.

Requirements for a minor in animal science (ANSC):
20 hours to include ANSC 1001L, ANSC 1032, ANSC 1041 or
ANSC 1051, ANSC 2252L, ANSC 3133, ANSC 3143,
ANSC 3433, and
5 hours from the following production and management courses:
ANSC 4252, ANSC 4263, ANSC 4272, ANSC 4283,
ANSC 4452, and ANSC 4652.
Students wishing to minor in animal science must consult with an animal science adviser.

SEE PAGE 240 FOR ANIMAL SCIENCE (ANSC) COURSES.

BIOLOGICAL ENGINEERING (BENG)

Lalit Verma
Head of the Department
203 Engineering Hall
479-575-2351

- Professors Griffis, Loewer, Verma
- Professors Emeriti Bryan, Nelson
- 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, Wimberley, Yang
- Research Professor Gardisser
- Research Associate Professors Huittink, 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 184. Students who wish to receive this degree enroll in the College of Engineering.

SEE PAGE 247 FOR BIOLOGICAL ENGINEERING (BENG) COURSES.
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), as consultants serving production agriculture, in the agrichemical and seed industries, and in agricultural research programs. 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. Many graduates from both majors also choose to continue their education in graduate programs in a wide variety of disciplines both related and complementary to the B.S. degrees.

CROP MANAGEMENT

Requirements for a B.S.A. degree with a major in Crop Management.
(See page 42 for University Core and page 64 for B.S.A. requirements)

35 hours of University Core requirements to include
CHEM 1103/1101L and
CHEM 1123/1121L
AGEC 1103
AGEC 2103 (For students wishing to minor in Ag. Business)

University Advanced Composition Requirement:
ENGL 2003. If exempt, ENGL 3053 is required.

College Requirements:
COMM 1313 and Communication Elective CSES 3023
Electives: 17 hours

Departmental Requirements: 63 hours

General Agronomy:
CSES/ENSC 1011 Intro. to Crop, Soil and Environmental Sci.
AGME 2903 Applications of Microcomputers, or
CSCE 1003 Survey of Computer Concepts, or
AGST 4023 Principles of Experimentation, or
STAT 2303 Principles of Statistics
(students wishing to minor in AG Business should not choose
CSES 1003)
BIOL 1543/1541L Principles of Biology/Lab
BIOL 1613/1611L Plant Biology/Lab
BIOL 4304 Plant Physiology, or
ANSC/POSC 3123 Principles of Genetics, or
BIOL 3323 General Genetics
CHEM 2613/2611L Organic Physiological Chemistry/Lab
ENTO 3013 Intro. to Entomology
PLPA 3004 Principles of Plant Pathology
CSES 2103/2101L Crop Science/Lab
CSES 2203/2201L Soil Science/Lab
CSES 4013 Advanced Crop Science
CSES 4133/4130L Weed ID, Morphology and Ecology/Lab
CSES 4143/4140L Principles of Weed Control/Lab
CSES 4224 Soil Fertility
CSES 462V Internship, or
CSES 400V Special Problems (1–3 hrs)

Select a total of 8 hours from groups A and B
(at least 2 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
CSES 400V SP: CCA Review/Certification (1 hr)
HORT 2303 Intro. to Turfgrass Mgmt.

Group B:
CSES 3214 Soil Resources and Nutrient Cycles
CSES 4103 Plant Breeding
CSES 4234 Plant Anatomy
CSES 4253 Soil Classification and Genesis
CSES 355V Soil Profile Description (1–2 hrs)
CSES 400V Special Problems (1–6 hrs)
PLPA 4333 Intro. to Biotechnology
Select an additional 9 hours from one of the following minors:

**Minor in Agricultural Business:**
Taking 9 hours from this group will complete the requirements for a minor in Agricultural Business. Students should retain a second adviser in the minor field.
- AGEC 2303 Intro. to Agribusiness
- AGEC 3403 Farm Business Management
- AGEC 3303 Food and Agricultural Marketing, or
- AGEC 3373 Futures and Options Markets, or
- AGEC 3413 Principles of Environmental Economics, or
- AGEC 4313 Agricultural Business Management

**Minor in Pest Management:**
Taking 9 hours from this group will complete the requirements for a minor in Pest Management. Students should retain a second adviser in the minor field.
- CSES 4143 Principles of Weed Control
- PLPA 4103 Plant Disease Control
- ENTO 4123 Insect Pest Management I, or
- ENTO 4133 Advanced Applied Entomology

**ENVIRONMENTAL, SOIL, AND WATER SCIENCE (ESWS)**

**Requirements for a B.S.A. degree with a major in Environmental, Soil, and Water Science:**
(See page 42 for University Core and page 64 for B.S.A. requirements)
- 35 hours of University Core requirements to include:
  - CHEM 1103/1101L and
  - CHEM 1123/1121L
  - MATH 2043 Survey of Calculus

**University Advanced Composition Requirement:**
- ENGL 2003 (exemption possible)

**College Requirements:**
- COMM 1313 and
- 3 hours communication elective selected from the following:
  - AGED 3142/3141L
  - CSES 3023 or any course from ENGL, JOUR, or COMM
  - Electives: 20 to 21 hours

**Departmental Requirements: 59-60 hours:**
- BIOL 1613/1611L Plant Biology/Lab, or
- CSES 1203 Intro. to Plant Sciences
- BIOL 1543/1541L Principles of Biology/Lab
- BIOL 3863/3861L General Ecology/Lab, or
- CSES 3223/3221L Ecosystems Assessment/Lab
- CHEM 2613/2611L Organic Physiological Chem/Lab
- GEOL 1113/1111L General Geology/Lab
- BIOL 2013/2011L General Microbiology/Lab
- AGST 4023 Principles of Experimentation, or
- STAT 2023 Biostatistics, or
- STAT 2303 Principles of Statistics
- PHYS 2013/2011L College Physics I/Lab

**Environmental Sciences Core:**
- CSES/ENSC 1011 Intro. to Crop, Soil, and Environmental Sciences
- CSES 2203/2201L Soil Science/Lab
- ENSC 1003 Environmental Science
- ENSC 3003 Intro. to Water Science

**Select 3 hours from Soil Science:**
- CSES 3214/3210D Soil Resources and Nutrient Cycles/Disc
- CSES 4224/4220L Soil Fertility/Lab
- CSES 4253/4250L Soil Classification and Genesis/Lab
- CSES/ENSC 4263 Environmental Soil Science

**Select 3 hours from Water Science:**
- ENSC 4023/4020L Water Quality/Lab
- GEOL 4033/4030L Hydrogeology/Lab
- BIOL 4814 Limnology
- GEOG 3333 Oceanography

**Select 12 hrs from at least 2 of the following 3 groups:**
- Methods/Techniques in Environmental Science
- CSES 355V Soil Profile Descriptions (1-2 hours)
- CSES/BENG 4803 Precision Agriculture
- ENSC 3253 Septic Systems
- ENSC 3603 GIS for Environmental Science
- ENSC 4034 Analysis of Environmental Contaminants

**Environment and Society**
- AGEC 3413 Principles of Environmental Economics
- AGEC 3503 Agricultural Law
- ENSC 3933 Environmental Ethics
- ENSC/AGEC 4413 Economics of Environmental Management
- RSOC/SOCI 4603 Environmental Sociology

**Natural Resource Systems/Management**
- CSES 2013 Pest Management
- ENSC 3103 Plants and Environmental Restoration
- ENSC 3263/3260 Environmental, Soil, and Water Cons./Lab

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

**Requirements for a minor in crop management (CPMG):**
- 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, including at least two courses from Group A.

  **Group A:**
  - CSES 3113, CSES 3312, CSES 3322, CSES 3332, CSES 3342

  **Group B:**
  - CSES 2003, CSES 3214, CSES 4013, CSES 4103, CSES 4133, CSES 4143, CSES 4224 and CSES 4234.

  Students planning to minor in crop management must notify the crop, soil, and environmental sciences department and consult an adviser.

**Requirements for a minor in Environmental, Soil, and Water Science (ESWS):**
- 18 semester hours of courses to be selected from the following three categories

  **Category 1: Environmental science (6 hours)**
  - to include ENSC 1003 and
  - 3 additional hours from AGEC 3413, AGEC 3503, BIOL 3863/3861L, ENSC 3223, ENSC 3253, ENSC 3103, ENSC 3603/3601L
  - ENSC 3263, ENSC 3933, ENSC/AGEC 4413
  - ENSC 4034, GEOL 1113/1111L, RSOC/SOCI 4603
Category 2: Soil science (6 hours)
to include CSES 2203 and
3 additional hours from CSES 3214, CSES 355V, CSES 4224,
CSES 4253, CSES/ENSC 4263, CSES 2201L

Category 3: Water science (6 hours)
to include ENSC 3003 and
3 additional hours from
ENSC 4023/4020L, GEOG 3333, GEOL 4033, or BIOL 4814.

A student planning to minor in environmental, soil, and water science should notify the department of crop, soil, and water sciences and consult with an academic adviser.

SEE PAGE 264 FOR CROP, SOIL, AND ENVIRONMENTAL SCIENCE (CSES) COURSES AND SEE PAGE 276 FOR ENVIRONMENTAL SCIENCE (ENSC) COURSES.

ENTOMOLOGY (ENTO)

Frederick M. Stephen
Interim Head of the Department
320 Agriculture Building
479-575-2451

- University Professors Meisch, Stephen
- University Professors Emeriti Music, Phillips, Yearian
- Professors Johnson (D.T.), Kring, Luttrell, McLeod, Steelman, Steinkraus, Young
- Professors Emeriti Lancaster, Mueller, Tugwell, Warren
- Adjunct Professors Hendrix, Johnson (D.R.), Katayama, Teague, Thompson
- Associate Professor Lorenz
- Assistant Professors Goggin, Greene, Hopkins, Loftin, Studebaker, Szalanski
- Research Assistant Professor Bernhardt
- Instructor Shanklin
- Curator Barnes

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. Undergraduate students interested in entomology should pursue a minor in entomology or pest management.

Requirements for a minor in entomology (ENTO):
A minimum of 19 semester hours in entomology to include ENTO 3013, ENTO 4024, and ENTO 4123. Select three additional courses from ENTO 4013, ENTO 4033, ENTO 4043, ENTO 4053, and ENTO 4133.

SEE PAGE 276 FOR ENTOMOLOGY (ENTO) COURSES.

FOOD SCIENCE (FDSC)

Ron Buescher
Head of the Department
Food Science Building
479-575-4605

- Distinguished Professor Morris (J.)
- Professors Buescher, Crandall, Hettiarachchy, Howard, Johnson, Proctor, Siebenmorgen
- Associate Professor Meullenet
- Assistant Professor Wang
- Adjunct Faculty Members Brady, Freeman, Howell, Li, Marcy, Morris (M.), Murphy, Owens, Prior, Pohlman

Food science is the discipline in which the engineering, biological, and physical sciences are used to study the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public. Food technology is the application of food science to the selection, preservation, processing, packaging, distribution, and use of safe, nutritious, and wholesome food. A major in food science prepares students for a wide variety of interesting and challenging career opportunities with food companies and governmental agencies.

Students may choose one of two areas of concentration for their degree program: Food Science (FDSC) or Food Technology (FDTN).

The food science concentration at the University of Arkansas is one of only 45 programs in the United States and the only one in Arkansas that provides a curriculum that is approved by the Institute of Food Technologists (IFT).

The food science concentration provides students with a strong background in the basic sciences and in advanced food science, which prepares them for graduate studies and careers in processing, research and development, quality control and assurance, value-added product development, sensory analysis, and food safety.

The food technology concentration provides students with an integrated background in food science and agribusiness and business. Students in the food technology concentration can readily complete a minor in agribusiness or business.

Ample elective hours exist in both concentrations to allow the selection of a minor in the Bumpers, Fulbright, or Walton colleges.

Requirements for a B.S.A. degree with a major in Food Science:
(See page 42 for University Core and page 64 for B.S.A. requirements)
35 hours of University Core requirements to include:
BIOL 1543/1541L
CHEM 1103/1101L
ECON 2143 or AGEC 1103 and
AGEC 2103 for Food Technology Concentration

University Advanced Composition Requirement:
ENGL 2003 (exemption possible)

College Requirements:
COMM 1313 and
3 hours communication selected from
AGED 3142/3141L
ENGL 3053 for Food Science concentration
Electives: 18 to 19 hours

Departmental Requirements: 72-73 hours
BIOL 2013/2011L
CHEM 1123/1121L and CHEM 2613/2611L
AFLS 1011 Freshman Orientation
FDSC 1011 Food Science Orientation
FDSC 3103/3100L Principles of Food Processing/Lab
FDSC 4713/4710L Food Product Development/Lab
Requirements for Food Science Concentration (FDSC):
CHEM 3813 Intro. to Biochemistry
MATH 1213 Trigonometry
MATH 2554 Calculus I
PHYS 2013/2011L College Physics I
STAT 2303 or STAT 2023 or
PSYC 2013 or AGST 4023 – Statistics
HESC 3204 Nutrition for Health Professionals and Educators
FDSC 4114/412L Food Analysis/Lab
FDSC 4124/4120L Food Microbiology/Lab
FDSC 4203/4200L Quality Evaluation and Control/Lab
FDSC 4304/4300L Food Chemistry/Lab
FDSC 4413/4410L Sensory Evaluation of Food/Lab
FDSC 4754/4750L Engineering Principles of Food Processing/Lab

Requirements for Food Technology Concentration (FDTN):
MATH 2043 Survey of Calculus
MATH 2053 Finite Math
FDSC 1103 Intro. to Food Science
FDSC 2503 Food Safety and Sanitation
FDSC 3202 Intro. to Food Law
FDSC 4203/4200L Quality Evaluation and Control/Lab
FDSC 431V(3) Internship
FDSC 4413/4410L Sensory Evaluation of Food/Lab
WCOB 1023 Business Foundations
WCOB 1033 Data Analysis and Interpretation
WCOB 1120 Computer Competency Requirement
MGMT 3563 Mgmt. Concepts and Organizational Behavior, or
AGEC 4313 Agricultural Business Management
MKTG 3433 Principles of Marketing, or
AGEC 3303 Food and Agricultural Marketing
Select 6 hours from:
MGMT 3743 Human Resource Mgmt.
AGEC 2303 Intro. to Agribusiness
TLOG 3613 Business Logistics
AGEC 4143 Agricultural Finance, or
any 3000–4000 Walton College of Business course

Requirements for a minor in Food Science (FDSC):
18 hours to include FDSC 3103, FDSC 4124, FDSC 4304
and 7 hours from FDSC 2503, FDSC 3202, FDSC 4114, FDSC 4203 or HESC 1213.
A student planning to minor in food science must consult a Department of Food Science adviser.

SEE PAGE 278 FOR FOOD SCIENCE (FDSC) COURSES

HORTICULTURE (HORT)

David L. Hensley
Head of the Department
316 Plant Sciences Building
479-575-2603

• Distinguished Professor Emeritus Moore
• University Professor Emeritus Rom (R.)
• Professors Klingaman, Morelock, Murphy, Clark, Hensley
• Professors Emeriti Bradley, Einert, Huang, McFerran, Martin
• Associate Professors Rom (C.), Evans, Richardson
• Associate Professor Emeritus King
• Research Associate Professor Robbins
• Assistant Professors Andersen, Karcher, Lindstrom, Srivastiva
• Assistant Professor Emeritus McDaniel

The Department of Horticulture offers two major degree plans: horticulture (HORT) and turf and landscape horticulture (TLHT).

Horticulture involves production, management, marketing, and use of ornamental crops (shrubs, trees, flowers, and turf) and edible crops (vegetables and fruits) for the economic, aesthetic, and nutritional well being of society. The horticulture major provides education in basic and applied sciences, arts and humanities, communication and leadership, 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. 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, and developing private business. Advanced study may be required for some careers. Students pursuing the horticulture degree may choose to concentrate studies in one of three areas:
1. Horticulture Management and Production (HMAP)
2. Horticulture Science (HSCI)
3. Horticulture Merchandising (HMER).

The turf and landscape horticulture (TLHT) major blends broad training in turf and ornamental horticulture with a strong basis in science. This major also requires an internship in the industry to gain practical, hands-on experience. Students interested in careers related to golf course or sports turf management or to the diverse landscape industries have two concentration options:
A) Turf Management (TGM)
B) Landscape Horticulture (LHRT).

Turf management students will be exposed to the many aspects of the turfgrass industry and receive specific training in horticulture, environmental sciences, pest management, business, and communications. Landscape horticulture students will receive instruction in selection, care, and use of plant materials as well as the skills of management for the residential, commercial, or public landscapes.

Job opportunities for turf management graduates include golf course superintendent, sports field manager, turfgrass service companies, seed or sod production, green industry journalism, research, teaching, or private consulting. Landscape horticulture graduates will be prepared for careers in the landscape management industry, landscape nurseries, landscape architectural firms, private and public gardens, and public agencies such as parks and recreation.

HORTICULTURE (HORT)

Requirements for a B.S.A. degree with a major in horticulture:
(See page 42 for University Core and page 64 for B.S.A. requirements)
35 hours of University Core requirements to include:
BIOL 1613/1611L
CHEM 1074/1071L (except HSCI concentration – CHEM 1103/1101L)
3 hours from ECON 2143, ECON 2013, ECON 2023, or
AGEC 1103, AGEC 2103

University Advanced Composition Requirement:
ENGL 2003 (exemption possible)

College Requirements:
COMM 1313 and
3 hours Communication Elective.
See adviser for suggested list of courses.
Electives: 9-20 hours
Departmental Requirements: 53-63 hrs
AFLS 1011
CSES 2203/2201L
BIOL 4304/4300L

Select 3 hours from:
AGED 3142/3141L, AGED 4003,
COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.

Select 3 hours from:
AGED 3142/3141L, AGED 4003, COMM 2323, COMM 2351, COMM 3303 or COMM 3703

Select 3-4 hours from:
PHYS 1023/1021L, PHYS 2013/2011L, PHYS 2054 or
PHYS 1044, BIOL 3323/3321L or ANSC 3123
(Note: students must take the accompanying lab to courses)

Select 3 hours of environmental science, earth science, or geology:
See adviser for suggested list of courses.
10 hours of Horticulture
HORT 2003 Principles of Horticulture
HORT 3103 Woody Landscape Plants, or
HORT 3113 Herbaceous and Indoor Plants
HORT 3901 Horticulture Career Development
HORT 462V or HORT 464V Internship (3 hrs)

Additional Requirements for Concentration A:
Turf Management (TMGM)
26 hours from Turf Management and Soils to include:
HORT 2303 Intro. to Turfgrass Management
HORT 3403/3400L Turfgrass Management
HORT 4033/4030L Landscape Installation, or
HORT 4043 Landscape Management
HORT 4903/4900L Golf and Sports Turf
CSES 4224/4220L Soil Fertility
PLPA 3004/3000L Plant Pathology
AGME 3102/3101L Turf Equipment
AGME 4973/4970L Irrigation

Additional Requirements for Concentration B:
Landscape Horticulture (LHRT)
HORT 2303 Intro. to Turfgrass Management
HORT 4033 Landscape Installation
HORT 4043 Landscape Management
HORT 4603 Practical Landscape Planning

Select 3 hours from:
HORT 3103/3100L Woody Plants,
HORT 3133/3130L Advanced Woody Plants, or
HORT 3113/3110L Herbaceous Plants

Select 6 hours from:
AGME 3153 Surveying,
AGME 3102/3101L Turf and Landscape Equipment, or
AGME 4973/4970L Irrigation

Select 6 hours of Pest Management:
CSES 2003/2000L
ENTO 3013/3010L or PLPA 3004/3000L

Requirements for a minor in horticultural production (HORT):
18 hours to include the following:

Select 9-11 hours from:
HORT 2303, HORT 4803, HORT 3303, HORT 4103,
HORT 4503, HORT 4703, or HORT 400V.

Select 3 hours from:
HORT 3103, HORT 3113, or HORT 3133.

Requirements for a minor in landscape design and urban horticulture (LHRT):
18 hours to include HORT 2003, and HORT 4043,
HORT 4603 or LARC Studio Course,
HORT 3103 or HORT 3113.

Select 6 additional hours from:
HORT 2303, HORT 3103, HORT 3113, HORT 3403,
HORT 4033, HORT 400V (MAXIMUM 3 HRS), HORT 4703,
HORT 4503, HORT 4803, HORT 4403 or LARC 3734.

Requirements for a minor in turf management (TURF):
19 hours to include the following:
CSES 2203/2201L.

Select 6 hours from:
HORT 2303, HORT 3403, or HORT 4903;
6 hours from:
ENTO 400V, HORT 3103, HORT 4033, HORT 4043, or HORT 400V.

Select 3 hours from:
AGME 4973/4970L, AGME 3102/3101L.

See page 289 for horticulture (HORT) courses.

PEST MANAGEMENT (PMGT)

Craig Rothrock
Program Coordinator
206 Plant Science Building
479-575-2445

- University Professors Kim, Meisch, Oliver, Riggs, Stephen,
Talbert, Yearian
- Professors Barrentine, Correll, Gergerich, Johnson (D.T.),
Kirkpatrick, Kring, Lee, Lim, Luttrell, McLeod, Rothrock,
Rupe, Steinkraus, TeBeest, Tugwell, Young
- Associate Professors Fenn, Lorenz, Milus
- Assistant Professor Burgos
- Extension Specialists Boyd, Cartwright, Coker, Johnson, Spradley

Students interested in this area of study should consult the program coordinator. The course work is listed in the department of Crop, Soil, and Environmental Sciences.

Requirements for a minor in pest management (PMGT):
20-21 hours to include CSES 2003, ENTO 3013, and PLPA 3004.
In addition, students must select one course from each area: CSES 4143 or CSES 4133; ENTO 4024, ENTO 4123 or ENTO 4133; and PLPA 4103. Students planning to minor in pest management must declare their intention to the program coordinator.

PLANT PATHOLOGY (PLPA)

Sung M. Lim
Head of the Department
217 Plant Sciences Building
479-575-2446

- University Professors Riggs, TeBeest
- University Professors Emeriti Kim, Scott
- Professors Correll, Gergerich, Kirkpatrick, Lee, Lim, Robbins,
Rothrock, Rupe, Weidemann
- Professors Emeriti Dale, Fulton, Jones,
- Associate Professors Fenn, Milus, Yang, Korth
- Lecturer Martin
- Research Associate Professor Cartwright
- Adjunct Assistant Professors Jia, Vann

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 B.S.A. degree in pest management. See page 64 for degree requirements. A minor in plant pathology is also available to undergraduate students.

Requirements for a minor in plant pathology (PLPA):
19 hours to include PLPA 3004, PLPA 400V and PLPA 4103. The remaining 9 hours to be selected from the following: BIOL 4353, BIOL 4304, BIOL 4424, BIOL 4233, and BIOL 4753. A student planning to minor in plant pathology should notify the department of plant pathology and consult an adviser.

SEE PAGE 319 FOR PLANT PATHOLOGY (PLPA) COURSES

POULTRY SCIENCE (POSC)

Walter G. Bottje
Head of the Department
0114 Poultry Center
479-575-3699

- Distinguished Professor Emeritus Forsythe
- University Professor Waldroup (P.W.)
- University Professors Emeriti Gyles, Nelson
- Professors Anthony, Bottje, Chapman, Coon, Erf, Hargis, Kirby, Kuenzel, Slavik, Wideman
- Professors Emeriti Andrews, Beasley, Denton, Harris
- Research Professor Emeritus Barton
- Research Professors Donoghue (A.), Huff (W.), Jones, Rath
- Adjunct Professors Bristor, Haggard, Keck, Plue, Porter, Rhoads, Rosen, Steelman, Waldroup (A.), Zelenka
- Associate Professors Emmert, Erf, Goodwin, Li, Parcells
- Research Associate Professors Clark, Marcy, Watkins
- Adjunct Associate Professors Story, Meullenet
- Assistant Professors Emeriti Donoghue (D.), Kwon, Owens
- Research Assistant Professors Balog, Bramwell, Huff (G.), Newberry
- Adjunct Assistant Professors Blair, Breeding, Cook, Davis, Fussell, Smith
- Adjunct Research Assistant Professor Pumphord

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.

Ample 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.

Requirements for a B.S.A. with a major in poultry science:
(See page 42 for University Core and page 64 for B.S.A. requirements)
35 hours of University Core Requirements to include:
BIOL 1543/1541L
CHEM 1103/1101L

University Advanced Composition Requirement:
ENGL 2003 (exemption possible)

College Requirements:
COMM 1313 and 3 hours Communication electives chosen from any of the following:
AGED 3142/3141L
COMM 2303, COMM 2323, COMM 3303, COMM 3703,
COMM 4323 or COMM 4343
ENGL 1213, ENGL 2613, ENGL 2623, or ENGL 3053
JOUR 1033

Departmental Requirements: 48 hours to include:
CHEM 1123/1121L, CHEM 2613/2611L
STAT 2303
BIOL 2103/2101L
and the following poultry science courses:
POSC 1002L Intro. to Poultry Careers Lab
POSC 2353 Broiler/Turkey Production
POSC 2363 Breeder/Layer Management
POSC 2554 Poultry Biology
POSC 3032 Animal Physiology I
POSC 3042 Animal Physiology II
POSC 3123 Principles of Genetics
POSC 3223 Poultry Diseases
POSC 4213 Integrated Poultry Mgmt.
POSC 4314 Egg and Meat Tech.
POSC 4343 Poultry Nutrition
POSC 4901 Undergraduate Seminar

Requirements for a minor in poultry science (POSC):
19 semester hours in courses above the freshman level to include POSC 2353 or POSC 2363 and POSC 3223, POSC 4314, POSC 4213, POSC 4343, and 3 hours POSC elective. A student planning to minor in poultry science should consult a departmental adviser.

SEE PAGE 321 FOR POULTRY SCIENCE (POSC) COURSES

SCHOOL OF HUMAN ENVIRONMENTAL SCIENCES (HESC)

Mary M. Warnock
Director
118 Home Economics Building
479-575-4305

- Professors Anderson, Farmer, Martin, Warnock, Whan
- Professors Emeriti Burton, Carroll, Cotton, Kenney, McCoy, Voth
- Associate Professors Bailey, Gentry, Noble, Turner
- Assistant Professors Apple, Fitch-Hilgenberg, Foote, Gloccker, Killian, Miller, Myres, Takigiku, Webb
- Assistant Professors Emeriti Cunningham, Noyce, Raymond
- Instructors Baldwin, Crandall, Loewer, Powell, Smith, Young
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, clothing and textiles.

Services for Students with Children

There are two services administered by the School of Human Environmental Sciences that can 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 from the entire community who are between the ages of three and five years.

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.

DEGREES OFFERED

Human Environmental Sciences students pursuing the bachelor of science degree in human environmental sciences (B.S.H.E.S.) may choose one of four majors. These programs have been accredited by the Council for Professional Development of the American Association of Family and Consumer Sciences. The four majors and concentrations are as follows:

1. Food, Human Nutrition, and Hospitality (FHNH)
   - Dietetics (DIET)
   - General Foods and Nutrition (GFNU)
   - Hospitality & Restaurant Mgmt. (HRMN)
2. Apparel Studies (APST)
3. General Human Environmental Sciences (HESC)
4. Human Development, Family Sciences and Rural Sociology (HDFS)
   - Child Development (CDEV)
   - Lifespan (LSPN)

Interior Design (IDES)

Students pursuing the bachelor of interior design (B.I.D.) degree must major in Interior Design (IDES). This program is accredited by the Foundation for Interior Design Education Research (FIDER).

Human Environmental Sciences Minors

Two minors are offered in Human Environmental Sciences: Human Development and Family Sciences (HDFS), and Human Nutrition (GFNU). Specific course requirements for the minors are listed at the end of the curriculum sections. Students may also minor in Journalism as well as other select minors in the J. William Fulbright College of Arts and Sciences or the Sam M. Walton College of Business.

The global agricultural, food, and life sciences minor is available for all students seeking majors in human environmental sciences. The minor is described on page 64.

Requirements for a bachelor of science in Human Environmental Sciences (B.S.H.E.S.):

- 1. A total of 124 semester hours with a 2.00 cumulative GPA.
- 2. A minimum of 39 hours of courses 3000 level or above
- 3. University Core Requirements
   - See page 42 for requirements. Check requirements for each major. Some require specific core courses.
- 4. Other University Requirements
   - Advanced Composition Requirement (see page 43)
   - If exempt from advanced composition, 3 hours of ENGL, COMM, JOUR or Foreign Language are required. See specific major requirements.
- 5. College Requirements
- 6. Electives
   - Electives can be used to develop a minor
- 7. School Requirements
   - See specific majors and concentrations.

APPAREL STUDIES (APST)

Kathleen R. Smith
Area Coordinator
213 Home Economics Bldg.
479-575-2577

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.

Requirements for a B.S.H.E.S. degree with a major in apparel studies:

- (See page 42 for University Core and page 64 for B.S.H.E.S. requirements.)
- 35 hours of University Core requirements to include:
  - CHEM 1074, 1071L and BIOL 1543, 1541L (Two semesters of chemistry, CHEM 1103/1101L and CHEM 1123/1121L, may be substituted for CHEM 1074/1071L.)
  - PSYC 2003
  - ECON 2143
  - ANTH 1023 or SOCI 213
  - ARTS 1003
- Select 3 hours from University Core Humanities (section B, C, or D)

University Advanced Composition Requirement:

- ENGL 2003 (exemption possible - if exempt, student can select from COMM, JOUR, ENGL, or FLAN).

College Requirement:

- COMM 1313
  - Electives: 15 hours (Suggested elective minor areas are marketing, journalism, drama, art or art history.)
School Requirements: 64 hours
MATH 2053
MKTG 3433
Select 3 hours from the following:
AGME 2903 or CSCE 1003 or other approved computer course.
Select 6 hours of any Foreign Language (not to be used as exemption for ENGL 2003)
Select 55 hours of HESC courses:
HESC 1501 Orientation
HESC 1013 Intro. to Clothing Concepts
HESC 1023 Intro. to Apparel Production
HESC 1053 Computer Based Methods
HESC 2013 Quality Assess of Apparel
HESC 2023 Visual Merchandising
HESC 2053 Intro. to Textile Science
HESC 3003 Apparel Production
HESC 3013 Intro. Fashion Merchandising
HESC 3033 Fashion Merchandising Method
HESC 4023 Advanced Apparel Merchandising
HESC 4033 Advanced Textile Study
HESC 4043 History of Apparel
HESC 4053 Contemporary Apparel
HESC 4063 Advanced Apparel Production
HESC 4073 Internship
HESC 4303 Professional Development
HESC 1213 Nutrition in Health
HESC 2413 Family Relations

Concentration B - 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.

Concentration C - 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.

Requirements for a B.S.H.E.S. degree with a major in Food,
Human Nutrition and Hospitality:
(See page 42 for University Core and page 64 for B.S.H.E.S. requirements.)
35 hours of University Core requirements to include:
HESC 2413
PSYC 2003
Concentration A (DIET) and B (GFNU) to include:
CHEM 1103/1101L
CHEM 1123/1121L
MATH 1203 or MATH 1213
Concentration C (HRMN) to include:
CHEM 1074/1071L or
CHEM 1103/1101L and CHEM 1123/1121L
BIOL 1543/1541L
University Advanced Composition Requirement:
ENGL 2003 (exemption possible)
College Requirement:
COMM 1313
Electives: 5-21 hours
( Highly recommended for Concentration B: EXED 3023;
for Concentration C: foreign language and HLSC 3633.)

School Requirements: 68 - 81 hours:
2 hours PEAC or DEAC
HESC 1501 Orientation to HESC
HESC 1213 Nutrition in Health
HESC 2112/2111L Foods I/Lab
HESC 3604 Food Prep for Hospitality Industry
HESC 3653 Food Systems Mgmt.
HESC 4103 Experimental Foods
HESC 4303 Professional Development in HESC

FOOD, HUMAN NUTRITION, AND HOSPITALITY (FHNH)

Janet Noble
Area Coordinator
215 Home Economics Bldg.
479-575-4700

The curriculum in food, human nutrition, and hospitality allows students to prepare for a career in a specialized area of foods and nutrition by completing a common set of basic courses and one of the concentrations:
A: dietetics (DIET)
B: general foods and nutrition (GFNU), and
C: hospitality and restaurant management (HRMN).
Interest and aptitude for the biological and physical sciences that support nutrition science are needed to complete concentrations A and B successfully. Concentration C is the best choice for those students who have an interest in management and who enjoy working with people.

Concentration A - Dietetics (DIET): This concentration is for the student who intends to become a registered dietitian (RD). Courses required include those necessary as prerequisites to a dietetic internship. An internship is required for eligibility to take the national registration examination and for eligibility for licensure. Students who complete the program with a minimum grade-point average of 3.0 may apply for an internship. Upon licensure, students practice as registered dietitians in the health care field or as consulting dietitians in private practice, sports nutrition, or in wellness and health maintenance centers. Students with lower GPAs may apply for supervised practice programs leading to the dietetic technician registered (DTR) certification.

Concentration B - 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.

Concentration C - 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.

Requirements for a B.S.H.E.S. degree with a major in Food,
Human Nutrition and Hospitality:
(See page 42 for University Core and page 64 for B.S.H.E.S. requirements.)
35 hours of University Core requirements to include:
HESC 2413
PSYC 2003
Concentration A (DIET) and B (GFNU) to include:
CHEM 1103/1101L
CHEM 1123/1121L
MATH 1203 or MATH 1213
Concentration C (HRMN) to include:
CHEM 1074/1071L or
CHEM 1103/1101L and CHEM 1123/1121L
BIOL 1543/1541L
University Advanced Composition Requirement:
ENGL 2003 (exemption possible)
College Requirement:
COMM 1313
Electives: 5-21 hours
( Highly recommended for Concentration B: EXED 3023;
for Concentration C: foreign language and HLSC 3633.)

School Requirements: 68 - 81 hours:
2 hours PEAC or DEAC
HESC 1501 Orientation to HESC
HESC 1213 Nutrition in Health
HESC 2112/2111L Foods I/Lab
HESC 3604 Food Prep for Hospitality Industry
HESC 3653 Food Systems Mgmt.
HESC 4103 Experimental Foods
HESC 4303 Professional Development in HESC
Requirements for Concentrations A: Dietetics and B: General Foods and Nutrition

ENGL 3053 or JOUR 3123 or AGED 3142/3141L
BIOL 2013/2011L
CHEM 2613/2611L and CHEM 3813
WCOB 1120
BIOL 2213/2211L and BIOL 2443/2441L or
   BIOL 1543/1541L and ANSC 3032 and ANSC 3042
HESC 3204 Nutrition for Health Professionals and Educators
HESC 3213 Dietetic and Nutrition Practice
HESC 4213 Advanced Nutrition
HESC 4223 Nutrition/Life Cycle
HESC 4243 Community Nutrition
HESC 425V (1 hr) Seminar

Additional Requirements for Concentration A: Dietetics

HESC 1201 Intro. to Diet and Nutrition
AGST 4023 Principles of Experimentation
HESC 4264/4260L Medical Nutrition Therapy I/Lab
HESC 4273 Medical Nutrition Therapy II
HESC 4613 Food Service Purchasing
HESC 4623 Selection and Layout of Food Service Equipment

Additional Requirements for Concentration B: General Foods and Nutrition

HESC 1201 Intro. to Diet and Nutrition and/or
HESC 1603 Intro. to Hospitality
HESC 2203 Nutrition for Exercise and Sport

Requirements for Concentration C: Hospitality and Restaurant Management

HESC 1601 Work Experience Practicum
HESC 1603 Intro. to Hospitality
AGED 3142/3141L Agri. Communications/Lab
ECON 2143 Basic Economics - Theory And Practice

MATH 2053
   (Math 1203, prerequisite for MATH 2053, required for hospitality and restaurant management students who do not have the required math proficiency.)

MGMT 3743 Human Resources Mgmt.
FDSC 2503 Food Safety/Sanitation
HESC 2120L Catering Management Laboratory
HESC 2123 Catering Management
HESC 2623 Legal Issues in the Hospitality Industry
HESC 4613 Food Service Purchasing
HESC 4623 Selection and Layout of Food Service Equipment
HESC 4693 Hospitality Internship
WCOB 1023 Business Foundations
WCOB 1033 Data Analysis
WCOB 1120 Computer Competency Requirement
WCOB 2013 Markets and Consumers
WCOB 2033 Human Resources
WCOB 2043 Financial Resources

Requirements for a minor in General Foods and Nutrition(GFNU): 18-19 hrs

HESC 1213, HESC 2112/2111L, HESC 3204, and HESC 4213.
Select 5-6 hours from HESC 2203, HESC 4223, HESC 4243, and
HESC 425V (may be repeated once for 2 hours total credit.)

GENERAL HUMAN ENVIRONMENTAL SCIENCES (GHES)

Mary M. Warnock
Director
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479-575-4305

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 158). At the beginning of the sophomore year, students should consult with their advisers to schedule the general education and pre-professional education courses.

Requirements for a B.S.H.E.S. degree with a major in General Human Environmental Sciences:

(See page 42 for University Core and page 64 for B.S.H.E.S. requirements.)

35 hours of University Core Requirements to include:
   CHEM 1074/1071L
   (CHEM 1103/1101L and CHEM 1123/1121L may be substituted)
   BIOL 1543/1541L
   PSYC 2003
   Plus two courses to meet state minimum social sciences core
   ARTS 1003
   HIST 2003, HIST 2013, or PLSC 2003
   MATH 1203 or MATH 1213

Select 3 hours from
   PHIL 2003, PHIL 2103, PHIL 2203 or WLIT 1113, WLIT 1123

University Advanced Composition Requirement:
   ENGL 2003 (exemption possible)

College Requirement:
   COMM 1313
   Electives – 12-14 hours
   (Students wishing to qualify for the M.A.T. need six hours of English, world literature or American literature and three hours of western civilization or world civilization.)

School Requirements: 46 hours

General Electives: 31-33 hours
   CHEM 2613/2611L
   1- to 3-hour computer class
   PEAC 1621
   HLSC 1002

Select 46 hours of HESC courses:
   HESC 1013 Intro. to Clothing Concepts
   HESC 1023 Intro. to Apparel Prod
   HESC 1213 Nutrition in Health, or
   HESC 3204 Nutrition Health Prof. and Ed.
HESC 1403 Lifespan Development
HESC 1501 Orientation
HESC 2053 Intro. Textile Science
HESC 2112/2111L Foods I/Lab
HESC 2123/2120L Catering Management/Lab
HESC 2413 Family Relations
HESC 3402 Child Guidance
HESC 4753 Family Financial Management
HESC 3763L Family Resources Mgmt. Lab
HESC 4813 Human Factors in ID
HESC 4303 Professional Development
HESC 4453 Parenting/Family Dynamics

HUMAN DEVELOPMENT, FAMILY SCIENCES,
AND RURAL SOCIOLOGY (HDFSRS)

Sue 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:

Concentration A: 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.

Concentration B: 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.

Requirements for a B.S.H.E.S. degree with a major in Human Development and Family Sciences:
(See page 42 for University Core and page 64 for B.S.H.E.S. requirements.)
35 hours of University Core Requirements to include:
BIOL 1543/1541L
4 hours from ASTR, CHEM, GEOL or PHYS
PSYC 2003
SOCI 2013 or RSOC 2603

University Advanced Composition Requirement:
ENGL 2003 (exemption possible)

College Requirement:
COMM 1313
Electives: 18-20 hours

School Requirements: 64-68 hours
3 hours from AGEC 1103, AGEC 2103, ECON 2013, ECON 2143 or ECON 3053
2-3 hours from any computer course.

Select 22 hours of HESC courses:
HESC 1501 Orientation
HESC 1213 Nutrition in Health
HESC 2413 Family Relations
HESC 2433 Child Development
HESC 3423 Adolescent Development
HESC 4423 Adult Development
HESC 4753 Family Financial Management
HESC 4303 Professional Dev in HESC
HESC 4453 Parenting/Family Dynamics

Additional Requirements for Concentration A:
Child Development
HESC 2402/2401L Infant and Toddler Development/Lab
HESC 3402/3401L Child Guidance
HESC 4463 Admn and Evaluation of Child Dev Programs
HESC 4472/4472L Child Development Practicum/Lab
CIED 3023 Survey of Exceptionalities
CIED 3103 Children’s Literature
CIED 3263 Language Development for the Educator
Any courses in HDFSRS not listed in this concentration or in the HDFS core may also be included as electives in this section.

Additional Requirements for Concentration B: Lifespan
HESC 1403 Lifespan Development
HESC 3443 Families in Crisis
HESC 4433 Dynamic Family Interaction
HESC 4443 Gerontology
HESC 4493 Public Policy Advocacy
SCWK 3163 Death and Dying
Select 3 hours of statistics from:
PSYC 2013, SOCI 3303/3301L or ISYS 2013
Select 3 hours research methods from:
PSYC 3073, SOCI 3313, or SCWK 4073
Select 12 hours from:
HESC 3763L, HESC 4483
(requires a GPA of 2.75 or higher), SOCI 3233,
SOCI 4133, CDIS 4273 or COMM 3433
RSOC 4603, RSOC 4623
Any courses in HDFSRS not listed in this concentration or in the HDFS core can also be included as electives in this section.

Requirements for a minor in Human Development and Family Sciences (HDFS): 18 hours
HESC 1403 and HESC 2413
Select 12-13 hours from the following:
HESC 2402/2401L, HESC 2433,
HESC 3402/3401L, HESC 3423, HESC 4423, HESC 4753,
HESC 4443, HESC 4453, HESC 4463, or HESC 4472
Interior Design (IDES)

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. Students are actively involved in national design competitions and domestic and international travel. Field trip opportunities are offered on a regular basis, and students are expected to participate. Graduates are placed in residential, contract, and institutional interior design firms, architectural firms, art galleries, set design, and contract and residential sales.

A sophomore portfolio review is an important component of the academic program. The review of studio work will occur 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 Design I, Design II, Studio I, and Introduction to Presentation Media. All full-time interior design faculty will 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. To be removed from probationary status, 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 an annual senior portfolio exhibition and a supervised internship experience are requirements for graduation. The faculty reserve the right to retain student work for accreditation and recruitment purposes.

Transfer students seeking advanced placement must submit a portfolio for faculty review prior to beginning any studio course. Review of portfolio will allow appropriate placement based on demonstrated skills. Students may be required to wait a semester for the appropriate studio sequence. Transfer students placed into the program prior to sophomore review will be required to participate in the sophomore review process.

A professional advisory board supports the program, and faculty and students participate in professional design association activities. The faculty are 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.

Requirements for a bachelor of Interior Design (B.I.D.):

1. A total of 124 semester hours with a 2.00 cumulative GPA
2. A minimum of 39 hours of courses 3000-level or above
3. University Core Requirements 35
   (See page 42 for core courses.)
   Must include 3 hours from:
   ECON 2013 or ECON 2023 or
   ECON 2143 or AGEC 1103 or
   AGEC 2013
   PSYC 2003
   SOCI 2013
   Fine Arts (3 hours)
4. Other University Requirements 3
   ENGL 2003 Advanced Composition Requirement
   (see page 43).
   If exempt, must take 3 hours from
   COMM, JOUR, or ENGL courses
5. College Requirements 3
   COMM 1313
6. Electives 1
7. School Requirements 82
   One ARTS studio elective and ARCH 4433
   6 hours of business courses to be selected from:
   FINN 3003, WCOB 1012, MGMT 3563
   WCOB 2013, MKTG 3433, or FINN 3933
8. WCOB 1120 or any computer course

NOTE: At least two of the three courses in studio art and business must be 3000- or 4000-level to meet the college requirement of 39 upper-division hours.

70 hours of HESC courses to include:

HESC 1501 Orientation to HESC
HESC 2053 Intro. to Textile Science
HESC 2413 Family Relations
HESC 4303 Professional Development in HESC
HESC 1031 Design I
HESC 1034 Design I Studio
HESC 1041 Design II
HESC 1044 Design II Studio
HESC 2803 Studio I. Development of Interior Space
HESC 2813 Studio II: Design Process & Application
HESC 2823 ID Materials & Resources
HESC 2833 Introductory Presentation Media
HESC 2841 Lighting Studio
HESC 2842 Lighting Systems
HESC 2883 History of ID I
HESC 2893 Principles of Computer–Aided Design
HESC 3803 Studio III: Working Drawings and Building Sys
HESC 3813 Studio IV: Interiors for Public Use
HESC 3863 Advanced Presentation Media
HESC 3883 History of ID II
HESC 4803 Studio V – Advanced Residential Design
HESC 4811 Internship for ID
HESC 4813 Human Factors in Interior Design
HESC 4823 Professional Practice for Interior Design
HESC 4843 Internship Preparation
HESC 4863 Studio VI – Commercial Design
HESC 4891 Senior Portfolio

SEE PAGE 284 FOR HUMAN ENVIRONMENTAL SCIENCES (HESC) COURSES.
Purpose and Objectives

The School of Architecture at the University of Arkansas houses the two professional design programs of architecture and landscape architecture. The School’s programs combine traditional models of professional studio-design education with innovative teaching in history and 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 problem solving are stressed, and the curriculum strives to empower students by developing skill, knowledge, and a deep sense of responsibility to the cultures we 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.

Accreditation and Membership

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 two types of degrees: the Bachelor of Architecture and the Masters of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

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 education 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.

ORGANIZATION, 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. It is currently supported by the Arkansas Department of Economic Development and by a generous endowment from the Donald W. Reynolds Foundation.

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 town and environmental planning, low and moderate income housing, and community and policy development. In addition to providing design leadership, the Center gives students the opportunity to work directly with leaders throughout the state to solve real problems in the context of actual situations and conditions.

The Center houses two separate programs: One occurs during the academic year when upper-level architecture and landscape architecture students may earn studio credits while providing valuable public service, and a second program occurs during the summer when a faculty member and six to eight students live and work in selected communities.

Delta Research and Design Center

The Delta Research and Design Center (DRDC), a unit of the University of Arkansas Community Design Center (UACDC), was established by one of two generous grants received from the Winthrop Rockefeller Foundation. The center, located in Clarendon, Arkansas, assists local communities in developing plans and programs to help expand their economy, improve education, and develop ecotourism and conservation.

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 multi-disciplined 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 pressure of critical reviews by 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 over 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.

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 E. Fay Jones and Maurice Jennings, and a garden designed by David Slawson. Students participate in design projects in the garden.

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 a four-year program culminating in a non-accredited degree, the Bachelor of Science in Architectural Studies with concentrations in architecture and landscape architecture.

School of Architecture 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 requirements.

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.

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 Academic Advising Center for a complete description of admission requirements.

Regular Admissions

All “Regular Admissions” students entering the Department of Architecture will be classified as either “Fall/Spring Studio Students” or “Spring/Summer Studio Students.”

Fall/Spring Studio Students

All students who meet the University of Arkansas minimum requirements for admission (20 ACT/3.00 GPA) and who have completed a college preparatory curriculum in high school are admitted to the Fall/Spring track of study. The high school curriculum must include physics and an upper level math course (pre-calculus or higher) for a student to be considered. This track of study is designed to immerse students in the rigor of the architecture design studio while completing required core courses. The studio is capped at 70 students. A review at the end of Fall semester is required for all students. Students who fail to achieve a minimum grade of “C” (2.00) in both Design I and in physics are not allowed to continue into Design II. Students may enroll in Design II after successfully completing Design I and physics with a minimum grade of “C” (2.00). Please see the School’s Advising Center for additional information regarding the review process, grade criteria, and continuance in the program.

Spring/Summer Studio Students

Students who meet the University of Arkansas minimum requirements for admission but who have not had physics or pre-calculus in high school are enrolled in the Spring/Summer track of study. These students begin the design sequence with Design I in the Spring semester and follow with a six-week summer course (Design II). This track of study allows students to focus on the foundations of physics, math, and additional University Core courses in the Fall semester without the additional work of Design I. Students in good standing (a minimum of “C” in physics and required University Core courses) at the end of Fall semester, may take Design I in the Spring. Students who do not achieve a minimum grade of “C” (2.00) in Design I may not continue into Design II. Students may enroll in Design II after successfully completing Design I with a minimum grade of “C” (2.00). Students who successfully complete Design I and Design II will begin Design III in the Fall semester. Please see the School’s Advising Center for additional information regarding the review process, grade criteria, and continuance in the program.

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

Architecture Department Transfer Students are generally classified as Spring/Summer studio students. They will begin the studio sequence (Design I) in the spring semester and will follow with a six-week summer course (Design II). Transfer students meeting the criteria for Fall/Spring studio admissions may apply to begin the Architecture Program’s studio sequence in the fall (see the Fall/Spring studio student description and criteria above).

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 transfer students must complete or receive transfer credit for either PHYS 1044/1040L “Physics for Architects I” or PHYS 2031/2011L “College Physics I” and all other first year university core curriculum courses prior to entry into ARCH 2114 “Architectural Design III” or ARCH 2114 “Architectural Technology I”.
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. Application documents are due in the architecture advising center by the first day of classes of the spring semester. Students will be evaluated for admission on the basis of academic performance in the University core and the Architecture curriculum comprised of the sub-disciplines of History/Theory, Technology, and Design. Admission requires a majority vote of the Admissions Committee. As part of the application process, all students will submit a course of study for the fourth and fifth years of the curriculum. 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. Multi-disciplinary 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. The requirement for completion of Landscape Architecture Design Studios I and II may be fulfilled by a two-semester, fall-spring sequence or by an equivalent and intensive 12-week summer program. Students entering the Landscape Architecture program in the spring semester are highly encouraged to enroll in the intensive 12-week summer program. 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 Academic 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 not-for-profit 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, Fayetteville campus. 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.

AWARDS AND SCHOLARSHIPS

Over 50 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 15.

ORGANIZATIONS IN THE SCHOOL
OF ARCHITECTURE

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.” AIAS stands with the American Institute of Architects (AIA), the American Collegiate...
Schools of Architecture (ACSA), the National Architectural Accrediting Board (NAAB), and the National Council of Architectural Registration Boards (NCARB) to make up the five collateral organizations within the profession.

The AIAS chapter at the University of Arkansas functions as a student government, as well as a service and a social organization, organizing and participating in both on-campus activities, such as Architecture Week, and off-campus activities, such as Forum, the national architecture student convention held each year during the Thanksgiving season. The organization also promotes a good transition into professional life by interacting with AIA members. 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. Specifically, the chapter initiates student competitions, develops field trips, exchanges ideas between students and professionals, identifies and develops projects of community value, maintains correspondence with other student organizations, and solicits presentations of specialized subjects related to the profession of landscape architecture.

Tau Sigma Delta Honor Society

The Alpha Eta Chapter of Tau Sigma Delta was established at the School of Architecture in 1977. The organization is the only national collegiate honor society recognized in the fields of architecture, landscape architecture, and allied arts. Its prime objectives are to emphasize scholarship and character, to stimulate mental achievement, and to recognize students who attain high scholastic standing. 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 Specifications Institute

Construction Specification Institute (CSI) is a non-profit 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.

The Construction Specification Institute Student Affiliate Chapter was formed at the University of Arkansas in 1993. CSI provides social/networking opportunities for students with area professionals as well as sponsors lectures and seminars on current construction issues.

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. See page 39 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>4.00</td>
</tr>
<tr>
<td>A−</td>
<td>3.67</td>
</tr>
<tr>
<td>A+</td>
<td>4.33</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>3.33</td>
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<tr>
<td>C</td>
<td>2.00</td>
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<tr>
<td>C−</td>
<td>1.67</td>
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<td>C+</td>
<td>2.33</td>
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<tr>
<td>D</td>
<td>1.00</td>
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<td>D−</td>
<td>0.67</td>
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<td>1.33</td>
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<tr>
<td>E</td>
<td>0.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>Value</th>
</tr>
</thead>
</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 retake 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 both courses. Failure to achieve this minimum standard will require retaking the studio.

6. Successful completion of the Comprehensive Design Studio (ARCH 5016/5026) and the co-requisite Technology VI (ARCH 5162) requires the demonstration of competence as evidenced by achieving a grade of “C” (2.00) or better in both courses. Failure to achieve this minimum standard will require retaking both courses.

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. Faculty-initiated reviews will occur during the final exam period of the semester under review.

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:
A. A recommendation to the faculty member regarding the grade appeal of the student.
B. A requirement for the student to repeat the design studio course and any co-requisite.
C. 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, and Landscape Architecture 3914. 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. The fees are non-refundable under any circumstances, including withdrawal from the respective programs. 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.

School Computer Policy

All students enrolled in the School of Architecture are required to supply, by the beginning of the second semester 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.

Dean’s List

In accordance with University policy, the School of Architecture publishes a Dean’s List at the close of each semester.

Graduation 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 distinction, the student must meet the following criteria:
1. At least the final two years of the degree course work must be completed at the UA Fayetteville campus.
2. For cum laude, the student must achieve a GPA of 3.50 or higher.
3. For magna cum laude, the student must achieve a GPA of 3.65 or higher.
4. For summa cum laude, the student must achieve a GPA of 3.80 or higher.

Departments, Degree Programs, and Courses

ARCHITECTURE (ARCH)

Departmental Office
120 Vol Walker Hall
479-575-4945

- University Professors Emeriti Jones, Smart, Sutherland (C.)
- Professors Blackwell, Goodstein, Shannon, Vitale, Wall
- Professors Emeriti Buono, Fowler, Jacks, Kellogg, Williams
- Associate Professors de Noble, Herman, Kucker
- Associate Professors Emeriti Denham, Doughty, Miller, Sutherland (M.), Tompkins
- Assistant Professors Messadi, Rudzinski (R.), Sexton, Smith, Terry
- Clinical Assistant Professors Fitzpatrick, Kultermann
- Adjunct Assistant Professors Del Gesso, Pearson, Piga

BACHELOR OF ARCHITECTURE DEGREE

1. Completion of the following 95-hour professional program: HOURS
Architectural Design 58
ARCH 1014, ARCH 1024, ARCH 2016, ARCH 2026,
ARCH 3016, ARCH 3026, ARCH 4016, ARCH 4026,
ARCH 5016, ARCH 5026
Architectural Technology 22
ARCH 2114, ARCH 2124, ARCH 3134, ARCH 3144,
ARCH 4154, ARCH 5162
History and Theory of Arch. 11
ARCH 1212, ARCH 1222, ARCH 2233, ARCH 2243,
ARCH 4433
Professional Practice 4
ARCH 5314
2. Completion of the 35-hour general University Core as listed on page 42. In addition, specific requirements are listed below:

**Professional Electives**

- Choose from upper-level courses (courses numbered 3000 or above) taught on the Fayetteville campus of the School of Architecture. 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**

- 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.

- Participation for at least one semester in an approved international educational experience. (See Off-Campus Study Requirement, page 88.)

**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 is 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 41). 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 42. 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 useful 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 2223, ARCH 2243 and ARCH 4433, and presentation of a 3.25 grade-point average.

2. At least nine hours of professional electives in a chosen area of specialization. Sample areas of 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 303 Morphology of Small Towns
- ARCH 303 House Culture
- LARC 3413 History of Landscape Architecture
- LARC 4413 Contemporary Landscape Architecture, and other approved courses. 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 Birth of Modern Culture, (1600 - 1900)
- ARCH 4023 St. Peter’s Basilica
- ARCH 302 Italian Art and Culture
- ARCH 303 Arch. of the City, Rome
- LARC 3413 History of Landscape Architecture and other approved courses.

**Modern Architecture and Urbanism** — select from

- ARCH 4443 History of Architecture IV
- ARCH 4483 Arch. in the Americas
- ARCH 4913 Design Thinking: Relationships Between Theory and Process
- ARCH 4023 History of the City in American Art and Culture
- ARCH 303 House Culture
- ARCH 4023 Italian Architecture from the Renaissance to the Present
- ARCH 4023 Birth of Modern Culture, (1600 - 1900)
- ARCH 303 Arch. of the City, Rome
- LARC 4413 Contemporary Landscape Architecture, and other approved courses.

3. At least three hours in the History of Architecture and Urbanism Colloquium.

4. 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 for specialization 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.

5. At least six hours of research thesis (ARCH 5026, option studio); students pursuing the historic preservation emphasis are strongly encouraged to include a historic building site visit in the thesis topic.
encouraged to participate in the UACDC option studio (ARCH 4016 or ARCH 4026) and/or the UACDC summer program (ARCH 303).

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. Declaration of an area of specialization is not required for the minor concentration.
3. At least three hours in the History of Architecture and Urbanism 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) and/or the UACDC summer program (ARCH 303).
6. Students considering pursuing the minor 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.

SEE PAGE 244 FOR ARCHITECTURE (ARCH) COURSES

BACHELOR OF SCIENCE DEGREE 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>Subject</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Design</td>
<td>6</td>
</tr>
<tr>
<td>ARCH 1014, ARCH 1024, ARCH 2016</td>
<td></td>
</tr>
<tr>
<td>Architectural Technology</td>
<td>8</td>
</tr>
<tr>
<td>ARCH 2114, ARCH 2124, or LARC 2714, LARC 3723</td>
<td></td>
</tr>
<tr>
<td>History and Theory of Arch.</td>
<td>11</td>
</tr>
<tr>
<td>ARCH 1212, ARCH 1222, ARCH 2233, ARCH 2243, ARCH 4433</td>
<td></td>
</tr>
<tr>
<td>(Students interested in Landscape Architecture may substitute LARC 3413 for ARCH 2233 or ARCH 2243.)</td>
<td></td>
</tr>
</tbody>
</table>

2. Completion of the following 35-hour general education program:

<table>
<thead>
<tr>
<th>Subject</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. (See University Core Requirements)</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>Subject</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>WCIV 1003 and WCIV 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>HIST 1123; a foreign language literature course;</td>
<td></td>
</tr>
<tr>
<td>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>Subject</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.</td>
<td></td>
</tr>
</tbody>
</table>
In cases of unusually thorough preparation, or in the case of international students, exemption may be sought from the department of foreign languages.

5. Completion of 21 hours of electives:

**Professional electives**

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-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.

**Free electives**

9

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 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 requirements for the minor are given in the section entitled “Majors, Minors, and Courses of Instruction.” Although students in architectural studies may choose from any recognized minor offered by the University, they are encouraged to consider the following fields:

<table>
<thead>
<tr>
<th>African-American Studies</th>
<th>Environmental Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>European Studies</td>
</tr>
<tr>
<td>Art</td>
<td>Gender Studies</td>
</tr>
<tr>
<td>Art History</td>
<td>Geography</td>
</tr>
<tr>
<td>Business Administration</td>
<td>History</td>
</tr>
<tr>
<td>Classical Studies</td>
<td>Latin-American Studies</td>
</tr>
<tr>
<td>Communication</td>
<td>Philosophy</td>
</tr>
<tr>
<td>Computer Sciences</td>
<td>Political Science</td>
</tr>
<tr>
<td>Drama</td>
<td>Psychology</td>
</tr>
<tr>
<td>Economics</td>
<td>Sociology</td>
</tr>
<tr>
<td>English</td>
<td></td>
</tr>
</tbody>
</table>

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 opportunities 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 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 a student’s special interests.

Sample curriculum for the Bachelor of Science in Architectural Studies degree can be obtained from the Advising Center.

**LANDSCAPE ARCHITECTURE (LARC)**

Departmental Office
231 Memorial Hall
479-575-4907

- Professor Emeritus Burggraf
- Professor Crone
- Associate Professors Beatty, Brittenum, Rollet-Crocker
- Assistant Professors Boyer, Fields

**BACHELOR OF LANDSCAPE ARCHITECTURE DEGREE**

1. Completion of the following 95-hour Professional core:

<table>
<thead>
<tr>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and Graphics</td>
</tr>
<tr>
<td>LARC 1315, LARC 1325, LARC 2113, LARC 2336,</td>
</tr>
<tr>
<td>LARC 2346, LARC 3356, LARC 3914, LARC 3366</td>
</tr>
<tr>
<td>LARC 4376, LARC 4383, LARC 5386</td>
</tr>
<tr>
<td>Landscape Architecture/ History/Theory</td>
</tr>
<tr>
<td>LARC 1211, LARC 1221, LARC 3413, LARC 4413,</td>
</tr>
<tr>
<td>LARC 3924</td>
</tr>
<tr>
<td>Summer Study Abroad</td>
</tr>
<tr>
<td>LARC 3933, LARC 4123</td>
</tr>
<tr>
<td>Landscape Architecture Technical Courses</td>
</tr>
<tr>
<td>LARC 2714, LARC 3723, LARC 3734, LARC 4714</td>
</tr>
<tr>
<td>HORT 3103</td>
</tr>
<tr>
<td>Professional Practice</td>
</tr>
<tr>
<td>LARC 5613</td>
</tr>
</tbody>
</table>

2. Completion of the 35-hour University Core as listed on page 42. As part of the University Core, the department recommends the following:

<table>
<thead>
<tr>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Science</td>
</tr>
<tr>
<td>BIOL 1543/1541L or BIOL 1613/1611L and GEOL 1113/1111L</td>
</tr>
</tbody>
</table>

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 41). 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.

SEE PAGE 297 FOR LANDSCAPE ARCHITECTURE (LARC) COURSES
PURPOSE 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 world-wide 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 undergraduate 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 31 fields and doctoral degrees in 13 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.

DEGREES OFFERED

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.

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 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). For the students who meet the Fulbright 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 Dean’s Office, room 525 Old Main. Students may also obtain information and an on-line application on the Web through Fulbright College of Arts and Sciences Scholarships and Fellowships at <http://www.uark.edu/~arsc/students/scholarships.html>.

Numerous 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.

HONORARY & DEPARTMENTAL 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:

- Phi Beta Kappa (arts and sciences)
- Kappa Kappa Psi (band, men)
- Tau Beta Sigma (band, women)
- Phi Sigma (biology)
- Alpha Chi Sigma (chemistry)
- American Chemical Society (chemistry)
- Alpha Psi Omega (drama)
- Pi Kappa Delta (forensics)
- Gamma Theta Upsilon (geography)
- Sigma Gamma Epsilon (geology)
- Eta Sigma Phi (Greek and Latin)
- Phi Alpha Theta (history)
- Alpha Kappa Delta (sociology)
- Pi Mu Epsilon (mathematics)
- Phi Mu Alpha (music, men)
- Sigma Alpha Iota (music, women)
- Sigma Pi Sigma (physics)
- Pi Sigma Alpha (political science)
- Alpha Epsilon Delta (pre-medical, medical technology, pre-dental)
- Psi Chi (psychology)
- Sigma Delta Pi (Spanish)
- Lambda Pi Eta (communication)
- Lambda Tau (writers)
- Kappa Tau Alpha (journalism)
- Pi Delta Phi (French)
- Delta Phi Alpha (German)
- Phi Beta Delta (international scholarship)
- Omicron Delta Epsilon (Economics)
**COLLEGE ACADEMIC REGULATIONS**

**Academic Advising Services**

The Fulbright College of Arts and Sciences provides an adviser for each student enrolled in the college. The faculty of each department within Fulbright College assumes responsibility for advising those 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 having yet decided on a major and those who are planning to attend professional 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 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.

**Honors Studies and Graduation with Honors**

To create an intellectual environment that challenges the best of students, the J. William Fulbright College of Arts and Sciences provides a comprehensive program of Honors Studies. This includes the Fulbright College Scholars Program, a four-year interdisciplinary honors program for students of superior academic ability or artistic talent, and the Departmental Honors Program, an honors program emphasizing directed independent study within a department or discipline of the college.

A student who has successfully completed a program of Honors Studies within Fulbright College is eligible to receive a baccalaureate degree with the distinction Fulbright College Scholar Cum Laude, or Departmental Scholar Cum Laude in the major field of study. Higher distinctions of Magna Cum Laude or Summa Cum Laude may be awarded to outstanding honors students by recommendation of the Fulbright College Honors Council.

To earn the distinction Fulbright College Scholar Cum Laude at graduation, a student must successfully complete the honors core curriculum, maintain a minimum grade-point average of 3.25, and satisfy requirements for departmental honors in the major field of study, including preparation and oral defense of an honors thesis. The Honors Council may award the higher distinctions of Magna Cum Laude or Summa Cum Laude based upon a student’s total academic performance, including the academic transcript, the quality of the scholarly activity pursued within the major field of study, and the breadth of college study as a whole.

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.

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.” For more information about Honors Studies within Fulbright College, see page 95 and individual department listings.

**COLLEGE DEGREE REQUIREMENTS**

Courses of study in 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 in the 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 20),
   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.

In addition to the University requirements listed above, each candidate for a degree in Fulbright College of Arts and Sciences must complete the degree program with a cumulative grade-point average of at least 2.00.

The Fulbright College residence requirement insists that no fewer than 30 hours of credit must be earned in courses offered by this college, and at least 24 of those hours must be numbered above 3000.

Each degree candidate in Fulbright College will receive an automated degree audit each semester of enrollment in advance of priority registration. It is e-mailed to the student, and a hard copy is sent to the student’s adviser or major department. It is recommended that the student meet with his or her adviser to review the degree audit.

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.

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. This thesis may be submitted to meet the college writing requirement mentioned above.

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.

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 42).

### Bachelor of Arts

<table>
<thead>
<tr>
<th>HOURS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A total of 124 semester hours.</td>
<td></td>
</tr>
<tr>
<td>2. University Core:</td>
<td></td>
</tr>
<tr>
<td>ENGL 1013, ENGL 1023, Composition I, II</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Composition Requirement (see page 43)</td>
<td></td>
</tr>
<tr>
<td>HIST 2003, HIST 2013, or PLSC 200</td>
<td>3</td>
</tr>
<tr>
<td>3. College Requirements</td>
<td></td>
</tr>
<tr>
<td>Fine Arts: six hours to include at least two different arts to be selected from the following nine courses:</td>
<td>6</td>
</tr>
<tr>
<td>ARTS 1003 or ARHS 1003 (except for art majors)</td>
<td></td>
</tr>
<tr>
<td>DRAM 1003 (except for drama majors)</td>
<td></td>
</tr>
<tr>
<td>COMM 1003</td>
<td></td>
</tr>
<tr>
<td>MLIT 1003</td>
<td></td>
</tr>
<tr>
<td>DANC 1003</td>
<td></td>
</tr>
<tr>
<td>ARCH 1003 or LARC 1003</td>
<td></td>
</tr>
<tr>
<td>HUMN 1003</td>
<td></td>
</tr>
<tr>
<td>Foreign language (Depending upon placement)</td>
<td>0-12</td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>PHIL 2003 or PHIL 2103</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1203 and one of the following three courses:</td>
<td>3-7</td>
</tr>
<tr>
<td>MATH 2043, MATH 2053, or MATH 2554</td>
<td></td>
</tr>
<tr>
<td>Natural sciences with laboratory</td>
<td>12</td>
</tr>
<tr>
<td>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:</td>
<td></td>
</tr>
<tr>
<td>Four to eight hours in the biological sciences may be selected from the following courses:</td>
<td></td>
</tr>
<tr>
<td>ANTH 1013/1011L</td>
<td></td>
</tr>
<tr>
<td>BIOL 1543/1541L</td>
<td></td>
</tr>
<tr>
<td>BIOL 1613/1611L</td>
<td></td>
</tr>
</tbody>
</table>

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:

- 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, HIST 1123 | 6
- WLIT 1113 and 3 hours to be chosen from: | 6
- 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 selection entitled Majors and Courses of Instruction. Majors may be chosen from the following fields:

- American Studies
- Anthropology
- Art
- Biology
- Chemistry
- Classical Studies
- Communication
- Computer Science
- Criminal Justice
- Drama
- Economics
- English
- French
- Geography
- Geology
- German
- History
- Intl. Relations
- Journalism
- Mathematics
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Social Work
- Sociology
- Spanish
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 99 for the combined academic and medical degree. See page 98 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 95.

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 Admission chapter in this catalog. Requirements on page 95.

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
- HLSC
- PHED
- DEAC
- ITED
- RECR
- EXED
- MILS
- UNIV
- ETEC
- PEAC
- VOED

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 program 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 developmental 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 42 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>Course Type</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A minimum of 124 semester hours. (Departments may require additional hours up to a total of 132.)</td>
<td></td>
</tr>
<tr>
<td>2. University Core:</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1013, ENGL 1023, Composition I, II</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Composition Requirement (see page 43)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2003, HIST 2013, OR PLSC 2003</td>
<td>3</td>
</tr>
<tr>
<td>3. College requirements:</td>
<td>0-9</td>
</tr>
<tr>
<td>Foreign language (Depending upon placement)</td>
<td>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 international students, exemption may be sought from the Department of Foreign Languages.

World literature, foreign literature, philosophy 9
(tobe 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, HIST 1123 6

Social sciences, to be selected from:
- ANTH 1023
- ECON 2013, ECON 2143
- GEOG 2103, GEOG 2203
- PSYC 2003
- SOCI 2013

Science and mathematics 18
(tobe 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
- Computer Science
- Earth Science
- Geology
- Mathematics
- Physics
- Public Administration

See page 99 for the combined academic and medical degree. See page 98 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 95.

**Bachelor of Fine Arts**

<table>
<thead>
<tr>
<th>Course Type</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A minimum of 128 semester hours.</td>
<td></td>
</tr>
<tr>
<td>2. University Core:</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1013, ENGL 1023, Composition I, II</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Composition Requirement (see page 43)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2003 or 2013 or PLSC 2003</td>
<td>3</td>
</tr>
<tr>
<td>3. College requirements:</td>
<td>3</td>
</tr>
<tr>
<td>4 hours to be selected from</td>
<td>9</td>
</tr>
<tr>
<td>PHYS 1023/1021L</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1053/1051L</td>
<td>3</td>
</tr>
<tr>
<td>ASTR 2003/2001L</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 1113/1111L</td>
<td>3</td>
</tr>
</tbody>
</table>
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 43)
   HIST 2003, HIST 2103, 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 6
   MATH 1023 3
   Social sciences to be selected from:
   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 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.
COMM 1313 or PHIL 2203 or an additional foreign language 3
COMM 1313 is required for art education majors.
MATH 1203 3
WCIV 1003, WCIV 1013 or HIST 1113, HIST 1123 6
WLIT 1113, WLIT 1123 6

4. 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, 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 95.

5. Additional Majors

Students fulfilling all requirements for the BS, BFA and BM degrees, including all core requirements and at least one major in these degree programs, may also claim an additional major in a humanistic discipline, social science, or interdisciplinary program associated with a BA degree. Upon completing all major requirements for that discipline, students wishing to have such an additional major will not receive a BA degree, but the additional major will be made part of their transcript. Students interested in this option should consult regularly with an academic adviser in the additional major and must notify the Fulbright College dean’s office (MAIN 525) when degree application is made.

Minors

Academic minors in approved degree programs are options available to students in the Fulbright College of Arts and Sciences. The minor must be in a field other than the major, and students must notify the department of their intention to minor. An academic minor ordinarily consists of 15-18 hours. Specific requirements for the minor are given in the section entitled Majors, Minors, and Courses of Instruction. Minors may be chosen from the following fields:

<table>
<thead>
<tr>
<th>African-American Studies</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>History</td>
</tr>
<tr>
<td>Art</td>
<td>Latin American Studies</td>
</tr>
<tr>
<td>Art History</td>
<td>Legal Studies</td>
</tr>
<tr>
<td>Biology</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Business</td>
<td>Middle East Studies</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Music</td>
</tr>
</tbody>
</table>
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.

**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. For students intending to obtain teacher licensure, except in Music and Art, Fulbright College offers a minor in pre-education (ASED), which, when taken in conjunction with a standard major, will qualify students for candidacy to the Master of Arts in Teaching (M.A.T.) degree and licensure program. See the ASED section on page 105 and the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158 for details concerning these regulations. Students should declare their intentions to prepare for teaching by the first semester of their sophomore year. For more information, please contact the Coordinator of Teacher Education in the College of Education and Health Professions, Peabody Hall, Room 8 and the Fulbright Advising Center, Old Main, Room 101.

**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 30 hours of the total required for the Bachelor of Arts degree or for 33 hours of the total required for the Bachelor of Science degree provided that the following requirements are met:

1. Completion of all core requirements for a B.A. or B.S. degree, as appropriate, prior to student’s entrance in medical or dental school.
2. Completion of a minimum of 12 hours of courses numbered above 3000 taken in Fulbright College.
3. Completion of at least 30 hours immediately prior to student’s entrance in medical or dental school in residence in Fulbright College.

Students interested in this degree should consult with their adviser or with the Fulbright College dean’s office early in their program. Formal application for the degree should be made to the Registrar.

This program is for highly qualified students with outstanding academic records who may be eligible for early admission to medical school or dental school programs. The year of a medical or dental study substitutes for the major in the B.A. or the B.S. degree program.

**Cooperative Education**

The Cooperative Education project 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, or from the Career Development Center, 607 Arkansas Union.

**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, nursing, 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 electives 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 Chairman of Studies in Social Work, or contact the Director of the Graduate School of Social Work, University of Arkansas at Little Rock, 33rd and University, Little Rock, AR 72204.

In other pre-professional programs, the distribution of credits applied toward a degree in Fulbright College may require the consent of a considerable portion of the available electives to prerequisite courses and to courses that are in direct support of the undergraduate major area.

Interested students should contact the appropriate advisers early in the planning of such programs.

**Pre-Law Program**

While there is no prescribed pre-law curriculum, Fulbright College offers a minor in legal studies administered 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 200.)

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

Pre-Professional Programs:

<table>
<thead>
<tr>
<th>Program</th>
<th>Chiropractic</th>
<th>Medical</th>
<th>Pharmacy</th>
<th>Dental</th>
<th>Optometry</th>
<th>Podiatry</th>
</tr>
</thead>
</table>

Allied Health Pre-Professional Programs:

<table>
<thead>
<tr>
<th>Program</th>
<th>Cytotechnology</th>
<th>Occupational Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Hygiene</td>
<td>Ophthalmic Medical Technology</td>
<td></td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>Diagnostic Medical Sonography</td>
<td></td>
</tr>
<tr>
<td>Medical Technology</td>
<td>Radiologic Technology</td>
<td></td>
</tr>
<tr>
<td>Respiratory Care</td>
<td>Nuclear Medicine Technology</td>
<td></td>
</tr>
</tbody>
</table>

For additional information about these and other allied health professions, contact the Fulbright College Advising Center, 101 Old Main, 479-575-3307, or e-mail: fcac@cavern.uark.edu, Web site: <http://www.uark.edu/~fcac/>.

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 or zoology, 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 College Advising Center, 101 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, BIOL 1543/1541L, plus 4 additional hours of biology

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, ENGL 2003 or substitute
- BIOL 1543/1541L, plus one other course in biological sciences, or equivalent
- CHEM 1103/1101L, CHEM 1123/1121L, CHEM 3603/3601L, CHEM 3613/3611L
- PHYS 2013/2011L, PHYS 2033/2031L

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, 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, 479-575-5348. Dr. Allison serves as chair of the pre-medical committee. For information, visit the University of Arkansas Pre-Medical Web site: <http://www.uark.edu/premed>.

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 or zoology. 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 Dr. Tim Kral, Department of Biological Sciences, 479-575-3251.

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 adviser for details.

The pre-pharmacy adviser for the University of Arkansas is Lorraine Brewer, Department of Chemistry and Biochemistry, 479-575-3103.

**Pre-Podiatry Program:** To meet entrance requirements for colleges of podiatry, 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 inquired 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 podiatry 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 84 hours. At least 5 of these elective hours must be upper-level.

All students planning careers in cytotechnology should contact the Fulbright College Advising Center, 101 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, 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 College Advising Center, 101 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 15 hours of electives.

All students planning careers in diagnostic medical sonography should contact the Fulbright College Advising Center, 101 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:

Applicants for admission must present a minimum of 68 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 College Advising Center, 101 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 appreciation, 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 College Advising Center, 101 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 US 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), 5 hours of chemistry, 4 hours of physics, 6 hours of psychology (including 3 hours of statistics), 3 hours of sociology, and an additional 6 hours of either sociology or psychology electives.

All students planning careers in occupational therapy should contact the Fulbright College Advising Center, 101 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 College Advising Center, 101 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 require 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 of 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 College Advising Center, 101 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 College Advising Center, 101 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 College Advising Center, 101 Old Main, 479-575-3307.

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 Fine Arts, Master of Public Administration, 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.

Departments, Degree Programs and Courses

AFRICAN-AMERICAN STUDIES (AAST)

Jeanne Whayne
Interim Chair of Studies
416 Old Main
479-575-3001

- Professor Morgan (sociology)
- Associate Professor Jones (music)
- Assistant Professors D’Alisera (anthropology), Robinson (history)

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;
3. The remaining six hours will be selected from the following recommended courses: ANTH 3253 Cultures of the South, HIST 4563 The Old South 1607-1865, HIST 4573 The New South 1860 to Present, HIST 4383 The History of Sub-Saharan Africa, SOCI 4073 Peoples of East Africa, WLIT 4993 African Literature;
4. No course can be counted both for African-American Studies and the departmental major.

Requirements for a Minor in African-American Studies: AAST 499V and HIST 3233, and at least 9 hours of approved elective courses. Interested students should consult with the African-American Studies Chairman for selection of appropriate classes.

With careful advising, a combined major of African-American Studies and majors other than those listed may be developed to meet student needs. Members of the African-American Studies Committee and interdepartmental committee are Jeanne Whayne (interim chair), history; Gordon Morgan, sociology; JoAnn D’Alisera, anthropology; Charles Robinson, history; and Eddie W. Jones, music.

Students desiring further information may consult with Professor Whayne of the history department.

SEE PAGE 236 FOR AFRICAN AMERICAN STUDIES (AAST) COURSES

AMERICAN STUDIES (AMST)

Robert B. Cochran
Chair of Studies
506 Old Main
479-575-7708

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 3933, 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 3383, 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 complete 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).

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.

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.

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.

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)
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 242 FOR ANTHROPOLOGY (ANTH) COURSES

ART (ARTS)
Lynn F. Jacobs
Chair of the Department
116 Fine Arts Building
479-575-5202
Web site: http://www.uark.edu/~artinfo/art.html

- Professors Brody, Harington, Pevén, Stout (K.)
- Professor Emeritus Ross
- Associate Professors Golden, Jacobs, Musnug, Nelson, Newman
- Assistant Professors Laporte, Hulen
- Adjunct Assistant Professors Kaminsky, Musick, Stout (D.)

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). 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. An exhibition of creative work of each student is required before commencement. Areas of selection are drawing, painting, sculpture, printmaking, ceramics, photography, and visual design. No art major may present ARTS 1003 or ARHS 1003, or any other art course, to satisfy the college fine arts requirement.

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 in studio art to be determined through consultation with an art department adviser. A student must notify the department of his/her intent to minor.

Requirements for a Major in Art with a Concentration in Art History/Criticism: A minimum of 40 semester hours, including ARTS 1313, ARTS 1323, ARTS 1013, ARTS 2013, ARTS 4921, 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 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.

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 course 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 the foundations requirements 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 BFA 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 66 semester hours including ARTS 1013, ARTS 1313, ARTS 1323, ARTS 2003, ARTS 2013, ARTS 3103, ARTS 3203 or ARTS 4343, and ARTS 4921, PHIL 4403, a minimum of 12 hours in a selected studio major, at least 12 hours in art history including ARHS 2913, ARHS 2923, and ARHS 4943.

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.

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, Old Main 101.
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://www.uark.edu/depts/coehp/boyer/Evaluation_for_internship/Evaluation_for_Art_Internship.doc>. The completed form must be returned to the Coordinator of Teacher Education, Peabody Hall Room 8, 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, Peabody Hall, Room 8, 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.

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).

For requirements for the M.F.A. degree program in art, see the Graduate School Catalog.

SEE PAGE 246 FOR ART (ARTS) COURSES

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.

SEE PAGE 246 FOR ARTS AND SCIENCES (ARSC) COURSES

ARTS & SCIENCES PRE-EDUCATION (ASED)
Fulbright College Advising Center
101 Old Main
479-575-3307
Web site: http://www.uark.edu/~fcac/
E-Mail: fcac@cavern.uark.edu

Students who desire licensure as high school teachers in one of the areas supported by Fulbright College, except for art and music education majors, must complete a minor in secondary education in conjunction with their undergraduate B.A. or B.S. degrees. Details of additional required courses for a specific major may be found within the major section of the catalog. Initial licensure is available by the University of Arkansas only to students who first complete a standard undergraduate degree with a secondary education concentration, and who then complete the Master of Arts in Teaching (M.A.T.) degree through the College of Education and Health Professions. Students interested in this program are advised to contact the Fulbright College Advising Center (MAIN 101) in addition to their departmental adviser. They should declare their secondary education minor by the first semester of the sophomore year. Art and music education majors will not be required to complete the M.A.T. program. Students in one of these majors should consult their departmental adviser.
Requirements for a secondary education concentration (grades 7-12):

Obtain a “C” or better in the following courses:
- CIED 1002 Intro to Education
- CIED 1011 Intro. to Ed Practicum
- ETEC 2001 Educational Technology
- ETEC 2002L Educational Tech Lab
- CIED 3023 Survey of Exceptionalities
  (PSYC 2003 is a co- or pre-requisite)
- CIED 3033 Classroom Learning Theory
  (PSYC 2003 is a pre-requisite)
- CIED 4203 Classroom Human Relations Skills
- CIED 4201 Seminar: Intro to Professionalism
- CIED 4210 Practicum: Critical and Creative Thinking Skills
- CIED 4211 Seminar: Critical and Creative Thinking Skills
- CIED 4221 Seminar: Structure of the Disciplines

NOTE: Consult the Admission Process for Initial Teacher Licensure Stages I-IV in the College of Education and Health Professions section on page 158 for teacher licensure and M.A.T. admission requirements. For more information, please contact the Coordinator of Teacher Education in the College of Education and Health Professions, Peabody Hall, room 8, the Fulbright Advising Center in room 101 of Old Main, or the Secondary Education M.A.T. advisers in the Department of Curriculum and Instruction, Graduate Education, room 205.

ASIAN STUDIES (AIST)

S. Henry Tsai
Chair of Studies
416 Old Main
479-575-3001

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 with the approval of the chair of Asian Studies.

SEE PAGE 240 FOR ASIAN STUDIES (AIST) COURSES

ASTRONOMY (ASTR)

Claud Lacy
Chair of Studies
226 Physics Building
479-575-2506

- Professors Lacy, Lieber
- Associate Professor Oliver

SEE PAGE 247 FOR ASTRONOMY (ASTR) COURSES

BIOLOGICAL SCIENCES (BISC)

Dan J. Davis
Chair of the Department
Science and Engineering 601
479-575-3251

Web site: http://biology.uark.edu/bisc.html

- Professors James, Roufa, Smith (K.), Talburt, Walker
- Professors Emeriti Dale, Johnston, Kilambi, Lane, Martin, Meyer, Russert-Kraemer, Sealander, Smith (E.)
- Associate Professors Beaupre, Brown, Durdik, Etges, Henry, Ivey, Kral, Rhoads, Sagers, Spiegel
- Associate Professors Emeriti Bailey, Wickliff
- Associate Research Professor Krementz
- Assistant Professors Lehmann, McNabb, Pinto, Ziegler
- Assistant Research Professors Magoulick, Thompson

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 plan necessarily 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. Bibliographic 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 adviser, 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 the B.A. with a major 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.”

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.

Requirements for a B.A. Degree with a Major in Biology:
A minimum of 124 hours is required, including:
1. BIOL 1543/1541L. Majors may take additional 1000-level BIOL courses, but majors may apply a maximum of eight 1000-level credits toward the major.
2. An additional 24 hours of biological sciences, including:
   a. One course from four of the following six areas of specialization, and at least one course from each of the three general areas of biology: botany, microbiology, zoology
      I. Microorganism Biology: BIOL 2533/2531L [lab optional] or BIOL 2013/2011L
      II. Genetics: BIOL 2323/2321L or BIOL 4233
      III. Morphology: BIOL 2504, BIOL 4104, BIOL 4424, BIOL 3123, BIOL 2404 or BIOL 2814
      IV. Physiology: BIOL 4304, BIOL 4313 or BIOL 2213/2211L
      V. Evolution: BIOL 3023
      VI. Ecology: BIOL 3863/3861L
   b. Bibliographic Practicum (BIOL 2001)
   c. Remaining 8-10 credit hours of biology electives above the 3000 level
3. Requirements in cognate science and mathematics include:
   a. CHEM 1103/1101L, CHEM 1123/1121L, and either CHEM 2613/2611L or CHEM 3603/3601L, CHEM 3613/3611L
   b. PHYS 2013/2011L, PHYS 2033/2031L
   c. MATH 2043 or MATH 2554

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 2.5 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 departmental chair of their intent to minor in biology.

Biology (B.S.) Life/Earth Science Teacher Licensure

Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003 (this is a pre-requisite to CIED 3033)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. 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 biology, see the Graduate School Catalog.

SEE PAGE 249 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 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.

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 – Finance
WCOB 2043 Acquiring and Managing Financial Resources
Plus an additional nine hours of 3000- or 4000-level finance courses.

Concentration 5 – 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
MTKG 4833 International Marketing
TLOG 4643 International Transportation Logistics

Concentration 6 – Management
MGMT 3563 Managerial Concepts and Organizational Behavior
Plus an additional 9 hours of 3000- or 4000-level management courses (except WCOB 3016)

Concentration 7 - Marketing
MTKG 3433 Principles of Marketing
Plus an additional 9 hours selected from the following:
MTKG 3533 Promotional Strategy
MTKG 4033 Selling and Sales Mgmt.
MTKG 4133 Marketing Research
MTKG 4553 Consumer Behavior
MTKG 4833 International Marketing
MTKG 4933 Retail Marketing Strategy
MTKG 4943 Retail Buying and Merchandise Control
TLOG 3613 Business Logistics

Concentration 8 – 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

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 minor students may substitute equivalent courses for the Walton College computer competency requirement. All equivalencies must be approved by the associate dean for academic affairs.

Chemistry and Biochemistry (CHBC)

Bill Durham
Chair of the Department
114 Chemistry Building
479-575-4648

Web site: http://www.uark.edu/depts/cheminfo/uarkchem/
E-mail: cheminfo@uark.edu

- Distinguished Professors Millett, Pulay, Schäfer, Wilkins
- University Professors Cordes, Hinton, Koepp
- 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 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 2223/2221L, 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 advisor.

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 2223/2221L, 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 4213/4211L, CHEM 4853, and 6 hours from CHEM 5813-5843 or CHEM 3813-4723, MATH 2554 and MATH 2564, PHYS 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.

Requirements for a B.S. degree with a Major in Chemistry, Biochemistry Option: A minimum of 39 semester hours in chemistry including CHEM1213/1211L, 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, 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 2033/2011L, 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 2323/2321L. The mathematics and physics courses are prerequisites for some advanced courses and should be scheduled early in the student’s program.

Requirements for a B.A. degree with a Major in Chemistry: Pre-professional 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 2033/2013L 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.

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 3453, and either CHEM 4853, and either CHEM 5813-5843 or CHEM 3813-4723, and either CHEM 3453/3451L, or the combination CHEM 3504-3514-3512L and two additional lecture courses numbered above 3000. PHYS 2033/2013L 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.

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 normal 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 academic adviser, who will help 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 honors 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.S.) Physical/Earth Science Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. Students wanting to teach science in middle school should consult with a middle level adviser in the College of Education and Health Professions.

Chemistry (B.A.) Physical/Earth Science Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. Students wanting to teach science in middle school should consult with a middle level adviser in the College of Education and Health Professions.

SEE PAGE 255 FOR CHEMISTRY (CHEM) COURSES

CLASSICAL STUDIES (CLST)
Dan B. Levine
Chair of Studies
502 Kimpel Hall
479-575-2951
Web site: http://www.uark.edu/ua/metis2/
• Professors Levine, Spellman, Waligorski
• Associate Professors Coon, Engels, Fredrick
Requirements for a Major in Classical Studies: The college offers a major in classical studies leading to the Bachelor of Arts degree. Students should select appropriate courses from the following:

1. 15 hours of Ancient Greek or 15 hours of Latin.
2. 18 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, PHI1 4003, PHI1 4013, PHI1 4023, PLSC 3953, WLIT 2323.

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, PHI1 4003, PHI1 4013, PHI1 4023, PLSC 3953, WLIT 2323.

Requirements for Departmental 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.

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 possess a 3.25 minimum grade-point average on all academic work and receive the recommendation of a faculty member in communication to the Honors Council of Fulbright College. A student may pursue an independent research program of a historical, critical, descriptive, or experimental nature, within any of the areas of rhetorical or communication theory, history of public address, interpersonal, small-group, or organizational communication, persuasion, argumentation, political communication, freedom of speech, communication education, or in any
closely related areas of inquiry. A student interested in mass communications, broadcasting, or film may choose to pursue either a research project or a creative study. In addition to satisfying the general college and departmental requirements for a bachelor’s degree, 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.

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:

1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003 (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following drama courses are recommended for drama/speech licensure, and with approval of adviser, may be used as electives in student’s program of study:
   - DRAM 1223 Intro. to Dramatic Art
   - DRAM 1333 Intro. to Design and Technical Production
   - DRAM 1683 Acting I
   - DRAM 272V (3) Theatrical Production
   - DRAM 3653 Directing I

Requirements for Departmental Honors are listed in the College of Engineering section of this catalog.

Requirements for a Major in Computer Science: At least 30 hours in computer science including CENG 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 preprofessional program requirements for the B.A. degree in computer science are MATH 2043 or MATH 2554, MATH 2103, MATH 3103.

The preprofessional program requirements for the B.A. degree in computer science are MATH 2043, MATH 2554, ENGL 1013, ENGL 1023, CENG 1113 and 1111L, CSCE 1123 and 1121L, and a 3-hour science course with a 1-hour laboratory.

Requirements for Departmental Honors are listed in the College of Engineering section of this catalog.

Requirements for a Major in Computer Science: CENG 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and either CENG 2133 or CSCE 4313.

SEE PAGE 263 FOR COMPUTER SCIENCE (CSCE) COURSES.

CRIMINAL JUSTICE (CMJS)

(See Sociology)

SEE PAGE 260 FOR CRIMINAL JUSTICE (CMJS) COURSES

DANCE (Danc)

(See Drama)

SEE PAGE 267 FOR DANCE (DANC) COURSES

DRAMA (DRAM)

D. Andrew Gibbs
Chair of the Department
619 Kimpel Hall
479-575-2953
Web site: http://www.uark.edu/depts/drama
E-mail: drama@cavern.uark.edu

- Professors Brusstar, Gibbs, Gross
- Associate Professors Herzberg, Martin, Riha
- Assistant Professors Dwyer, Gorden, Tyndall
- Instructor Leftwich

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 courses:

- DRAM 1223 Intro. to Dramatic Art
- DRAM 1313 Stage Technology I: Costumes and Makeup
- DRAM 1311L Stage Technology I Lab
- DRAM 1323 Stage Technology II: Scenery and Lighting
- DRAM 1321L Stage Technology II Lab
- DRAM 1683 Acting I
- DRAM 2683 Acting II
- DRAM 3653 Directing I

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), who succeed in graduate or professional studies in such areas as engineering, science, law, medicine, or business, if pursued, who pursue life-long learning and continued professional development, and who undertake leadership roles in their profession, in their communities, and in the global society.

The department offers the Bachelor of Science, Bachelor of Arts, and graduate degrees in computer science. The Bachelor of Science degree for this department is listed in the College of Engineering section of this catalog. The graduate degrees are described in the Graduate School Catalog.
a choice of one course selected from DRAM 3213 (Costume Design I), DRAM 3733 (Lighting Design I), DRAM 3903 (Makeup Design) or DRAM 4653 (Scene Design I)

DRAM 4233 History of Theatre I
DRAM 4333 History of Theatre II

six hours of courses chosen from DRAM 3803 Development of the Drama, DRAM 4733 Dramatic Criticism, DRAM 3433 Stage Speech, DRAM 4463 African American Theatre History, DRAM 491 Special Topics in Script Analysis/Synthesis, one design course, not previously taken, chosen from among DRAM 3213, DRAM 3733, DRAM 3903, DRAM 4653.

In addition, all drama majors are required to take 2 credit hours of DRAM 3001 Theatre Practicum. It is expected that one hour of theatre practicum will be taken per academic year. In consultation with the adviser, each student may select the focus area of each practicum credit, but no more than 2 credits may be earned for performance assignments. 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 undergraduate students with an opportunity to formally participate in 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.

**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:**

1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)

3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for drama/speech licensure: (With approval of adviser, these courses may be used as electives in student’s program of study.)
   - COMM 2303 Public Speaking
   - COMM 2373 Intro. to Debate
   - COMM 4793 Directing Forensics
   - Any other upper-level communications course

For requirements for the M.A. and M.F.A. degrees in drama, see the Graduate School Catalog.

SEE PAGE 267 FOR DRAMA (DRAM) COURSES

**ECONOMICS (ECON)**

Joseph Ziegler
Chair of the Department
402 Business Building
479-575-ECON (3266)
Web site: http://waltoncollege.uark.edu/ECON/default.asp

- Phillips Petroleum Chair of International Business and Economics
- Distinguished Professor Murray
- Lewis E. Epley Jr. Professor Ferrier
- Professors Britton, Curington, Dixon, Farmer, Gay, McKinnon, Ziegler
- Associate Professors Horowitz, Kali
- Assistant Professors Deck, Lee, Mendez, Reyes

**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.

**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 Fullbright 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 2553 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

University of Arkansas, Fayetteville
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).

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, 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 102.

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 2023, or ECON 2143, are prerequisites to all economics courses numbered above 3000.

Economics (B.A.) Social Studies Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003 (this is a pre-requisite to CIED 3033)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for licensure, and with approval of adviser, may be used as electives in student’s program of study:
   6 hours of geography, including GEOG 1123 Human Geography
   9 hours of American history, including HIST 2003, HIST 2013
   3 hours of sociology or anthropology
   PLSC 2003 American National Government
   PLSC 2203 State and Local Government, or
   PLSC 3223 Arkansas Politics
   PSYC 2003 General Psychology
6. The following courses are specifically required for licensure:
   ECON 2013 or ECON 2023 or ECON 2143
   HIST 3383 Arkansas History
7. 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 269 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 Guilds
- Distinguished Professor Emeritus Kinnamon
- University Professors Emeriti Harrison, Van Scyoc, Williams
- Professors Booker, Brinkmeyer, Burrus, Candido, Cochran, DuVal, Gies, Hefter, Montgomery, Quinn, Sherman, Talburt
- Professors Emeriti Bennett, Bolsterli, Guinn, Hart, Rudolph
- Associate Professors Adams (C.), Gilchrist, Hays, Jimoh, Kahf, Marren, Slaterry, Stephens
- Associate Professors Emeriti MacRae, Park
- Assistant Professors Adams (R.), Armstrong, Cohen, McCombs
- Instructors Clark, Lane

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.

Writing Requirement: All upper-division English courses require a research or an analytical paper except ENGL 4003, ENGL 4013, 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 300 and WLIT courses numbered above 2333.

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 do 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 requirements for the combined major are as follows: 21 semester hours including JOUR 1023, JOUR 3013, JOUR 3023, and JOUR 3633. Other sequences of courses are available for students emphasizing broadcast journalism.

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: 1. Complete a minimum of 36 hours in the primary field. Students who complete a minor in ASED may substitute ENGL 2013 or ENGL 2023 for three hours of English electives.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003 (this is a pre-requisite to CIED 3033)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are required for licensure; and, with approval of adviser, these courses may be used as electives in the student’s program of study:
   ENGL 3183 Modern English Syntax and Style, or
   ENGL 4003 English Language and Composition for Teachers
6. 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 274 FOR ENGLISH (ENGL) COURSES

EUROPEAN STUDIES (EUST)

Mark E. Cory
Director of Studies
518 Kimpel Hall
479-575-5939
Web site: http://www.uark.edu/depts/eust/

• Professors Booker (English), Bukey (history), Cory (German), Dixon (geography), DuVal (English), Eichmann (French), Gay (economics), Hanlin (German), Heffernan (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), Ruiz (Spanish)
• Instructor Rozier (Italian)

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

**History**
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 399VH). 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 278 FOR EUROPEAN STUDIES (EUST) COURSES

**FOREIGN LANGUAGES (FLAN)**
See also specific languages.

Kay Pritchett
Chair of Department
425 Kimpel Hall
479-575-2951

Web site: http://www.uark.edu/depts/laninfo

- Professors Cory, Eichmann, Hanlin, Haydar, Levine, Pritchett, Ricker, Tucker, Williams
- Professors Emeriti Falke, Fernandez
- Associate Professors Arenberg, Bell, Christiansen, Davis, Fredrick, Restrepo, Turner
- Associate Professors Emeriti Bergal, Ford, Hassel, Horton
- Research Associate Professor Cornell
- Assistant Professors Comfort, Condray, Fukushima, Jones, Ruiz
- Instructors Rozier, Xu

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
In addition to meeting the eligibility standards determined by the Fulbright College Honors Council, candidates must

1. demonstrate an intelligent and responsive command of a minimal number of literary monuments,
2. demonstrate a satisfactory knowledge within the non-literary areas of the target culture,
3. demonstrate an acceptable level of proficiency in the four skills of their language,
4. complete a minimum of six hours of honors work in the chosen language,
5. submit by the final semester of their senior year evidence of substantial independent study,
6. present themselves toward the end of the final semester of their senior year for an oral examination administered by an Honors Council committee.

Foreign Language (B.A.) Teacher Licensure Requirements:

1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.

SEE PAGE 280 FOR FOREIGN LANGUAGES (FLAN) COURSES, CHECK PAGE 235 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 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 4003 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 Women and Family in the Middle East Since 1800
- 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

**Requirements for the B.S. Degree with a Major in Earth Science:**

- **Total Hours: 56**
- In addition, all earth science majors must satisfy the senior-level writing requirement as specified by the geosciences department.

**Earth Science (B.S.) Teacher Licensure in Life/Earth Science or Physical/Earth Science Requirements:**

1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This course is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for Life/Earth Science, and with the approval of adviser, these courses may be used as electives in student’s program of study:
   - BIOL 1543/1541L Principles of Biology
   - BIOL 2533/2531L Cell Biology
   - BIOL 3023 Evolutionary Biology
   - BIOL 2323/2321L General Genetics
   - BIOL 3863/3861L General Ecology
6. The following courses are recommended for Physical/Earth Science, and with the approval of adviser, these courses may be used as electives in student’s program of study:
   - CHEM 1074/1071L Fundamentals of Chemistry
   - CHEM 2262/2272 Analytical Chemistry/Lab
   - PHYS 1023/1021L Physics and Human Affairs
   - PHYS 2013/2011L College Physics
7. Students wanting to teach science in middle school should consult with a middle level adviser in the College of Education and Health Professions.

**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.

- **Basic Courses:**
  - Biology (select 8 hours)
- **Chemistry or Physics:** (select 8 hours)
- **GEOL 1113/1111L:** 4 hours
- **GEOL 1133/1131L:** 4 hours

- **Advanced Courses:**
  - ASTR 2003, ASTR 2001L: 4 hours
  - GEOG 3003, GEOG 4353, GEOG 4363: 9 hours
  - GEOL 2313, GEOL 3114, GEOL 3313, GEOL 3413: 13 hours
- At least 6 additional hours, at the 3000 level or above, in either geography or geology: 6 hours

**Total Hours: 56**

Geography (GEOG)

Undergraduates who wish to major in geography should identify themselves to the department as soon as possible in order that they may develop a meaningful sequence of courses and take part in departmental activities. Two types of undergraduate programs with concentrations in geography are described below. Those interested in the graduate program should consult the Graduate School Catalog.
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.

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.

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).

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

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:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for licensure, and with approval of adviser, may be used as electives in student’s program of study:
   - 6 hours of geography, including GEOG 1123 Human Geography
   - 9 hours of American history, including HIST 2003, HIST 2013, HIST 2014
   - 3 hours of sociology or anthropology
   - PLSC 3003 American National Government
   - PLSC 3223 Arkansas Politics
   - PSYC 2001 General Psychology
6. The following courses are specifically required for licensure:
   - ECON 2013 or ECON 2023 or ECON 2143
   - HIST 3383 Arkansas History
7. 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 281 FOR GEOGRAPHY (GEOG) COURSES

Geology (GEOL)
The department of geosciences offers degrees in several areas of geology including the Bachelor of Science and Bachelor of Arts degrees in geology and the Bachelor of Science degree in earth science. It is emphasized that students wishing to become practicing professional geologists should hold the Bachelor of Science degree in geology at a minimum. It is further recognized that practicing professional geologists typically hold a Master of Science degree. The education of students pursuing the Bachelor of Science in earth science or Bachelor of Arts in geology degrees should reflect general education in the liberal arts with emphasis in geology. The goal of the program leading to the Bachelor of Science degree in geology is to provide students with a broad spectrum of the various subdisciplines of geology, while at the same time honoring an emphasis in the traditional areas of mineralogy, igneous, metamorphic and sedimentary petrology, structural geology and stratigraphic principles. This curriculum will prepare students to enter graduate programs without deficiencies at the University of Arkansas or other established programs.

Requirements for a Major in Geology leading to the B.S. Degree: A minimum of 40 semester hours including GEOL 1113/1111L (or GEOL 3002), GEOL 2131, GEOL 3313, GEOL 3413, GEOL 3513/3511L, GEOL 4223, GEOL 4643/4641L, GEOL 4666, and 6 additional geology course hours selected from GEOL 4033, GEOL 4043, GEOL 4053, GEOL 4153, GEOL 4253, GEOL 4413, GEOL 4433. Also, each student must complete CHEM 1103/1101L and CHEM 1123/1121L, College or University Physics (8 hours), MATH 2554 and MATH 2564 and a 3-hour upper-level science course approved by the student’s adviser.

Requirements for a Major in Geology leading to the B.A. Degree: GEOL 1113/1111L (or 3002), GEOL 2131, GEOL 3313, GEOL 3413, GEOL 3513, GEOL 4223, GEOL 4643/4641L, 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.

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 2131, 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.) Teacher Licensure in Life/Earth Science or Physical/Earth Science Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for Life/Earth Science, and with the approval of adviser, these courses may be used as electives in student’s program of study:
   - BIOL 1543/1541L Principles of Biology
   - BIOL 2533/2531L Cell Biology
   - BIOL 3023 Evolutionary Biology
   - BIOL 3233/3231L General Genetics
   - BIOL 3863/3861L General Ecology
6. The following courses are recommended for Physical/Earth Science, and with the approval of adviser, these courses may be used as electives in student’s program of study:
   - CHEM 1074/1071L Fundamentals of Chemistry
   - CHEM 2262/2272 Analytical Chemistry/Lab
   - PHYS 1023/1021L Physics and Human Affairs
   - PHYS 2013/2011L College Physics
7. Students wanting to teach science in middle school should consult with a middle level 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 281 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, Cornell, Engels, Kennedy, Sutherland, Tsai, Whayne
• Professors Emeriti Brown, Chase, Vizzier
• Associate Professors Chappell, Coon, Finlay, Gordon, Robinson, Sloan, Sonn, Tucker
• Associate Professor Emeritus Edwards
• Assistant Professors Brogi, Schweiger, Starks, Williams (P)

Requirements for a Major in History: 36 semester hours to include WCIV 1003 and WCIV 1013 or HIST 1113 and HIST 1123 (or HIST 1113H 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 areas:

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

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 4323, HIST 4333, HIST 4373, HIST 4383, HIST 4393, HIST 4413, HIST 4433

Assistant Professors Brogi, Schweiger, Starks, Williams (P)

Professors Emeriti Brown, Chase, Vizzier

Assistant Professors Chappell, Coon, Finlay, Gordon, Robinson, Sloan, Sonn, Tucker

See page 281 for GEOLOGY (GEOL) COURSES
**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.

**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.

**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 102.

For freshman history, see Western civilization 1003, 1013.

**History (B.A.) Social Studies Teacher Licensure Requirements:**

1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for licensure, and with approval of adviser, may be used as electives in student’s program of study:
   - 6 hours of geography, including GEOG 1123 Human Geography
   - 9 hours of American history, including HIST 2003, HIST 2013
   - 3 hours of sociology or anthropology
   - PLSC 2003 American National Government
   - PLSC 2203 State and Local Gov., or PLSC 3223 Arkansas Politics
   - PSYC 2003 General Psychology
6. The following courses are specifically required for licensure:
   - ECON 2013 or ECON 2023 or ECON 2143
   - HIST 3383 Arkansas History (for elementary education majors; secondary education majors may choose between HIST 3383 or HIST 4583 Arkansas in the Nation.)
7. 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 286 FOR HISTORY (HIST) COURSES**

**HONORS STUDIES (HNRS)**

Sidney Burris
Director of Honors Studies
517 Old Main
479-575-2509
Web site: http://www.uark.edu/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 1</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Civilization</td>
<td>6</td>
</tr>
<tr>
<td>HIST 1113H, HIST 1123H</td>
<td>6</td>
</tr>
<tr>
<td>World Literature</td>
<td>6</td>
</tr>
<tr>
<td>WLIT 1113H, WLIT 1123H</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2003H</td>
<td>6</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>6</td>
</tr>
<tr>
<td>Select from the following: ARHS 1003H, COMM 1003H, DANC 1003H, DRAM 1003H, HUMN 1003H, MLIT 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**

<table>
<thead>
<tr>
<th>Humanities of Culture</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMN 1114H, HUMN 1124H,</td>
<td></td>
</tr>
<tr>
<td>HUMN 2114H, HUMN 2124H</td>
<td></td>
</tr>
</tbody>
</table>

**Philosophy**

| PHIL 2003H                     | 3  |

**Fine Arts**

| Select from the following:    |    |
| 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:    |    |

**Colloquia 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 95). 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 (chosen from at least two different departments) 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 2043, 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 Music Degree**

**Humanities Option 1**

| World Civilization          | 6  |
| HIST 1113H, HIST 1123H      |    |

**Fine Arts, World Literature, Philosophy**

| Select from two different areas. |    |
| ARHS 1003H, COMM 1003H, DANC 1003H, DRAM 1003H, HUMN 1003H, MLIT 1003H |    |

**World Literature**

| WLIT 1113H, WLIT 1123H |    |

**Humanities Option 2**

| Honors Roots of Culture | 12 |
| HUMN 1114H, HUMN 1124H, HUMN 2114H |    |

**Colloquium in Humanities**

3

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. 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 Fine Arts Degree

J. William Fulbright College of Arts and Sciences

Mathematics: 3-4
Natural Science: 8
Colloquia in Social Sciences 6

Foreign Language: (depending upon placement) 0-6
See your adviser.
Social Science 3
Select from the following.
ANTH 1023H, GEOG 2103H, ECON 2013H,
ECON 2023H, ECON 2013 AND ECON 2023,
PSYC 2003H, SOCI 2013H

Natural Sciences: 8
Eight hours of honors credit to be chosen from the
lab sciences. See adviser for specific science course listing.
Mathematics: 3-4
Fulbright Scholars must fulfill the math requirement
of MATH 2043 or MATH 2053 or MATH 2554.

Bachelor of Fine Arts Degree

HOURS

Humanities Option 1
World Civilization 6
HIST 1113H, HIST 1123H
World Literature 6
WLIT 1113H, WLIT 1123H
Philosophy 3
PHIL 2003H
Fine Arts 3
Select from the following.
COMM 1003H, DANC 1003H, DRAM 1003H,
HUMN 1003H, MLIT 1003H
Colloquia in Humanities 6
Must be selected from two different areas of humanities.
Course offerings vary each semester. See adviser.

Humanities Option 2
Honors Roots of Culture 16
HUMN 1114H, HUMN 1124H, HUMN 2114H,
HUMN 2124H
Philosophy 3
PHIL 2003H
Colloquia in Humanities 6
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:
Foreign Language: (depending on placement) 0-9
See your adviser.
Social Science 3
Select from the following.
ANTH 1023H, GEOG 2103H, ECON 2013H,
ECON 2023H, ECON 2013 AND ECON 2023,
PSYC 2003H, SOCI 2013H
Colloquia in Social Sciences 6
Must be selected from two different areas of social sciences.
Course offerings vary each semester. See adviser.
Natural Science: 8
Eight hours of honors to be chosen from lab sciences.
See adviser for specific science course listing.
Mathematics: 3-4
Fulbright Scholars must fulfill the math requirement
of MATH 2043 or MATH 2053 or MATH 2554.

Graduation With Honors

A student who has successfully completed a program of Honors
Studies within Fulbright College is eligible to receive a baccalaureate
degree with the distinction: Fulbright College Scholar Cum Laude, or
Departmental Scholar Cum Laude in the major field of study. Higher
distinctions of Magna Cum Laude or Summa Cum Laude may be
awarded to outstanding honors students by recommendation of the
Fulbright College Honors Council.

To earn the distinction Fulbright College Scholar Cum Laude at
graduation, a student must successfully complete the honors core
curriculum, maintain a minimum grade-point average of 3.25, and
satisfy requirements for departmental honors in the major field of
study, including preparation and oral defense of an honors thesis. The
Honors Council may award the higher distinctions of Magna Cum
Laude or Summa Cum Laude based on a student’s total academic
performance, including the academic transcript, the quality of the
scholarly activity pursued within the major field of study, and the
breadth of college study.

To earn the distinction of Departmental Scholar Cum Laude at
graduation, a student must successfully complete requirements pre-
scribed by the major department, including an honors thesis and oral
examination, and maintain a minimum grade-point average of 3.25.
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 those exception-
al instances where truly outstanding work within the major field is
coupled with a superior understanding of its relationship to the liber-
al arts, the distinction Summa Cum Laude may be awarded.

For more information about Honors Studies within Fulbright
College, see individual departmental listings within the college.

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, Scheide, Sloan, Stephens
- Assistant Professors Halman, Robinson, 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.

SEE PAGE 290 FOR HUMANITIES (HUMN) COURSES

INTERNATIONAL RELATIONS (IREL)

Hoyt H. Purvis
Chair of Studies
116 Kimpel
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
requirements for a major in international relations:  

HOURS

FIIR 2813 Intro. to International Relations 3  
(same as PLSC 2813)

Six hours of upper-division foreign language courses 6  
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.)

ECON 2013 Principles of Macroeconomics and ECON 6-9  
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 & Finance

From the following (depending on ECON option selected):  
(Courses must be selected from at least two departments.) 6-9

COMM 4343 Intercultural Communication
ECON 4633 International Trade Policy, or  
ECON 4643 International Macroeconomics & Finance*  
(if not used to meet ECON requirement)

GEOR 2103 Emerging Nations
GEOR 2203 Developed Nations
GEOR 4243 Political Geography
HIST 3063 Military History
HIST 3443 Modern Imperialism
HIST 3533 World War II
HIST 3583 U.S. and Vietnam
HIST 4763 Diplomatic History
PLSC 3533 Political Development
PLSC 3803 International Organization
PLSC 3813 International Law
PLSC 3823 Theories of International Relations
PLSC 3853 American Foreign Policy
PLSC 4513 Creating Democracies
PLSC 4803 Foreign Policy Analysis
PLSC 4813 Politics of the Cold War

Area Studies Concentration  

Three hours of an Area Studies Colloquium (AIST, EUST, 9  
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.)

FIIR (IREL) 4003 International Relations Seminar 3  
(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.)

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 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 4023 Egyptology
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 2203 Developed Nations
GEOG 4243 Political Geography
HIST 3063 Military History
HIST 3443 Modern Imperialism
HIST 3533 World War II
HIST 3583 U.S. and Vietnam
HIST 4763 Diplomatic History
PLSC 3533 Political Development
PLSC 3803 International Organization
PLSC 3813 International Law
PLSC 3823 Theories of International Relations
PLSC 3853 American Foreign Policy
PLSC 4513 Creating Democracies
PLSC 4803 Foreign Policy Analysis
PLSC 4813 Politics of the Cold War

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
HIST 3033 Islamic Civilization
HIST 3043 History of the Modern Middle East
HIST 3063 Military History
HIST 3203 Colonial Latin America
HIST 3213 Modern Latin America
HIST 3443 Modern Imperialism
HIST 3473 Palestine and Israel in Modern Times
HIST 3503 Far East in Modern Times
HIST 3533 World War II
HIST 3583 The United States and Vietnam, 1945-1975
HIST 3923H Honors Colloquium  
(for honors students if the topic is international-related)

Approved Courses for Minor in Anthropology for  
International Relations majors:

ANTH 3003 World Prehistory
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 4023 Egyptology
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 2203 Developed Nations
GEOG 4243 Political Geography
HIST 3063 Military History
HIST 3443 Modern Imperialism
HIST 3533 World War II
HIST 3583 U.S. and Vietnam
HIST 4763 Diplomatic History
PLSC 3533 Political Development
PLSC 3803 International Organization
PLSC 3813 International Law
PLSC 3823 Theories of International Relations
PLSC 3853 American Foreign Policy
PLSC 4513 Creating Democracies
PLSC 4803 Foreign Policy Analysis
PLSC 4813 Politics of the Cold War

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
HIST 3033 Islamic Civilization
HIST 3043 History of the Modern Middle East
HIST 3063 Military History
HIST 3203 Colonial Latin America
HIST 3213 Modern Latin America
HIST 3443 Modern Imperialism
HIST 3473 Palestine and Israel in Modern Times
HIST 3503 Far East in Modern Times
HIST 3533 World War II
HIST 3583 The United States and Vietnam, 1945-1975
HIST 3923H Honors Colloquium

(for honors students if the topic is international-related)
Approved Courses for Minor in Political Science:
Students must complete 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 following 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 Politics of Russia
- PLSC 4583 Political Economy of the Middle East
- PLSC 4593 Islam and Politics
- PLSC 4803 Foreign Policy Analysis
- PLSC 4813 Politics of the Cold War
- PLSC 4823 Foreign Policy of East Asia
- PLSC 4843 Middle East in World Affairs
- PLSC 4873 Inter-American Politics

Approved Courses for Minor in Asian Studies:
Students must complete 12 hours from approved Asian Studies courses described in the catalog, including at least three hours in AIST 4003 Asian Studies Colloquium.

Approved Courses for Minor in European Studies:
Students must complete 12 hours from approved European Studies courses described in the catalog, including at least three hours in EUST 4003 European Studies Colloquium.

Approved Courses for Minor in Latin American Studies:
Students must complete 12 hours from approved Latin American Studies courses described in the catalog.

Approved Courses for Minor in Middle East Studies:
Students must complete a minimum of 9 hours from approved MEST core courses, including MEST 4003, and 6 hours of Arabic beyond the 12 credit college language requirement.

Approved Courses for Minor in Russian Studies:
Students must complete 12 hours from approved Russian Studies courses described in the catalog.

JOURNALISM (JOUR)

Requirements for a B.A. degree in Journalism:
Students must complete the course listed in the catalog. The purpose of the department 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.

Writing Requirement:
Students may meet the college writing requirement by producing a satisfactory honors thesis, or research/analytical paper. The research/analytical paper must be written in any journalism 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, 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 3013. 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:
Combined Majors

Combined Major in Journalism and Political Science: The combined major in journalism and political science is recommended for those students who have a strong interest in the reporting of public affairs as a career. The journalism requirement may be satisfied by 24 semester hours of courses, including JOUR 1023, JOUR 2013, JOUR 2033, JOUR 3013, JOUR 3023, JOUR 3633, and JOUR 4043, plus two courses from the following: JOUR 3133, JOUR 3333. (Some courses may have 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:

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<td>PLSC 3103</td>
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<td>PLSC 4273</td>
<td>PLSC 4813</td>
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Alternatively, a foreign affairs concentration may be pursued by electing the advanced hours from the following courses:

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<tr>
<th>Course Code 1</th>
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<td>PLSC 4593</td>
<td>PLSC 4803</td>
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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 as follows: 21 semester hours including JOUR 1023, JOUR 1033, JOUR 2013, JOUR 3013, JOUR 3023, and JOUR 3633. (Some courses may have prerequisites.) For English course requirements for the combined major see notes under department of English.

Journalism (B.A.) Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.

NOTE: The journalism courses required are currently being developed. Contact your departmental adviser.

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 295 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), Williams (English)
- Associate Professors Bell, Restrepo (foreign languages), Montgomery (journalism), Ryan (political science), Striffler (anthropology)
- Assistant Professors Ruiz (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. Included in the 12 hours may be 3 additional hours of LAST 4003, provided the topic is different. A maximum of 6 hours of electives may be submitted from any one department.

**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 please see the listings under the individual departmental headings):

**Anthropology**
- ANTH 3503 Power and Popular Protest in Latin America
- ANTH 3513 Latinos in the US
- ANTH 3523 Gender and Politics in Latin America
- ANTH 4173 The Latin American City
- ANTH 448V Individual Studies in Anthropology

**Economics**
- ECON 3843 Economic Development & Multilateral Finance

**Geography**
- GEOG 2103 Emerging Nations
- GEOG 410V Special Problems in Geography
- GEOG 4173 The Latin American City

**History**
- HIST 3203 Colonial Latin America
- HIST 3213 Modern Latin America
- HIST 4173 The Latin American City
- HIST 4743 History of Brazil

**Latin American Studies**
- LAST 2013 Intro. to Latin-American Studies

**Political Science**
- PLSC 3573 Governments and Politics of Latin America
- PLSC 394V Readings in Political Science
- PLSC 4873 Inter-American Politics
- PLSC 5573 Political Change/Latin America

**Spanish**
- SPAN 3103 Cultural Readings
- SPAN 3113 Intro. to Literature
- SPAN 4133 Survey of Spanish-American Literature
- SPAN 4223 Latin-American Civilization
- SPAN 4303 The Latin American City: Culture and Society
- SPAN 4243 Literature and Culture in the Hispanic United States
- SPAN 4253 Latin-American Cinema and Society
- SPAN 475V Special Investigations
- SPAN 5253 Colonial Literature and Culture
- SPAN 5393 19th Century Spanish-American Literature
- SPAN 5463 20th Century Spanish-American Literature
- SPAN 5533 Mexican Literature

**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. The preferred method for satisfying the remaining hours is to enroll in the colloquium at least once for honors credit (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 298 FOR LATIN AMERICAN STUDIES (LAST) COURSES

**MATHEMATICAL SCIENCES (MASC)**

Dmitry Khavinson
Chair of the Department
301 SCEN
479-575-3351

- Distinguished Professors Schein, Khavinson
- Professors Akeroyd, Brewer, Cochrane, Feldman, Luecking, Madison
- Professors Emeriti Duncan, Dunn, Keown, Kimura, Long, Scroggs, Summers
- Associate Professors Arnold, Capogna, Goodman-Strauss, Johnson, Lanzani, Meaux, Meek, Ryan
- Associate Professors Emeriti Monroe, Sekiguchi
- Assistant Professors Chan, Hogan, De Oliveira, Petrus, Rieck
- Visiting Assistant Professors Solynin, Vassilev (D), Vassilev (J)
- Instructors Mackey, Tjani, Woodland
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. (See writing requirement below.)

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 CSCE 1023/1021L 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 industrial 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 3443.

The courses required for option (2) are MATH 4523, MATH 3443, 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.

Sciences and University of Arkansas, Fayetteville

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.

Requirements for a Minor in Mathematics: MATH 2103, 2574, 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.

Advising Center, Old Main room 101.

MATH 2554 and 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.

Mathematics (B.A. or B.S.) Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. Students wanting to teach mathematics in middle school should consult with a middle level adviser in the College of Education and Health Professions.

Requirements for a Minor in Mathematics:
MATH 2103, 2564, 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.

Mathematics (B.A. or B.S.) Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. Students wanting to teach mathematics in middle school should consult with a middle level adviser in the College of Education and Health Professions.

Requirements for a Minor in Mathematics:
MATH 2103, 2564, 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.

Mathematics (B.A. or B.S.) Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. Students wanting to teach mathematics in middle school should consult with a middle level adviser in the College of Education and Health Professions.

Requirements for a Minor in Mathematics:
MATH 2103, 2564, 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.

Mathematics (B.A. or B.S.) Teacher Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. Students wanting to teach mathematics in middle school should consult with a middle level adviser in the College of Education and Health Professions.
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 HUMAN 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)

- HUMAN 1124H Honors Equilibrium of Cultures, 500-1600 CE and discussion section HUMAN 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 The Ottoman Empire and Iran (1300-1722)
- HUMAN 3923H Honors Colloquium
  (when offered as a MRST course)
- HUMAN 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), Kafr (comparative literature), Reid (political science), Tucker (history), Wolpert (music)
- Assistant Professors D’Alisera (anthropology), Ghadbian (political science)
- Research Associate Professor Cornell (R.) (Arabic)
- 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, biology, 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 21 hours in MEST or MEST-approved courses, 3 hours in the MEST Colloquium (MEST 4003), and 6 hours of Arabic language beyond the Fulbright College language proficiency requirement (ARAB 2013). MEST courses must be in at least two disciplines, with no fewer than 9 hours of MEST core courses in each.

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.

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.

MEST 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 4023 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 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 Middle East
- HIST 4433 Social and Cultural History of the Modern Middle East
- HUMAN 2213 Intro. to World Religions
- 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: Modern Arabic Poetry
WLIT 3983/603 Special Studies: Modern Arabic Lit. in Translation
WLIT 3983/603 Special Studies: Women and Arabic Literature

Requirements for a Minor in Middle East Studies:
Total Hours Required: (18 semester hours)
Students must complete a minimum of 9 hours of MEST courses, 3 hours in the MEST Colloquium (MEST 4003), and 6 hours of Arabic beyond the Fulbright College language proficiency requirement (ARAB 2013).

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.

Middle East Studies Colloquium: (3 hours) Students must complete three hours in the Middle East Studies Colloquium (MEST 4003).

Electives: (up to 9 hours) Students may complete up to 9 hours in addition to the language requirement and the Colloquium requirement in individualized 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, Ragsdale, Sloan, Thompson, Wolpert
• Research Professor Markham
• Professors Emeriti Ballenger, Bright, Brothers, Cowell, Groh, Jackson, Janzen, Umiker, Widder, Worthley
• Associate Professors Jones, Misenhelter, Mueller, Ramey, Warren, Yoes
• Associate Professors Emeriti Colber, Johnson, Nastasi
• Assistant Professors Cholthitchanta, Hickson, Margulis (E.), Margulis (J.), Rulli
• Visiting Professor Janowski
• Visiting Assistant Professors Delaplain, Gunter, Lacy, Langager, Morris, Pierce, Pratchard, Thomas

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 95 for general education requirements, see below for more detailed specific requirements), and the Bachelor of Arts with a Major in Music (see page 95 of this catalog 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.

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, 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 MUAP 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.)

Stringed 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.

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; 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, Composition: MUTH 164V, MUTH 364V (14), MUTH 4633, MUPD 4201; electives (may be non-music): 7. Theory: MUTH 164V, MUTH 364V (6), MUTH 4633, MUTH 498V (3); electives (may be non-music): 13; 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); MUED 2012, MUED 3021, MUED 3833; 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, Old Main 101.
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, ETEC 2001, ETEC 2002L.
4. Obtain a “C” or better in MUED 2012, 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. This form is available online at <http://www.uark.edu/depts/coehp/boyer/Evaluation_for_internship/Evaluation_for_Music_Internship.doc>. The completed form must be returned to the Coordinator of Teacher Education, Peabody Hall room 8, 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.
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, Peabody Hall, room 8, 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 3431, MUEN 3441, MUEN 3461, MUEN 3481, MUEN 3511; 9 additional MUAC to consist of MUAC 1331, MUAC 1341, MUAC 1351, MUAC 1361, MUAC 1371, MUAC 2141, MUAC 1381, and either MUAC 1301 or MUAC 1311, MUPD 3811, MUED 4293; electives (may include MUTH 1003 and any MUEN): 6.

Music Education, Strings: 14 MUAP to consist of 8 MUAP 110V, 5 MUAP 310V, MUAP 3201; 8 MUEN 3431; 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 and MUAC 1381, MUPD 3811, MUED 4273; electives (may include MUTH 1003 and any MUEN): 6.

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 3411, 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, MUED 4283, electives (may include MUTH 1003 and any MUEN): 6.

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 3411, 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, MUED 4283, electives (may include MUTH 1003 and any MUEN): 6.

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; MUAC 2111, MUAC 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 chosen from MUEN 3411, MUEN 3431, MUEN 3441, MUEN 3451, MUEN 3461, MUEN 3481, MUEN 3511; plus the requirements for the General Business Minor for Non-Business Students.

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; MUPD 3801; MUAC 2111, MUAC 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 chosen from MUEN 3411, MUEN 3431, MUEN 3441, MUEN 3451, MUEN 3461, MUEN 3481, MUEN 3511; plus the requirements for the General Business Minor for Non-Business Students.

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.

For each student there is a committee consisting of at least the honors adviser, the major teacher in the area of the honors project, a member from a department outside the music department (chosen by the student), and a member of the Honors Council. 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:

I. Performance
   a. 2 semesters of MUAP 310VH, with concurrent registration in MUAP 3201H and MUAP 4201H
   b. 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.)

II. History and Literature
   a. Junior year: MUHS 5973 Seminar in Bibliography and Methods of Research
   b. Senior year: MUSC 4903H Honors Essay

III. Theory
   a. Junior year: MUHS 5973 Seminar in Bibliography and Methods of Research
   b. Senior year: MUSC 4903H Honors Essay

IV. Composition
   a. At least six hours of MUTH 364VH Honors Composition II
   b. A full program of original compositions or equivalent.

V. Music Education
   a. Junior year: MUED 5513 Seminar: Resources in Music Education
   b. Senior year: MUSC 4903H Honors Essay

Requirements for a Small in Music: A minimum of 18 semester hours in music courses, of which at least six hours must be selected from MUTH, MUHS, and/or MLJT 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 309-312 FOR MUSIC (MLJT THROUGH MUTH) COURSES

PHILOSOPHY (PHIL)

Thomas D. Senor
Chair of the Department
318 Old Main
479-575-3551
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, Ward

Requirements for a Major in Philosophy: 30 semester hours in philosophy to include PHIL 2203 or PHIL 4253, and PHIL 4003, PHIL 4033, and six hours to be chosen from PHIL 4013, PHIL 4023, PHIL 4043, 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 102.

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 316 FOR PHILOSOPHY (PHIL) COURSES
PHYSICS (PHYS)
William F. Oliver, III
Chair of the Department
226 Physics Building
479-575-2506
Web site: http://www.uark.edu/depts/physics/
E-mail: physics@cavern.uark.edu

- University Professor Salamo
- Professors Gea-Banacloche, Gupta, Harter, Lacy, Lieber, Pederson, Singh, Vyas, Xiao
- Research Professor Vickers
- Professor Emeritus Hobson
- Associate Professors Bellaïche, Oliver, Stewart, Thibado
- Assistant Professors 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 2054/2050L, PHYS 2074/2070L, PHYS 2094/2090L, 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, PHYS 4713, 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 or astronomy with up to 9 hours of 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).

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 teaching 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.

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:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
Honors candidates are eligible for honors colloquia, honors courses, advanced courses and to do independent research in their senior year. The Departmental Honors Program in Political Science offers junior science. The student is urged to consult with his or her faculty may be derived from completion of an honors essay (PLSC 499VH), ment for approval at least four weeks prior to graduation. The paper by submitting an acceptable research/analytical paper to the depart-

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 (B.A.) Social Studies Teaching Licensure Requirements:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for licensure, and with approval of adviser, may be used as electives in student’s program of study:
   6 hours of geography, including GEOG 1123 Human Geography
   9 hours of American history, including HIST 2003, HIST 2013
   3 hours of sociology or anthropology
   PLSC 2003 American National Government
   PLSC 2203 State and Local Government, or
   PLSC 3223 Arkansas Politics
   PSYC 2003 General Psychology
6. The following courses are specifically required for licensure:
   ECON 2013 or ECON 2023 or ECON 2143
   HIST 3383 Arkansas History
7. 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 102.

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
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 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:

ECON 2013, PLSC 3103, PLSC 4193, PLSC 4283, WCOB 1033

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).

Dual Enrollment Option for undergraduates interested in entering the M.P.A. program: BSPA students wishing to accelerate their entrance into the M.P.A. program are allowed dual enrollment status during the last semester of undergraduate work. The following courses may be used for dual enrollment purposes:

PLSC 4193/5193 or PADM 5813/5823.

Students exercising this option must be admitted by the graduate school and begin their departmental admission process during the semester in which they are dually enrolled.

SEE PAGE 319 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 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:

ECON 2013, PLSC 3103, PLSC 4193, PLSC 4283, WCOB 1033

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).

Dual Enrollment Option for undergraduates interested in entering the M.P.A. program: BSPA students wishing to accelerate their entrance into the M.P.A. program are allowed dual enrollment status during the last semester of undergraduate work. The following courses may be used for dual enrollment purposes:

PLSC 4193/5193 or PADM 5813/5823.

Students exercising this option must be admitted by the graduate school and begin their departmental admission process during the semester in which they are dually enrolled.

SEE PAGE 319 FOR POLITICAL SCIENCE (PLSC) COURSES.

PSYCHOLOGY (PSYC)

Douglas A. Behrend
Chair of the Department
216 Memorial Hall
479-575-4256
Web site: http://www.uark.edu/depts/psyc
E-mail: psycapp@uark.edu

• University Professor Emeritus Dana
• Professors Cavell, Knowles, Lohr, Schroeder, Stripling
• Professors Emeriti Marr, Schult, Trapp, Witte
• Associate Professors Behrend, Beike, Freund, Lampinen, Petricic, Westendorf
• Associate Professors Emeriti Bonge, Danforth, Mobley
• Assistant Professors Bering, Levine, Murray, Williams
• Adjunct Professor Judges
• Adjunct Assistant Professor Nelson
• Clinical Assistant Professors Jenkins, Patton, Perry

Requirements for B.A. Degree with a Major in Psychology:

Minimum of 30 semester hours to include PSYC 2003, PSYC 2013, PSYC 3073, minimum of one course chosen from PSYC 3083, PSYC 3183, PSYC 3283, PSYC 3383, PSYC 3483, PSYC 3583, PSYC 3683, PSYC 3783, six hours chosen from PSYC 3103, PSYC 4073, PSYC 4123, PSYC 4143, PSYC 4183, PSYC 4193, and six hours chosen from PSYC 3013, PSYC 3023, PSYC 3033 (or PSYC 3093), PSYC 4053, PSYC 4063, and remaining hours as free electives chosen from any psychology course in this catalog. A 2.00 cumulative grade-point average on all work completed in the Department of Psychology (including a grade of “C” or higher in PSYC 3083, PSYC 3183, PSYC 3283, PSYC 3383, PSYC 3483, PSYC 3583, PSYC 3683, or PSYC 3783) will be required for graduation with a B.A. degree.

Students who want to pursue graduate training in psychology are advised to begin preparations early in their undergraduate careers. Grade-point average, scores on the Graduate Record Examinations,
effective communications skills, preparation in the natural sciences and mathematics, and research experience (e.g., honors project, independent readings) are the major criteria considered by admissions committees.

Students with applied, paraprofessional, or human-service interests who plan to enter the job market with a B.A. in psychology are strongly encouraged to take relevant courses in anthropology, sociology, social work, human development and family studies, and education. Students interested in business applications of psychology (e.g., marketing, management) are similarly encouraged to take related courses in the Sam M. Walton College of Business, minors are also available in several areas of business. For more information concerning psychology as a major or careers in psychology and related fields, please contact the Psychology Advising Coordinator, Memorial Hall, room 203.

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. 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.

Honors candidates in psychology are encouraged to enroll in as many honors classes, seminars, and colloquia as possible. 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 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:
1. Declare the Pre-Education (ASED) minor in the Fulbright Advising Center, Old Main room 101.
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of “C” or higher (see page 105.)
3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)
4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.
5. The following courses are recommended for licensure, and with approval of adviser, may be used as electives in student’s program of study:
   6 hours of geography, including GEOG 1123 Human Geography
   9 hours of American history, including HIST 2003, HIST 2013
   3 hours of sociology or anthropology
   PLSC 2003 American National Government
   PLSC 2013 State and Local Government, or
   PLSC 3223 Arkansas Politics
   PSYC 2003 General Psychology
6. The following courses are specifically required for licensure:
   ECON 2013 or ECON 2023 or ECON 2143
   HIST 3383 Arkansas History
7. 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 322 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.), Cory, Engels, King, Levine, Montgomery, Schneider, Spellman, Tsai
- Associate Professors Adler, Chappell, Coon, Finlay, Senor, Tucker, Worden
- Assistant Professors D’Alisera, Erickson, Schweiger, Ghadbian
- 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 HUMAN 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 4003 H “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
HIST 3923H Honors Colloquium: Honors Approaches to Religious Studies
HIST 4043 Late Antiquity and the Early Middle Ages
HIST 4053 Late Middle Ages
HIST 4073 Renaissance and Reformation Europe
HIST 4313 History of China to 1644
HIST 4353 Middle East 600-1500
HIST 4373 Mongol & Mamluk Middle East 1250-1520
HIST 4393 The Ottoman Empire and Iran 1300-1722
HIST 4533 American Social and Intellectual History to 1865
RUSSIAN STUDIES (RSST)

Donald R. Kelley
Chair of Studies
722 W. Maple
479-575-2006

- Professors Kelley (political science), Gay (economics), Tucker (foreign languages)
- Assistant Professors Ferrier (economics), Starks (history)

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

SEE PAGE 325 FOR RUSSIAN STUDIES (RSST) COURSES

SOCIAL WORK (SCWK)

Joe Schriver
Director of the School of Social Work
Bev Steimla
Associate Director of the School of Social Work
Melody Greer
BSW Coordinator
106 ASUP
479-575-5039

Web site: http://www.uark.edu/depts/scwk/

- Professors King, Schriver
- Associate Professor Emerita McGetrick
- Assistant Professors Christy-McMullin, DeCoster, Reese
- Research Associate Professor Page
- Clinical Assistant Professor Hall
- Clinical Assistant Professors Greer, Steimla
- Visiting Assistant Professor House

The social work program is fully accredited at the baccalaureate level by the Council on Social Work Education. The principal objective of the social work program is to prepare students for beginning generalist social work practice. Contact school director for admission and retention requirements.

Requirements for a Major in Social Work: 45 semester hours of social work courses including:

- SCWK 2133 Intro. to 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 3193 Human Diversity and Social Work
- 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
COMM 1313 Fundamentals of Communication
PSYC 2003 General Psychology
Statistics course, 3 hours
ECON 2143 Economics

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.

Requirements for a Minor in Social Work: 18 hours including SCWK 2133, SCWK 3193, and SCWK 4153 (required) and any other nine hours of social work electives. A student must notify the department of his or her intent to minor. The social work minor is not preparation for social work practice and is not accredited by CSWE.

SEE PAGE 326 FOR SOCIAL WORK (SCWK) COURSES
2. Complete the Pre-Education (ASED) minor. All courses for the minor must be completed with a grade of "C" or higher (see page 105.)

3. Complete PSYC 2003. (This is a pre-requisite to CIED 3033.)

4. Complete the Admission Process for Initial Teacher Licensure Stages I-IV as detailed in the College of Education and Health Professions section on page 158.

5. The following courses are recommended for licensure, and with approval of adviser, may be used as electives in student’s program of study:
   - 6 hours of geography, including GEOG 1123 Human Geography
   - 9 hours of American history, including HIST 2003, HIST 2013
   - 3 hours of sociology or anthropology
   - PLSC 2003 American National Government
   - PLSC 2203 State and Local Government, or PLSC 3223 Arkansas Politics
   - PSYC 2003 General Psychology

6. The following courses are specifically required for licensure:
   - ECON 2013 or ECON 2023 or ECON 2143
   - HIST 3383 Arkansas History

7. 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 Major in Sociology and Anthropology:** 36 hours with a minimum of 15 hours in each subject, to include SOCI 2013, SOCI 3013, SOC 3033/3301L (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 fields concerned.

For a combined major in sociology and African-American studies, see page 102.

For a major in criminal justice, see below.

For a major in social work, see page 136.

For requirements for an M.A. degree in sociology, see the Graduate School Catalog.

SEE PAGE 327 FOR SOCIOLOGY (SOCI) COURSES, SEE PAGE 260 FOR CRIMINAL JUSTICE (CMJS) COURSES

**Criminal Justice (CMJS)**

Jerry L. Patnoe  
Chair of Studies  
211 Old Main  
479-575-3205  
Web site: http://www.uark.edu/depts/social

The program in criminal justice is designed to prepare candidates for a variety of entry-level positions in criminal justice and to enable experienced personnel to expand their knowledge and skills. Drawing on a strong interdisciplinary base in the social sciences, the program provides education in the complexities of human behavior and problems of interpersonal relations in an increasingly urbanized America. The overall goal of the program is to enable men and women to contribute to the development and implementation of a fair and effective system of criminal justice.

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**Requirements for the B.A. Degree with Major in Criminal Justice:** Minimum of 31 semester hours to include CMJS 2003, CMJS/SOCI 3023, SOCI/CMJS 3043, CMJS/SOCI 3203, SOCI 3301L, SOCI 3303, SOCI 3313, one course from CMJS 3003, CMJS 3503. 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 major at the University of Arkansas is required.

**Writing Requirement:** To fulfill the Fulbright College writing requirement, each criminal justice major will submit, prior to graduation, a substantial research or analytical paper, with a grade of ‘A’ or ‘B’ from an upper-division criminal justice 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 Criminal Justice:**

The Departmental Honors Program in Criminal Justice is an upper-division course of study based on a topic in the area of 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.

SEE PAGE 260 FOR CRIMINAL JUSTICE (CMJS) COURSES

**STATISTICS (STAT)**

Laurie Meaux  
Chair of Studies  
301 SCEN  
479-575-3351

- Professor McNew
- Associate Professors Gbur, Mauromoustakos, Meaux
- Assistant Professors Petris, De Oliveira
- Research Associates Duncan, Thompson

**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 329 FOR STATISTICS (STAT) COURSES
STATEMENT OF SHARED PURPOSE

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.

ORGANIZATION AND FACILITIES

The Walton College offers degree programs for undergraduate students and for graduate students at both the master’s and doctoral levels. 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 that organization signifies commitment by the college to the goals of promoting and actualizing the highest standards of business education.
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
- Information Technology Research Center
- Supply Chain Management Research Center
- Small Business Development Center

UNDERGRADUATE DEGREE PROGRAMS

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.

ADMISSION TO THE SAM M. WALTON COLLEGE OF BUSINESS

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.

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. Completing honors sections of courses in the Fulbright College will fulfill this requirement. 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 the following:
   a. One three-hour college colloquium in a student’s major: 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.
4. Complete an alternate honors capstone course WC0B 3016H, Business Strategy and Planning. This is a course emphasizing joint projects with a Walton College corporate partner.

Requirements for the Departmental Scholars program:

1. Complete six hours of honors courses in the University Core or demonstrate proficiency in a foreign language (as described above).
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.

STUDENT ORGANIZATIONS IN WALTON COLLEGE

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
ACADEMIC REGULATIONS OF WALTON COLLEGE

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 obtain at least a 2.25 (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 2.25 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Code</th>
<th>Course Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1313</td>
<td>ENGL 1023</td>
<td>WCOB 1023</td>
</tr>
<tr>
<td>MATH 2053</td>
<td>MATH 2043</td>
<td>WCOB 1033</td>
</tr>
<tr>
<td>ECON 2013</td>
<td>WCOB 2023</td>
<td>WCOB 2013</td>
</tr>
<tr>
<td>ECON 2023</td>
<td>WCOB 1111</td>
<td>WCOB 2033</td>
</tr>
<tr>
<td>ENGL 1013</td>
<td>WCOB 1012</td>
<td>WCOB 2043</td>
</tr>
</tbody>
</table>

Students’ records will be evaluated each semester to determine whether a student should be moved to a major, have pre-business classification removed, and assigned an adviser in their major department. 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 2.25 (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 accounting 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 hours in the junior-senior business elective block of courses for the degree requirements. Students may not present a combination of foreign language and junior-senior business electives to fulfill this requirement.
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 hour requirement 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 course of study for junior/senior business electives must complete 12 hours of junior/senior language courses.

The student must notify the Undergraduate Programs Office in Walton College of intent to pursue a double major. All requirements for double majors must be completed prior to awarding of a degree.

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, and

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.

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- 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 five-page paper 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>.

DEGREE REQUIREMENTS OF WALTON COLLEGE

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)
   i. Concentration I – Business Economics
   ii. Concentration II – International Economics and Business
3. Finance (FINN)
   i. Concentration I – Banking
   ii. Concentration II – Financial Management/Investment
   iii. Concentration III – Insurance
   iv. Concentration IV – Real Estate
   v. Concentration V – Personal Financial Management
4. General Business (GBUS)
5. Information Systems (ISYS)
6. Management (MGMT)
   i. Concentration I – Administrative Management
   ii. Concentration II – Human Resource Management
   iii. Concentration III – Small Business Management
7. Marketing (MKTG)
   i. Concentration I – Retail Marketing
   ii. Concentration II – Industrial Marketing
   iii. Concentration III – Marketing Management
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 obtain at least a 2.25 (on a 4.00 scale) overall grade-point average in addition to the completion of all pre-business core courses (or equivalents), also with a minimum 2.25 GPA. Further, 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.

<table>
<thead>
<tr>
<th>A. University Core Requirements</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition (two courses)**</td>
<td>6</td>
</tr>
<tr>
<td>Finite Mathematics**</td>
<td>3</td>
</tr>
<tr>
<td>American History or Government</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science (two courses with labs)</td>
<td>8</td>
</tr>
</tbody>
</table>

[Sam M. Walton College of Business]
B. Additional Requirements for Business Students

- Fundamentals of Communication** 3
- Survey of Calculus** 3
- Business Social Science (one of the following) 3
  - PSYC 2003 General Psychology
  - PSYC 3013 Social Psychology
  - PSYC 3023 Abnormal Psychology
  - PSYC 3103 Cognitive Psychology
  - PSYC 4063 Personality
  - PSYC 4073 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 27
  - 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 Microeconomics**
  - 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 Res.**
  - WCOB 2033 Acquiring and Managing Human Res.**

- Upper-Division Requirement 6
  - WCOB 3016 Business Strategy and Planning

D. Major Requirements 24

- E. Business Electives 15

- F. General Education Electives 16
  (no more than 6 hours in PEAC or DEAC)

TOTAL REQUIRED FOR B.S.B.A. DEGREE 126

** Pre-Business requirement: These 42 hours must be completed with a GPA of 2.25, an overall GPA of 2.25, 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 2.25 (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 2.25 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/functional concentration/foreign language courses. In addition, students must earn a grade of “C” or better in each of the pre-business core courses.

Course Requirements for the B.S.I.B. Degree

A. University Core Requirements 35

See description and listing of the university core for the B.S.B.A. degree.

B. Additional Requirements for Business Students 9

- Fundamentals of Communication** 3
- Survey of Calculus** 3
- Business Social Science (one of the following) 3
  - PSYC 2003 General Psychology
  - PSYC 3013 Social Psychology
  - PSYC 3023 Abnormal Psychology
  - PSYC 3103 Cognitive Psychology
  - PSYC 4063 Personality
  - PSYC 4073 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 33

<table>
<thead>
<tr>
<th>Lower-Division Requirements</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCOB 1120 Computer Competency Requirement**</td>
<td>1</td>
</tr>
<tr>
<td>WCOB 1111 Freshman Business Connections**</td>
<td>2</td>
</tr>
<tr>
<td>WCOB 1012 Legal Environment of Business**</td>
<td>3</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>
</tr>
<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 Res.**</td>
<td>3</td>
</tr>
<tr>
<td>WCOB 2033 Acquiring and Managing Human Res.*</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper-Division Course</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCOB 3016 Business Strategy and Planning</td>
<td>6</td>
</tr>
</tbody>
</table>

### D. International Business and Collateral Course Requirements 36

<table>
<thead>
<tr>
<th>International Business Requirements</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4633 International Trade</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4643 International Macroeconomics and Finance</td>
<td>3</td>
</tr>
<tr>
<td>Select 9 hours from the following:</td>
<td>9</td>
</tr>
<tr>
<td>FINN 3703 International Finance</td>
<td></td>
</tr>
<tr>
<td>MGMT 4583 International Mgmt.</td>
<td></td>
</tr>
<tr>
<td>MKTG 4533 Marketing Mgmt.</td>
<td></td>
</tr>
<tr>
<td>MKTG 4833 International Marketing</td>
<td></td>
</tr>
<tr>
<td>Plus three hours of a Jr./Sr.-level management course</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transportation and Logistics</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLOG 3443 Principles of Transportation</td>
<td>3</td>
</tr>
<tr>
<td>TLOG 3613 Business Logistics</td>
<td>6</td>
</tr>
<tr>
<td>TLOG 4643 International Transportation and Logistics</td>
<td>3</td>
</tr>
<tr>
<td>Plus six hours of Jr./Sr.-level transportation courses</td>
<td>6</td>
</tr>
</tbody>
</table>

### E. Business Concentration 15

Students must complete one of the following business concentrations:

<table>
<thead>
<tr>
<th>Accounting</th>
<th>3</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 Financial Reporting and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Plus three hours of a Jr./Sr.-level accounting course</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Economics</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3133 Macroeconomic Theory</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4333 Managerial Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4743 Introduction to Econometrics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4653 Economics of Multinational Enterprises</td>
<td>3</td>
</tr>
<tr>
<td>Plus three hours of a Jr./Sr.-level economics course</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information Systems</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISYS 2263 Intro. to Information Systems Development</td>
<td>3</td>
</tr>
<tr>
<td>ISYS 3293 Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>ISYS 3393 Business Application Development in the Visual Basic Environment</td>
<td>3</td>
</tr>
<tr>
<td>ISYS 4283 Centralized Data Systems</td>
<td>3</td>
</tr>
<tr>
<td>Plus three hours of a Jr./Sr.-level information systems course</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finance</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINN 3053 Financial Markets and Institutions</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3703 International Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3063 Principles of Investments, or</td>
<td></td>
</tr>
<tr>
<td>FINN 3603 Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4233 Advanced Corporate Finance, or</td>
<td></td>
</tr>
<tr>
<td>FINN 4133 Advanced Investments</td>
<td>3</td>
</tr>
<tr>
<td>Plus three hours of a Jr./Sr.-level finance course</td>
<td>3</td>
</tr>
</tbody>
</table>

### General Business

Fifteen hours of 3000/4000-level courses in Walton College; no more than nine hours in a single academic area 15

### Management

<table>
<thead>
<tr>
<th>Management</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 3743 Human Resource Mgmt.</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 4583 International Mgmt.</td>
<td>9</td>
</tr>
<tr>
<td>Plus nine hours of Jr./Sr.-level management courses</td>
<td>9</td>
</tr>
</tbody>
</table>

### F. Foreign Language Requirements 12

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 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 3033, 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:
The following courses:

Spanish – any upper division course for Latin American 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

Italian – any upper division course for EUST

Arabic – any upper division course for MEST

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 Sciences pertaining to the United States to include any upper division course for American Studies (AMST) listed in the University catalog.

H. Electives

I. 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.

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, 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:

- 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 at the 3000 or 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 nine hours of 3000- or 4000-level business economics courses.

Concentration 4 – Finance
   WCOB 2043 Acquiring and Managing Financial Resources
   Plus an additional nine hours of 3000-4000 level finance courses

Concentration 5 – 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
   MKTG4833 International Marketing
   TLOG 4643 International Transportation and Logistics

Concentration 6 – Management
   MGMT 3563 Managerial Concepts and Organizational Behavior
   Plus an additional nine hours of 3000- or 4000-level management courses (except WCOB 3016)

Concentration 7 – Marketing
   MKTG 3433 Principles of Marketing
   Plus an additional nine hours selected from the following:
   MKTG 3533 Promotional Strategy
   MKTG 4033 Selling and Sales Mgmt.
   MKTG 4133 Marketing Research
   MKTG 4553 Consumer Behavior
   MKTG 4833 International Marketing
   MKTG 4933 Retail Marketing Strategy
   MKTG 4943 Retail Buying and Merchandise Control
   TLOG 3613 Business Logistics

Concentration 8 – Transportation and Logistics
   TLOG 3443 Principles of Transportation
   TLOG 3613 Business Logistics
   Plus an additional six hours selected from the following:
   TLOG 3623 Purchasing and Inventory Systems
   TLOG 4633 Transportation Carrier Management
   TLOG 4643 International Transportation and Logistics
   TLOG 4653 Transportation and Logistics Strategy

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.

Departments, Degree Programs and Courses

ACCOUNTING (ACCT)

Karen V. Pincus
Department Chair and S. Robson Walton Chair in Accounting
401 WCOB
479-575-4051

• Ralph McQueen Chair of Accounting Professor Bouwman
• Doris M. Cook Chair in Accounting and Professor Callahan
• S. Robson Walton Chair in Accounting and Professor Pincus
• Sam M. Walton Leadership Chair and Professor Williams
• Walter B. Cole Chair in Accounting Professor Wright
• Professor Finn
• Associate Professor and Nolan G. Williams Lecturer in Accounting Thomas
• Associate Professor West
• Assistant Professors Mosebach, Peters, Smith
• Clinical Associate Professor Leflar
• Instructors Caldwell, Schroeder, Shook, Whitmore

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 AACSB – 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.
For example, the professional public accountant provides auditing and accounting services to client business and non-business organizations in a variety of industries. A management accountant works for a particular organization in its finance and operations areas or becomes part of the management team. Some accountants are employed by non-profit organizations such as the American Cancer Society, state and local governments, or government agencies like the FBI. Other accounting graduates are self-employed in a variety of professions or businesses, and some continue in graduate school to prepare for teaching 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.

**Accounting Major Requirements**

<table>
<thead>
<tr>
<th>Course Requirement in the Major</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 2013 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 Information</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>
</tbody>
</table>

**Collateral Requirement:** ISYS 2263 Introduction to Information Systems Development | 3 |

**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 authorizations. 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 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.

SEE PAGE 236 FOR ACCOUNTING (ACCT) COURSES

**BUSINESS LAW (BLAW)**

Karen V. Pincus
Accounting Department Chair
401 WCOB
479-575-4051

- Associate Professor Norwood
- Instructors Greenhaw, Lawrence

SEE PAGE 251 FOR BUSINESS LAW (BLAW) COURSES

**ECONOMICS (ECON)**

Joseph Ziegler
Department Chair
402 WCOB
479-575-ECON (3266)

- Phillips Petroleum Company Chair of International Business and Economics Distinguished Professor Murray
- Professors Britton, Curington, Dixon, Gay, McKinnon, Ziegler
- Adjunct Professor Millar
- Lewis E. Epley Jr. Professorship Associate Professor Ferrier
- Associate Professors Farmer, Horowitz
- Assistant Professors Deck, Kali, Mendez
- 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:

- Complete the requirements for a B.S.B.A. degree as listed on page 143.
- Walton College Core Requirements (See page 143) 33
- Course Requirements in the concentration 24
  - ECON 3033 Microeconomic Theory 3
  - ECON 3133 Macroeconomic Theory 3
  - ECON 4333 Economics of Organizations 3
  - ECON 4743 Intro. to Econometrics, or 3
  - ECON 4753 Forecasting
  - Nine hours of ECON 3000/4000 9
  - Collateral Course 3
  - (may be selected from MATH 2103, MATH 2564, MATH 2574, AGEC 3413, AGEC 4413, GEOG 3353, and any upper division course in ACCT, FINN, ISYS, MGMT, MKTG, MATH, and STAT)
- Junior- senior-level electives within Walton College 15
  (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 course 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.

- Complete the requirements for a B.S.B.A. degree as listed on page 143.
- University Core 35
- Additional University Core 9
- Walton College Core Requirements (See page 143) 33
- Course Requirements in the concentration 21
  - ECON 3033 Microeconomic Theory 3
  - ECON 3133 Macroeconomic Theory 3
  - ECON 4633 International Trade 3
  - ECON 4643 International Macroeconomics and Finance 3
- International Business and ECON electives 6
  Select from the following:
  - FINN 3703 International Finance
  - MGMT 4783 International Management
  - MKTG 4833 International Marketing
  - TLOG 4643 International Transportation and Logistics
  - ECON 4653 Global Competition and Strategy
  - ECON 3853 Emerging Markets
  - ECON 3843 Economic Development, World Bank, and Multilateral Finance
  - ECON 3933 Japanese Economics

Other courses may fulfill this requirement as approved by the economics faculty adviser

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 six 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 15
(Only three hours are permitted within major field of economics)
General Education Electives 7
Total Degree Requirements 126

SEE PAGE 269 FOR ECONOMICS (ECON) COURSES

FINANCE (FINN)

Wayne Y. Lee
Department Chair and Alice L. Walton Chair in Finance
302 WCOB
479-575-4505

• Arkansas Bankers Association and Bellamy Chair of Banking and Professor Dominick
• Alice L. Walton Chair in Finance and Professor Lee
• Dillard Chair of Corporate Finance and Professor Millar
• Harold A. Dulan Finance Chair in Capital Formation and Professor Liu
• Associate Professors Heath, Perry
• Assistant Professors Jandik, Kruse, Rennie
• Clinical Assistant Professor Carter
• Clinical Assistant Professor Carter
• 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 coursework, participation in real-world business activities, and/or 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 143.

Total General Education 60
Walton College Core Requirements (See page 143) 33

Courses Required in All Concentrations 24
FINN 3013 Financial Analysis and Valuation 3
FINN 3053 Financial Markets and Institutions 3
FINN 3703 International Finance 3

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 3
FINN 3133 Commercial Banking 3
FINN 4313 Advanced Commercial Bank Management 3
Finance or interdisciplinary electives 6

Concentration II: Financial Management/Investment
FINN 3103 Financial Modeling 3
Plus one of the following options 6
Option 1: Any two of the four courses listed below
FINN 3063 Investments 3
FINN 3603 Corporate Finance 3
FINN 4133 Advanced Investments 3
FINN 4233 Advanced Corporate Finance 3
Option 2:
FINN 4143 Portfolio Management I 3
FINN 4153 Portfolio Management II 3
Option 3:
FINN 4163 Fixed Income Securities I 3
FINN 4173 Fixed Income Securities II 3
Finance or interdisciplinary electives 3

Concentration III: Insurance
FINN 3623 Risk Management 3
FINN 4733 Life/Health Insurance I 3
FINN 4833 Property/Casualty Ins. I 3
Finance or interdisciplinary electives 6

Concentration IV: Real Estate
FINN 3933 Real Estate Principles 3
FINN 4413 Real Estate Investment and Appraisal 3
FINN 4433 Real Estate Finance 3
Finance or interdisciplinary electives 3
Concentration V: Personal Financial Management

ACCT 3843 Fundamentals of Taxation 3
ACCT 5883 Individual Tax Planning 3
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
Finance or interdisciplinary electives 6

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 3333 Information Systems Management 3
ISYS 3373 End User Computing 3

Management
MGMT 3643 Team 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

Total Walton College Requirements 60

Total Degree Requirements 126

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:

I. Banking/Financial Management/Investment

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINN 3013 Financial Analysis and Valuation</td>
<td>3</td>
</tr>
<tr>
<td>Plus any 2 of the following 3 courses</td>
<td>6</td>
</tr>
<tr>
<td>FINN 3053 Financial Markets and Institutions</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3103 Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3703 International Finance</td>
<td>3</td>
</tr>
<tr>
<td>Plus any 2 of the following 6 courses</td>
<td>6</td>
</tr>
<tr>
<td>FINN 3063 Investments</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3133 Commercial Banking</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3603 Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4133 Advanced Investment</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4233 Advanced Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4313 Advanced Commercial Banking</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

II. Insurance/Real Estate
Choose any 5 of the following 7 courses 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINN 3003 Personal Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3623 Risk Management</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4733 Life and Health Insurance I</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4833 Property and Casualty Insurance I</td>
<td>3</td>
</tr>
<tr>
<td>FINN 3933 Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4413 Real Estate Investment and Appraisal</td>
<td>3</td>
</tr>
<tr>
<td>FINN 4433 Real Estate Finance</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

SEE PAGE 279 FOR FINANCE (FINN) COURSES

INFORMATION SYSTEMS (ISYS)

Fred Davis
Department Chair and David D. Glass Chair in Information Systems
204 WCOB
479-575-4500

- David D. Glass Chair in Information Systems and Professor Davis (F.)
- Professors Cronan, Douglas, Glorfeld, Jones (T. W.)
- Edwin and Karlee Bradberry Endowed Chair and Associate Professor Hardgrave
- Associate Professor Aloysius, O’Leary-Kelly (S.), Riemenschneider
- Clinical Professor Doke
- Clinical Assistant Professor Renwick
- Instructors Alguire, Armstrong (K.), Bristow, Brown (N.), Woodbury
- Executive in Residence Schmidt

The curriculum in information systems is designed to prepare graduates for careers in solving business problems with applications of computer technology. Graduates with a degree in Information Systems are sought by hundreds of companies for many different types of positions, such as programmer, analyst, database administrator, and web developer, among others. U of A graduates are now programming, analyzing and designing systems, consulting, teaching, and solving business problems across the country.

Information Systems Major Requirements

The major in Information Systems 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. The Information Systems department encourages its majors to seek an interdisciplinary minor. See an Information Systems adviser for selection of courses.

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming I (CSCE 1023/1021)</td>
<td>6</td>
</tr>
<tr>
<td>Waldo General Education (See page 143)</td>
<td>33</td>
</tr>
<tr>
<td>Course Requirements in the Major</td>
<td>24</td>
</tr>
<tr>
<td>ISYS 2263 Intro. to Information Systems Development</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>
Management Major

Students majoring in management enjoy much flexibility in completing their major. All majors must complete MGMT 3563, Management Concepts and Organizational Behavior, and then choose 21 additional hours from a wide array of Management and non-Management collateral courses. For those students who wish some specialization in the Management major, the Management department suggests two specific areas of focus.

The human resource management focus is designed to prepare students for careers in human resource-related occupations, including personnel management. 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 focus is suggested for students who are interested in starting and/or operating a small business or independent company after graduation. This focus offers students an opportunity to learn about and work directly with small business firms. The small business and entrepreneurship concentration provides excellent preparation for students wishing to obtain a highly integrated view of business operations.

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 a management adviser for selection of courses.

Complete the Requirements for a B.S.B.A. degree as listed on page 143.

Total General Education 60

College Core Requirements 33

Courses Required 24

MGMT 3563 Management Concepts and Organizational Behavior 3

Select 21 hours from the following courses, at least 15 of which must be in Management:

MGMT 3633 Applied Managerial Problem Solving 3
MGMT 3643 Team Management 3
MGMT 3933 Entrepreneurship/New Venture 3
MGMT 4103 Special Topics 3
MGMT 4203 Understanding Complex Organizations 3
MGMT 4403 Total Quality Management 3
MGMT 4433 Small Enterprise Management 3
MGMT 4533 Labor Legislation 3
MGMT 4583 International Management 3
MGMT 4943 Organizational Staffing 3
MGMT 4953 Organizational Rewards/Compensation 3
MGMT 4993 Entrepreneurship Practicum 3
ECON 3533 Labor Economics 3
ECON 4333 Economics of Organizations 3
ACCT 3013 Accounting View of Economics Events 3
ACCT 3613 Managerial Uses of Accounting Information 3
ACCT 3843 Fundamentals of Taxation 3
ISYS 3373 End User Computing 3
MKTG 4033 Selling and Sales Management 3
MKTG, 4933 Retail Marketing Strategy 3
MKTG 4943 Retail Buying and Merchandise Control 3

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 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.

SEE PAGE 293 FOR INFORMATION SYSTEMS (ISYS) COURSES

MANAGEMENT (MGMT)

Daniel C. Ganster
Department Chair and Charles C. Fichtner Chair in Management
402 WCOB
479-575-6216

• Charles C. Fichtner Chair in Management and Professor Ganster
• Raymond F. Orr Chair and Professor Gupta
• Professors O’Leary-Kelly (A.), Todd, White
• Associate Professors Delery, Ellstrand, Johnson, Reeves
• Assistant Professor Anand

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.

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 Decision Making 3
ISYS 4363 Business Application Systems Development 3
ISYS 4373 Object Oriented Programming 3
3 hours ISYS 3000/4000 and/or collateral courses 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)

Total Walton College Requirements 60
Total Degree Requirements 126
Recommended courses for students wishing to focus on Human Resource Management:
- MGMT 3643 Team Management 3
- MGMT 4533 Labor Legislation 3
- MGMT 4943 Organizational Staffing 3
- MGMT 4953 Orgn Rewards/Compensation 3
- ECON 3533 Labor Economics 3
- ECON 4333 Managerial Economics 3

Recommended courses for students wishing to focus on Small Business and Entrepreneurship:
- MGMT 3643 Team Management 3
- MGMT 3933 Entrepreneurship/New Venture 3
- MGMT 4433 Small Enterprise Mgmt. 3
- MGMT 4993 Entrepreneurship Practicum 3

Junior- senior-level electives within Walton College
(Only six hours are permitted within MGMT, subject to the constraint that no more than 27 total hours are in MGMT) 15

Total College Requirements 60
Total Degree Requirements 126

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 also may be particularly valuable to students planning to pursue a master’s (M.B.A.) degree.

General Business Major Requirements

Complete the requirements for a B.S.B.A. degree as listed on page 143.

Total General Education 60
Walton College Core Requirements (See page 143) 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 3563 Management Concepts and Organizational Behavior 3
- MGMT 3643 Team Management 3
- MGMT 3933 Entrepreneurship/New Venture 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 4263 IT Strategy 3
- ISYS 4933 Global IT 3

Group 4
- ECON 3533 Labor Economics 3
- ECON 4333 Economics of Organizations 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 15
(Only three hours are permitted in any one department.)

Total Walton College Requirements 60
Total Degree Requirements 126

SEE PAGE 307 FOR MANAGEMENT (MGMT) COURSES

MARKETING AND LOGISTICS (MKTL)
Thomas D. Jensen
Department Chair
302 WCOB
479-575-4055

- Wal-Mart Chair of Marketing and Professor Burton
- Wal-Mart Lecturer in Retailing and Professor Jensen (T.)
- R. A. and Vivian Young Chair and University Professor Kurtz
- Oren Harris Chair of Transportation Professor Ozment
- Associate Professors Ashton, Creyer, Gentry, Kopp, Murray, Rapert, Stassen, Waller
- Assistant Professor Mendoza
- Visiting Assistant Professor Jensen (M.)
- Instructors Cole, Cox

The department of marketing and logistics offers two majors:
1) marketing
2) transportation and logistics.

Descriptions of the marketing major and courses follow. The transportation and logistics major is described in the next section.

Marketing Major

The major in marketing 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 a marketing adviser for selection of courses.

The major in marketing is designed to prepare students for careers involving product planning, distribution, promotion, and pricing strategies in profit or nonprofit organizations. In addition to a broad overview of the marketing functions within organizations, students are provided with knowledge and skills in consumer behavior, marketing research, and strategic marketing. Students majoring in marketing are actively subjected to problem-solving situations, both domestic and international, where a variety of contemporary tools are employed to stimulate the strategic decision-making process. Supportive disciplines with which the marketer should be familiar include psychology, sociology, accounting, economics, statistics, quantitative analysis, and research methodology.

The marketing major has three concentrations to select from: marketing management, retail marketing, and industrial marketing. The marketing management concentration is intended to provide students with broad knowledge and skills in marketing applicable to industry. The retail marketing concentration prepares students for marketing careers in the retail industry. The industrial concentration prepares students for marketing careers in the industrial sector with a special emphasis on personal selling and sales management.
Marketing Major Requirements

Complete the requirements for a B.S.B.A. degree as listed on page 143.

**Total General Education**  60
**Walton College Core Requirements** (See page 143) 33

**Courses Required in All Concentrations**  24
- MKTG 4133 Marketing Research 3
- MKTG 4553 Consumer Behavior 3
- MKTG 4533 Marketing Management 3
- MKTG Elective 3

Majors must select one of the following concentrations and must complete six hours within the elected concentration.

**Concentration I: Marketing Management**
Select six hours from the following:
- MKTG 3533 Promotional Strategy 3
- MKTG 4033 Selling and Sales Management 3
- MKTG 4933 Retail Marketing Strategy 3
- TLOG 3613 Business Logistics 3

**Concentration II: Retail Marketing**
- MKTG 4933 Retail Marketing Strategy 3
- MKTG 4943 Retail Buying and Merchandise Control 3

**Concentration III: Industrial Marketing**
- MKTG 4033 Selling and Sales Management 3
- Six hours MKTG 3000/4000 and/or collateral courses 6

**Junior-senior-level electives within Walton College**
(Only six hours are permitted within a major field) 15

**Total Walton College Requirements** 60

**Total Degree Requirements** 126

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
  - MKTG 4943 Merchandising and Buying

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.

SEE PAGE 309 FOR MARKETING (MKTG) COURSES

Transportation Major

The major in transportation 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.
Plus nine hours from the following courses:
ACCT 3013 Accounting View of Economic Events
ACCT 3553 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.

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 4733 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.

SEE PAGE 331 FOR WALTON COLLEGE OF BUSINESS (WCOB) COURSES
MISSION STATEMENT
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.

COLLEGE ORGANIZATION, FACILITIES, AND SERVICES
For administrative purposes, the programs of the college are organized under five academic units:

1. Curriculum and Instruction
   - Elementary/Childhood Education
   - Middle Level Education
   - Secondary Education
   - Special Education

2. Educational Leadership, Counseling, and Foundations
   - Counselor Education
   - Educational Foundations
   - Educational Administration
   - Educational Technology
   - Higher Education

3. Eleanor Mann School of Nursing
   - Nursing

4. Health Science, Kinesiology, Recreation, and Dance
   - Health Science
   - Kinesiology
   - Recreation

5. Rehabilitation, Human Resources, and Communication Disorders
   - Adult Education
   - Communication Disorders
   - Rehabilitation Counseling
   - Vocational Education
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, distance education center and educational statistics laboratory are housed in the Graduate Education Building.

Peabody Hall houses several classrooms, offices for individual professors, the Sylvia Hack Boyer Center for Student Services, and the associate dean for academic affairs' office. Additional classroom and office facilities used by the College of Education and Health Professions are located in Ozark Hall, West Avenue Annex, and the Speech and Hearing Clinic.

The 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, a fitness-weight training center, 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 utilizes the Donna Axum Fitness Center, HPER Building Natatorium, Fullbright 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 service 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 five program areas: intramural sports, general recreation, sport clubs, disabled student intramural athletics, and the Outdoor Recreation 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 free of charge to University students.

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 childcare 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 policymakers in decision-making regarding education in the state.

Established in 1974, the Regional Continuing Education Center in Rehabilitation 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 and offers a track in rehabilitation counseling for persons who are deaf or hard of hearing as part of the M.S. in rehabilitation counseling program.

Accreditation and Membership

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), 2100 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 112 individuals who completed the teacher education program at the University of Arkansas in 2001-2002. 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 Accreditation of Counseling and Related Educational Programs (CACREP), 5999 Stevenson Avenue, 4th Floor, Alexandria, Virginia 22304; 1-800-347-6647, ext. 301. The Bachelor of Science in Nursing (B.S.N.) degree program is accredited by the Commission on Collegiate Nursing Education, One Dupont Circle NW, Suite 530, Washington, D.C. 20036; 202-887-6791 and by the National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York, NY 10006; 212-363-5555, ext 153. 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.
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 Arkansas Educational Research & Policy Studies Journal, edited by EDFD Professor Christopher J. Lucas.

CURRICULA OFFERED FOR INITIAL LICENSURE

Nursing Licensure

Completing the minimum requirements for a degree of Bachelor of Science in Nursing will satisfy the academic requirements of 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, 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 158 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. Each application for a teacher’s license requires completion of an approved program of study and documentation of passing the PRAXIS exams. Those wishing to add an additional license or endorsement should contact the academic department for the approved program of study.

The Bumpers College of Agriculture, 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 teacher education Certification Officer 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 Certification Officer, 8 Peabody Hall, for more information.

ACADEMIC REGULATIONS FOR PROFESSIONAL EDUCATION PROGRAMS

Admission Process for Initial Licensure

Stage I: 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.
- Elementary 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: Complete an Evaluation for Internship by October 1 of senior year. Art and music students should complete the evaluation by October 1 prior to a fall internship and by March 1 prior to a spring internship.

This form is available from the college Web site. The form must be completed and returned to the Certification Officer, 8 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 courses: CIED 1002, CIED 1011, CIED 3023 (PHED 3903 for KINS K-12 majors), CIED 3033, ETec 2001, and ETec 2002L.

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. All elementary and middle level education students must successfully complete HIST 3383. All secondary education social studies/history students must successfully complete HIST 4583.
4. Obtain a “C” or better in the six hours of program-specific courses (see your adviser for information).
5. Schedule a visit with your adviser for additional requirements including admission to upper-division courses.
6. Consult with your adviser regarding PRAXIS II requirements.
7. 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.
8. Complete the Evaluation for 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. Please contact the Certification Officer, 8 Peabody Hall, for more information.

Stage III: Admission to M.A.T. Degree Program

The following minimum criteria are necessary to be eligible for consideration for admission: (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, select-ed written recommendations, an interview, and other require-
   ments 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 the Master of Arts in Teaching (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 counties 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 exam.
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 Certification Officer, 8 Peabody Hall, prior to entering internship.

NOTE: Students should always consult the Certification Officer 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 Certification Officer, 8 Peabody Hall.

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 Certification Officer to verify program completion in teacher education.

Education Placement Services

The University, through the College of Education and Health Professions, maintains placement services for the purpose of cooperating with school officials in filling vacancies with appropriately qualified teachers and helping prospective teachers find suitable vacancies. The University does not recommend candidates for teaching positions unless they have been in residence for at least 12 weeks.

The University provides this service to its students for a nominal registration fee. It is extended to students seeking initial placements. Alumni may keep their placement files up to date by re-submitting their registration by November 1 of each year with the Education Placement Services. Students who are planning to teach should register during the internship year. The telephone for Education Placement Service is 479-575-2350.

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, which 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.

DEGREES OFFERED

The college offers curricula leading to the Bachelor of Science in Education degree (B.S.E.) in the following programs. Several of these degree programs have concentrations and specialties that are described in the section entitled “Departments, Degree Programs, and Courses.”
- Elementary Education
- Health Science
- Kinesiology
- Middle Level Education
- Recreation
- Communication Disorders
- Vocational Education

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 “Departments, Degree Programs, and Courses.”

ADMISSION TO THE COLLEGE

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 in the college:
1. Neither hours nor grades earned in transfer work are used in the determination of the student’s grade-point average.
2. Unless exceptions are granted at the time of admission to the University of Arkansas, transfer courses with grades of “D” will not be accepted by the College of Education and Health Professions. See the Admission chapter of this catalog for more information.
3. 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.
4. Courses taken at other institutions of higher education where the course content is designed to be remedial are not accepted.
5. 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.

Minors

Students in the college may declare any official academic minor available at the University of Arkansas. Students must notify the Boyer Center for Student Services, 200 Graduate Education Building, 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.

COLLEGE SCHOLARSHIPS

In addition to University granted scholarships and financial aid, the college offers a limited number of scholarships. These awards vary in amount and are usually granted on a one-year basis. Applicants are selected on the basis of promise, character, leadership, scholarship, and financial need.

For details regarding scholarships, write to Boyer Center for Student Services, College of Education and Health Professions, 200 Graduate Education Building, University of Arkansas, Fayetteville, AR 72701 or visit the College of Education and Health Professions scholarship Web page. Available scholarships and application forms can be downloaded from <http://www.uark.edu/depts/coehp/Scholarships.html>.

HONORARY AND DEPARTMENTAL 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
- National Student Speech-Language-Hearing Association – for communication disorders majors
- Arkansas Nursing Students Association, National Student Nurse Association, Pi Theta chapter of and the Sigma Theta Tau International Honor Society of Nursing – for nursing majors
- Rehabilitation Counseling Association for Students – rehabilitation counseling program.

THE SYLVIA HACK BOYER CENTER
FOR STUDENT SERVICES

Office of the Associate Dean for Academic Affairs
E-mail: bcss@uark.edu

Academic Advising

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. The Boyer Center for Student Services houses the offices of the Associate Dean for Academic Affairs, Certification Officer, Director of Advising, the college’s advising center, and placement services.

Students who have 45 hours or less are assigned an academic adviser in the Boyer Center for Student Services who will assist them throughout their educational career 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 and graduate programs, transfer of credit, teacher licensure, admission to the M.A.T., placement services, student services, and administrative procedures can be directed to the Boyer Center for Student Services, 200 Graduate Education Building.

COLLEGE HONOR ROLL

At the close of each semester, the college publishes an honor roll containing the names of not more than 10 percent of the highest-ranking students in each class. Students who are carrying a minimum of 12 semester hours shall be eligible for the Honor Roll.

COLLEGE HONORS PROGRAM

The College of Education and Health Professions honors program is designed to enable undergraduate students in the college who have demonstrated potential for outstanding scholastic achievement an opportunity to broaden and deepen their liberal and professional education. Honors program students are also eligible to take honors courses in other colleges.

The experience in the honors program includes, but is not limited to, enrollment in honors courses, an honors seminar, and a required undergraduate thesis/project.

Incoming freshmen who meet one of the following three requirements will be invited to participate in the honors program; however, each student must file a formal application to be enrolled.

1. An ACT composite score of 28 or higher
2. An SAT score of 1150
3. Rank in the top 5% of their high school graduating class.

Eligibility for continued enrollment in the honors program will be based on the following cumulative minimum grade-point averages.

1. At the end of freshman year (30 hours) – 3.25 GPA
2. At the end of sophomore year (59 hours) – 3.37 GPA
3. At the end of the junior year (93 hours) – 3.50 GPA
4. At graduation – 3.50 GPA

It is desirable and strongly advised that students enter the honors program as freshmen. However, other students may make application to participate if they meet requirements for admission and for continued enrollment eligibility. They must still meet all program requirements before graduation.

Transfer students may enter the honors program based on the admission and eligibility requirements above and their cumulative grade-point average from the previous college.

At the end of each semester, the director of the College of Education and Health Professions 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 has become ineligible, he or she will be requested to drop all honors courses for which he or she is registered the following semester. The ineligible student’s file will be flagged “probationary status.” An honors student may stay on probationary status for only one semester without being dropped from the honors program. At the end of the probationary semester, the student’s cumulative grade-point average will be reviewed. The student will be re-instated to good standing in the honors program or dropped permanently from the program.

The course and grade requirements for completion of the College of Education and Health Professions honors program are as follows:

1. Completion of 12 hours of honors credit, only six of which may be taken outside the College of Education and Health
Provisions. The following courses are required:
- 6 hours of Honors sections of core classes taken from Arts and Sciences
- HNED 3001H Honors Education Thesis Tutorial
- HNED 4003H Honors Education Thesis/Project

2. Graduation with a minimum GPA of 3.50.

NOTE: Successful completion of the College Honors program is different from graduation with honors. Please refer to the section below on graduating with honors.

Contact the Boyer Center for Student Services, 200 Graduate Education Building, for more information.

SEE PAGE 289 FOR COLLEGE OF EDUCATION AND HEALTH PROFESSIONS HONORS PROGRAM (HNED) COURSES

GRADUATION 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 42). Students are required to have a pre-graduation check at least one semester prior to graduation. 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 43. 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 in which applied. Students who complete the pre-graduation check must have a grade-point average of at least 2.00 on all work remaining for the baccalaureate degree. For clarification, please contact the Boyer Center for Student Services, 200 Graduate Education Building, at 479-575-4203.

General Studies – Undergraduate Programs

The following are general studies requirements that must be met by all students completing an undergraduate program in the College of Education and Health Professions. Some programs may require specific courses as part of the general studies requirements. Students should consult their adviser for program-specific requirements.

Requirements of the College of Education and Health Professions

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>6-9</td>
</tr>
<tr>
<td>ENGL 1013</td>
<td></td>
</tr>
<tr>
<td>ENGL 1023</td>
<td></td>
</tr>
<tr>
<td>ENGL 2003 (exemption possible; see page 41)</td>
<td></td>
</tr>
<tr>
<td>Literature*</td>
<td>3</td>
</tr>
<tr>
<td>(Teacher education majors must choose from American, English, or World Literature)</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>12</td>
</tr>
<tr>
<td>(See University Core requirements, page 42); 3 hours must be U.S. History or Government; 3 hours must be PSYC 2003*</td>
<td></td>
</tr>
<tr>
<td>Communication*</td>
<td>3</td>
</tr>
</tbody>
</table>

| COMM 1313 Speech               |       |
| Fine Arts, Humanities         | 6     |
| (See University Core requirements, page 42) | |
| Science                       | 8     |
| Two courses with laboratories. (See University Core requirements, page 42). Four hours of biological science and four hours of physical science are required for teacher education majors. | |
| Mathematics                    | 3     |
| College algebra or above      |       |
| Health and Wellness*          | 3     |
| HLSC 1002 Wellness Concepts and | |
| PEAC 1621 Fitness Concepts, or | |
| NURS 3212/3221 for nursing majors | |
| Media/Computer*               | 3     |
| ETEC 2001/2002L for teacher education majors | |
| NURS 3013 for nursing majors  |       |

Total hours required for General Studies 47-50

* COEHP Core Requirements

GRADUATION WITH HONORS

Graduation with Honors will be conferred to College of Education and Health Professions students 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 honors designation will be assigned as follows:

1. For Highest Honors, 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 Honors, the student must have a minimum cumulative grade point average of 3.75 and rank in the top 10 percent of the graduating class.
3. For Honors, the student must have a minimum cumulative grade point average of 3.50 and rank in the top 10 percent of the graduating class.

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.
Departments, Degree Programs, and Courses

DEPARTMENT OF CURRICULUM AND INSTRUCTION (CIED)
Tom E. C. Smith
Department Head
Peabody Hall
479-575-4209
E-mail: tecsmith@uark.edu

Shirley Lefever-Davis
Coordinator of Graduate Programs
Peabody Hall
479-575-4209
E-mail: slefever@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 sponsors endorsements in ESL, gifted and talented, reading, and special education. 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, additional secondary school licensure programs are made available.

SEE PAGE 257 FOR CURRICULUM AND INSTRUCTION (CIED) COURSES

Elementary Education

- Professor Sullivan
- Associate Professors Collier, Imbeau, Lefever-Davis, McGee
- Assistant Professors Eilers, Kirkpatrick
- Instructors Cronan, Riggs

The University of Arkansas offers the B.S.E. degree in elementary 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 Elementary Education Majors and Others Seeking Admission to the Undergraduate Teacher Education Program

Stage I: Boyer Center Advisement
1. Enroll in the undergraduate B.S.E. program in elementary 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 (participating in an oral interview with program faculty and providing a copy of the appropriate PRAXIS passing scores) in the first semester advised by elementary 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.

Elementary Education Requirements

<table>
<thead>
<tr>
<th>HOURS</th>
<th>General Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-27</td>
<td>ENGL 1013 Composition I</td>
</tr>
<tr>
<td></td>
<td>ENGL 1023 Composition II</td>
</tr>
<tr>
<td></td>
<td>WLIT (3 hrs) World Literature</td>
</tr>
<tr>
<td></td>
<td>ENGL (3 hrs) Literature elective</td>
</tr>
<tr>
<td></td>
<td>HLSC 1002 Wellness Concepts</td>
</tr>
<tr>
<td></td>
<td>PEAC 1621 Fitness Concepts</td>
</tr>
<tr>
<td></td>
<td>ARTS 1003 Art Studio</td>
</tr>
<tr>
<td></td>
<td>PSYC 2003 General Psychology</td>
</tr>
<tr>
<td></td>
<td>MATH 1203 College Algebra</td>
</tr>
<tr>
<td></td>
<td>ENGL 2003 Advanced Composition</td>
</tr>
<tr>
<td></td>
<td>(Exemption by examination or credit in ENGL 2013 or grade of at least “B” in ENGL 1013 and “A” in ENGL 1023 at Fayetteville campus.)</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.

Elementary Education/Communication

| 31 |
| COMM 1313 Fundamentals of Communication |
| CIED 4101 Practicum |
| CIED 4113 Integrated Communication Skills |
| CIED 4128 Content Integration |
| (math, science, social studies) |
| HESC 2433 Child Development |
| HESC 3402/3401L Child Guidance |
| HESC 4453 Parenting and Family Dynamics |
| PSYC 3093 Childhood and Adolescence |
| CIED 3263 Language Development for the Educator |

Interdisciplinary Studies

| 43 |
| Mathematics (12 hours) |
| Twelve hours in addition to the general studies requirement of MATH 1203. Six of the 12 hours must include MATH 2213 and MATH 2223. |
| General Science (16 hours) |
| BIOL 1543/1541L |
| Geology course with laboratory |
| Physical science course with laboratory |
The Bachelor of Science in Education (B.S.E.) in middle-level education is a teacher preparation degree that prepares educators for meeting the needs of early adolescents. Grounded in an understanding of and appreciation for the physical, intellectual, emotional, and social development of early adolescents (ages 9 to 14, and/or grades four to eight), the B.S.E. degree provides the pre-requisite knowledge, skills, and dispositions necessary for entry into the fifth-year, Master of Arts in Teaching (M.A.T.) program for initial licensure in middle-level education. Candidates for the B.S.E. in middle-level education will be eligible to apply for entry to the M.A.T. program, through which they will develop further expertise on educating early adolescents and graduate with the requisite skills and degree for teaching grades four to eight.

Requirements for the B.S.E. in Middle-Level Education:

**General Studies (47-50)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>(College &amp; University core requirements)</td>
<td></td>
</tr>
<tr>
<td>English Composition, Literature, Social Sciences, Communication, Science, Mathematics, Health and Wellness, and Fine Arts and Humanities.</td>
<td>24</td>
</tr>
<tr>
<td>Pre-Education Courses</td>
<td>12</td>
</tr>
<tr>
<td>CIED 1002 Intro. to Education</td>
<td>18</td>
</tr>
<tr>
<td>CIED 1011 Intro. to Education Practicum</td>
<td>18</td>
</tr>
<tr>
<td>CIED 3023 Survey of Exceptionalities</td>
<td>18</td>
</tr>
<tr>
<td>CIED 3033 Classroom Learning Theory</td>
<td>18</td>
</tr>
<tr>
<td>CIED 3063 Literacy Strategies for Middle Level Learners</td>
<td>18</td>
</tr>
<tr>
<td>ETEC 2001 Educational Technology</td>
<td>18</td>
</tr>
<tr>
<td>ETEC 2002L Educational Technology Lab</td>
<td>18</td>
</tr>
<tr>
<td>CIED 3103 Children’s Literature</td>
<td>18</td>
</tr>
<tr>
<td>CIED 3113 Emergent and Developmental Literacy</td>
<td>18</td>
</tr>
<tr>
<td>CIED 3133 Emergent and Developmental Literacy</td>
<td>18</td>
</tr>
<tr>
<td>ARHS 1003 Art Lecture</td>
<td>18</td>
</tr>
<tr>
<td>ARED 3603 Public School Art for Elementary Schools</td>
<td>18</td>
</tr>
<tr>
<td>MUED 3813 Music for Elementary Education Majors</td>
<td>18</td>
</tr>
<tr>
<td>MUED 3810L Music for Elementary Education Majors Lab</td>
<td>18</td>
</tr>
<tr>
<td>PHED 3373 Methods and Materials in P.E. for Children</td>
<td>18</td>
</tr>
<tr>
<td>Pre-Education Core</td>
<td>128-131</td>
</tr>
<tr>
<td>Total for Elementary Education</td>
<td>128-131</td>
</tr>
</tbody>
</table>

**NOTE:** The advanced composition requirement should be satisfied during the appropriate semester as advised. ENGL 2003 is not listed since it does not count for degree hours but may be passed by test or exemption (or completion of course). Recommended math electives: MATH 2053, MATH 2103, MATH 3773, STAT 2303.

**M.A.T. Degree Program Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses for the M.A.T. Core</td>
<td>10</td>
</tr>
<tr>
<td>CIED 5012 Measurement/Research/Statistical Concepts for Teachers</td>
<td>10</td>
</tr>
<tr>
<td>CIED 5022 Classroom Management Concepts for Teachers</td>
<td>10</td>
</tr>
<tr>
<td>CIED 5032 Curriculum Design Concepts for Teachers</td>
<td>10</td>
</tr>
<tr>
<td>CIED 5052 Seminar: Multicultural Issues</td>
<td>10</td>
</tr>
<tr>
<td>ETEC 5062 Teaching and Learning with Computer Based Technologies</td>
<td>10</td>
</tr>
<tr>
<td>Additional Program Requirements</td>
<td>23</td>
</tr>
<tr>
<td>CIED 5003 Childhood Seminar</td>
<td>23</td>
</tr>
<tr>
<td>CIED 5073 Case Study in Childhood Education</td>
<td>23</td>
</tr>
<tr>
<td>CIED 5173 Literacy Assessment</td>
<td>23</td>
</tr>
<tr>
<td>CIED 5183 Readings in Early Childhood Education</td>
<td>23</td>
</tr>
<tr>
<td>CIED 5162 Applied Practicum</td>
<td>23</td>
</tr>
<tr>
<td>CIED 5063 Contemporary and Futuristic Concerns of Childhood Education</td>
<td>23</td>
</tr>
<tr>
<td>CIED 508V Childhood Ed. Cohort Teaching Internship</td>
<td>23</td>
</tr>
<tr>
<td>NOTE: Enrollment in the M.A.T. with an emphasis in childhood education is limited. A passing score on the appropriate PRAXIS test is a requirement to begin the M.A.T. A passing score on an additional PRAXIS test is a requirement to graduate from the M.A.T. (Students must consult with their advisers to determine the appropriate PRAXIS test for admission and graduation.) Other specific application procedures and selection criteria are available in the Department of Curriculum and Instruction, Graduate Education Building, Room 201 or from childhood education faculty advisers.</td>
<td></td>
</tr>
</tbody>
</table>
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>Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1013, ENGL 1023, or ENGL 2003 or exempt with test.</td>
<td>9</td>
</tr>
<tr>
<td>Literature (American, English, or World)</td>
<td>3</td>
</tr>
<tr>
<td>Social Studies</td>
<td>12</td>
</tr>
</tbody>
</table>

(See University State Minimum Core Requirements —
3 hours must be U.S. History or Government,
3 hours must be PSYC 2003, and
6 hours of elective introductory-level courses from the following: sociology, history, political science, economics, anthropology, geography, or philosophy)

| COMM 1313 Communications                     | 3     |
| Fine Arts, Humanities                         | 6     |
| Laboratory Science                           | 8     |
| Mathematics (college algebra or above)        | 3     |
| Health and Wellness                          | 3     |
| (HLSC 1002 Wellness Concepts, and PEAC 1621 Fitness Concepts) | |

 Electives (defined by program)

Total Hours Required for General Studies 47-50

Pre-education Core Requirements 12
CIED 1002/1011 Intro. to Education/Practicum 3
ETEC 2001/2002L Educational Technology 3
CIED 3023 Survey of Exceptionalities 3
CIED 3033 Classroom Learning Theory 3

Common Core for all teacher education majors 12
CIED 3053 The Emerging Adolescent 3
CIED 3043 Intro. to Middle Level Principles and Methods 3
CIED 3073 Early Adolescent Literature 3
CIED 3063 Literacy Strategies for Middle Level Learners 3

Designated by Middle-Level program 12

Total Hours for Pre-education Core 24

Dual Areas of Concentration: As determined by State licensure requirements.

<table>
<thead>
<tr>
<th>English/Social Studies</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Studies/English</td>
<td>21</td>
</tr>
<tr>
<td>History of American People</td>
<td></td>
</tr>
<tr>
<td>HIST 2003/2013 History of American People</td>
<td></td>
</tr>
<tr>
<td>HIST 3383 Arkansas and the Southwest</td>
<td></td>
</tr>
<tr>
<td>3 hours selected from the following:</td>
<td></td>
</tr>
<tr>
<td>HIST 3033, HIST 3043, HIST 3203, HIST 3233,</td>
<td></td>
</tr>
<tr>
<td>HIST 3473, HIST 3503, HIST 4313, HIST 4323,</td>
<td></td>
</tr>
<tr>
<td>HIST 4353, HIST 4383</td>
<td></td>
</tr>
<tr>
<td>ECON 2143 Basic Economics-Theory and Practice, or ECON 3053 Economics for Elementary Teachers</td>
<td></td>
</tr>
<tr>
<td>ECON 4033 History of Economic Thought</td>
<td></td>
</tr>
<tr>
<td>GEOG 1123 Human Geography</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Math/Science</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>21</td>
</tr>
<tr>
<td>ENGL 1213 Intro. to Literature</td>
<td></td>
</tr>
<tr>
<td>6 hours selected from the following: ENGL 2133, ENGL 2143, ENGL 2153, ENGL 2163, History of Literature in English I-IV</td>
<td></td>
</tr>
<tr>
<td>ENGL 4003 English Language and Composition for Teachers</td>
<td></td>
</tr>
<tr>
<td>ENGL 3183 Modern English Syntax and Style</td>
<td></td>
</tr>
<tr>
<td>ENGL 4253 African Literature, or</td>
<td></td>
</tr>
<tr>
<td>ENGL 4333 African-American Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL 3653 Intro. to Shakespeare</td>
<td></td>
</tr>
<tr>
<td>3-hour course above 3000-level selected from Medieval, Renaissance (excluding Shakespeare), Restoration, or 18th Century Literature</td>
<td></td>
</tr>
<tr>
<td>3-hour course above 3000-level selected from 19th Century, 20th Century, or American Literature</td>
<td></td>
</tr>
</tbody>
</table>

Social Studies/English

<table>
<thead>
<tr>
<th>English</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1213 Intro. to Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL 2133, ENGL 2143, ENGL 2153, ENGL 2163, History of Literature in English I-IV</td>
<td></td>
</tr>
<tr>
<td>ENGL 4003 English Language and Composition for Teachers</td>
<td></td>
</tr>
<tr>
<td>ENGL 3183 Modern English Syntax and Style</td>
<td></td>
</tr>
<tr>
<td>ENGL 4253 African Literature, or</td>
<td></td>
</tr>
<tr>
<td>ENGL 4333 African-American Literature</td>
<td></td>
</tr>
<tr>
<td>ENGL 3653 Intro. to Shakespeare</td>
<td></td>
</tr>
<tr>
<td>3-hour course above 3000-level selected from Medieval, Renaissance (excluding Shakespeare), Restoration, or 18th Century Literature</td>
<td></td>
</tr>
<tr>
<td>3-hour course above 3000-level selected from 19th Century, 20th Century, or American Literature</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Math/Science</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>33</td>
</tr>
<tr>
<td>MATH 2213/2223 Survey of Mathematical Structures I and II</td>
<td></td>
</tr>
<tr>
<td>MATH 2554/2564 Calculus I and II</td>
<td></td>
</tr>
<tr>
<td>MATH 3133 History of Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 3773 Foundations of Geometry</td>
<td></td>
</tr>
<tr>
<td>MATH 2103 Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 2053 Finite Mathematics</td>
<td></td>
</tr>
<tr>
<td>CSCE 1023/1021L Programming I/Lab</td>
<td></td>
</tr>
</tbody>
</table>
Admission Requirements:

1. Completion of the pre-education core on page 164 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. Admission to the Teacher Education Program
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 257 FOR MIDDLE LEVEL EDUCATION (CIED) COURSES

Secondary Education (SEED)

- Professors Besonen, Farah, Graening, Taylor, Totten
- Associate Professors Morrow, Wavering
- Assistant Professor Lincoln

Secondary Schools Program

Students certifying 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.

The following 18-hour, Pre-Education Core will be included in the undergraduate degree program. A “C” or higher is required.

College of Education and Health Professions
market potential. However, meeting or exceeding minimum requirements does not guarantee acceptance into the M.A.T. 7. At the completion of the 6 hours of M.A.T courses, the secondary faculty will convene to review the status of the 50 candidates.

III. Professional Standing Status

Professional Standing Status will be granted at completion of the first 6 hours of M.A.T. courses and after faculty review. (For details, contact the Department of Curriculum and Instruction, Peabody Hall.)

SEE PAGE 327 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 329 FOR SPECIAL EDUCATION (SPED) COURSES

DEPARTMENT OF EDUCATIONAL LEADERSHIP, COUNSELING, AND FOUNDATIONS (ELCF)

Roy Farley
Department Head
234 Graduate Education Building
479-575-4207
E-mail: rfarley@uark.edu

James Swartz
Coordinator of Graduate Studies
251 Graduate Education Building
479-575-2207
E-mail: jswartz@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, and higher education. A master’s degree may be obtained in educational technology and educational foundations. Educational foundations 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
- Assistant Professor Newgent
- Instructor Stephen
- Visiting Assistant Professor Robertson

SEE PAGE 260 FOR COUNSELOR EDUCATION (CNED) COURSES

Educational Administration (EDAD)

- Associate Professors Elliott, Hughes
- Assistant Professors Capps, Holt, Noggle

SEE PAGE 270 FOR EDUCATIONAL ADMINISTRATION (EDAD) COURSES

Educational Technology (ETEC)

- Associate Professor Murphy
- Assistant Professor Brescia
- Instructor Cohen

SEE PAGE 277 FOR EDUCATIONAL TECHNOLOGY (ETEC) COURSES

Higher Education (HIED)

- Professors Gearhart, Hammons, Lucas
- Associate Professors Gohn, Miller, Murry
- Adjunct Associate Professor Brazzell
- Adjunct Assistant Professors Carry, Mallory, Stephenson

SEE PAGE 286 FOR HIGHER EDUCATION (HIED) COURSES

Educational Foundations (EDFD)

- Professors Lucas, Mulvenon, Stegman
- Associate Professors Denny, Ritter, Swartz, Turner

SEE PAGE 270 FOR EDUCATIONAL FOUNDATIONS (EDFD) COURSES

DEPARTMENT OF HEALTH SCIENCE, KINESIOLOGY, RECREATION, AND DANCE

Sharon Hunt
Department Head
306 HPER Building
479-575-2857
E-mail: sbhunt@uark.edu

Susan Mayes
Coordinator of Undergraduate Studies
308 HPER Building
479-575-2859
E-mail: smayes@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 267 FOR DANCE ACTIVITY (DEAC) COURSES

Health Science (HLSC)

- University Professor Young
- Associate Professors Jones (C.), Turner
- Visiting Assistant Professors Mink, Williams

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 42 and the college requirements as listed on page 161. 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>Course Description</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required general studies for the Health Science Major</td>
<td>13-14</td>
</tr>
<tr>
<td>BIOL 1543/1541L Principles of Biology</td>
<td></td>
</tr>
<tr>
<td>CHEM 1103/1101L/1100D University Chemistry I</td>
<td></td>
</tr>
<tr>
<td>SOCI 2013 General Sociology</td>
<td></td>
</tr>
<tr>
<td><strong>NOTE:</strong> HLSC 1103 is recommended in lieu of HLSC 1002</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>
<tr>
<td>HLSC 1303 Introduction to Human Sexuality</td>
<td></td>
</tr>
<tr>
<td>HLSC 2613 Foundations in Health Education</td>
<td></td>
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<tr>
<td>HLSC 2653 Intro. to Community Health</td>
<td></td>
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<tr>
<td>HLSC 2662 Terminology/Health Professions</td>
<td></td>
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<tr>
<td>HLSC 3003 Practicum in Community Health</td>
<td></td>
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<tr>
<td>HLSC 3633 First Responder – First Aid</td>
<td></td>
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<tr>
<td>HLSC 3643 Community Health Plan/Promotion (6 hrs)</td>
<td></td>
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<tr>
<td>HLSC 3663 Principles of Mental Health</td>
<td></td>
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<tr>
<td>HLSC 3683 Health Care Consumerism</td>
<td></td>
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<tr>
<td>HLSC 404V Community Health Preceptorship</td>
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<tr>
<td>HLSC 4633 Human Diseases</td>
<td></td>
</tr>
<tr>
<td>JOUR 1023 Media and Society</td>
<td></td>
</tr>
<tr>
<td>BIOL 2013/2011L General Microbiology</td>
<td></td>
</tr>
<tr>
<td>PSYC 3093 Childhood and Adolescence</td>
<td></td>
</tr>
<tr>
<td>3 hours of PSYC elective</td>
<td></td>
</tr>
<tr>
<td>BIOL 1603/1601L Principles of Zoology and Lab, or</td>
<td></td>
</tr>
<tr>
<td>BIOL 1613/1611L Plant Biology and Lab</td>
<td></td>
</tr>
<tr>
<td>BIOL 2213/2211L Human Physiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 2443/2441L Human Anatomy</td>
<td></td>
</tr>
<tr>
<td>SCWK 3163 On Death and Dying</td>
<td></td>
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<tr>
<td>PSYC 4023 Adulthood and Aging, or</td>
<td></td>
</tr>
<tr>
<td>SCWK 3183 The Elderly Citizen</td>
<td></td>
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<tr>
<td>PSYC 4113 Behavior Modification</td>
<td></td>
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<tr>
<td>5 hours of health science electives (adviser approved)</td>
<td></td>
</tr>
</tbody>
</table>

**SEE PAGE 289 FOR HEALTH SCIENCES (HLSC) COURSES**

### Kinesiology (KINS)

- University Professor Brown
- Professors Di Brezzo, Fort, Gorman, Riggs
- Associate Professor Lirgg
- Clinical Associate Professor Kern
- Assistant Professors Ferguson, Graening
- Clinical Assistant Professors Bonacci, Smith-Nix
- Instructors Forbes, Mayes, Vardiman
- Lecturer Mears

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:

1. K-12 Teaching Physical Education/Wellness & Leisure
2. Exercise Science – Exercise Physiology/Biomechanics
3. Exercise Science – Pre-Professional
4. Exercise Science – Fitness Specialist
5. Exercise Science – Pre-Athletic Training

All students must complete the University Core requirements as listed on page 42 and the College of Education and Health Professions requirements as listed on page 161. 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 and College of Education and Health Professions 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, complete the stages of admission for initial licensure as listed on page 158, 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, 8 Peabody Hall. Students planning on applying for other post-baccalaureate programs should inquire as to prerequisite requirements. Students planning on a major in kinesiology with a concentration in exercise science (concentrations II, III, IV, V) must earn a grade of “C” or better in KINS 3153, KINS 3353, and KINS 3533. A minimum of 124 semester hours is required for graduation in the major of kinesiology. The total hours may vary slightly depending on the concentration of study.

### Curriculum for a Major in Kinesiology

<table>
<thead>
<tr>
<th>Course Description</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required general studies for the Kinesiology Major</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 1103/1101L/1100D University Chemistry I, or</td>
<td></td>
</tr>
<tr>
<td>for K-12 concentration only, any 4-hour state</td>
<td></td>
</tr>
<tr>
<td>minimum core chemistry with lab</td>
<td></td>
</tr>
<tr>
<td>BIOL 2443/2441L Human Anatomy</td>
<td></td>
</tr>
<tr>
<td><strong>Kinesiology Core</strong></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</td>
<td></td>
</tr>
<tr>
<td>concentrations II-IV), or</td>
<td></td>
</tr>
<tr>
<td>KINS 3163 Exercise Physiology: Theory and Application</td>
<td></td>
</tr>
<tr>
<td>(for K-12 concentration I)</td>
<td></td>
</tr>
<tr>
<td>KINS 3353 Mechanics of Human Movement</td>
<td></td>
</tr>
</tbody>
</table>

#### Concentration I: K-12 Teaching

Physical Education/Wellness & Leisure

<table>
<thead>
<tr>
<th>Course Description</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECR 1001L Outdoor Recreation Lab</td>
<td></td>
</tr>
<tr>
<td>BIOL 1543/1541L Principles of Biology</td>
<td></td>
</tr>
<tr>
<td>PHED 2003 Teaching Styles/Lesson Planning</td>
<td></td>
</tr>
<tr>
<td>PHED 2013 Teach Progressions/Assessment of Basic Skills</td>
<td></td>
</tr>
</tbody>
</table>

University of Arkansas, Fayetteville
College of Education and Health Professions

Pre-Education Core Specialty Program Courses
KINS 2223 Motor Development (hours counted in the kinesiology core)
CNED 4003 Classroom Human Relations Skills
11-14 hours toward course content in health science
(see adviser for available course choices) or other
adviser-approved electives

The fifth-year program in the K-12 concentration consists of 33 hours of graduate courses including student teaching internship and a comprehensive exam. Successful completion should result in eligibility for teaching licensure and the Master of Arts in Teaching (M.A.T.) degree.

(Remember to refer to the Graduate School Catalog for special requirements.)

Exercise Science Core
Requirements for Kinesiology (Exercise Science)

Concentrations II, III, IV, and V:

**CHEM 1123/1121L/1120D University Chemistry II**
(not required for Concentration V)
**PHYS 2013/2011L/2010D College Physics I**
**PHYS 2033/2031L/2030D College Physics II**
(not required for Concentrations IV, V)
**BIOL 2213/2211L Human Physiology**
**HESC 1213 Nutrition in Health**
**PSYC 4183 Physiological Psychology**
(not required for Concentrations IV, V)
**CNED 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**

**BIOL 1543/1541L Principles of Biology/Lab**
**PSYC 2013 Intro. to Statistics for Psych.**
or adviser-approved statistics course
**MATH 2043 Survey of Calculus**
**CHEM 2613/2611L/2610D Organic Physiol. Chem**
**CHEM 3813 Intro. to Biochemistry**
Additional adviser-approved electives (11 hrs.)

**Concentration III: Exercise Science – Pre-Professional**

**PSYC 2013 Intro. to Statistics for Psych.**
or adviser-approved statistics course
**MATH 2043 Survey of Calculus (depending on post-baccalaureate plans, see adviser)**
**CHEM 3603/3601L/3600D Organic Chemistry I**
**CHEM 3613/3611L/3610D Organic Chemistry II**

**Concentration IV: Exercise Science – Fitness Specialist**
**MATH 1203 College Algebra**
**MATH 1213 Plane Trigonometry**
**CHEM 2613/2611L/2610D Organic Physiol. Chem**
**PSYC 3023 Abnormal Psychology**
(takes place of PSYC 4183 in Exercise Science Core)
**MGMT 3563 Management Concepts in Org. Behavior**
**MKTT 3433 Principles of Marketing**
(Pre-requisite: ECON 2103 and ECON 2023)
**KINS 4773 Performance and Drugs**
**VOED 4403 Nutrition Education and Counseling**
Additional adviser-approved electives (10 hrs.)

**Concentration V: Exercise Science – Pre-Athletic Training**
**Biol 1543/1541L Principles of Biology**
**ETEC 2001/2002L Educational Technology/Lab**
**MATH 1203 College Algebra**
**MATH 1213 Plane Trigonometry**
**PSYC 3023 Abnormal Psychology**
(takes place of PSYC 4183 in Exercise Science Core)
**KINS 2393 Prevention and Care/Athletic Injuries**
**KINS 3413 Evaluative Techniques for Athletic Training**
**KINS 3663 Rehabilitation of Athletic Injury**
**KINS 4773 Performance and Drugs Professions**
**HLSC 2662 Terminology for the Health Professions**
**HLSC 3633 First Responder – First Aid**
**VOED 4403 Nutrition Education and Counseling**
Additional adviser-approved electives (10 hrs.)

**SEE PAGE 296 FOR KINESIOLOGY (KINS) COURSES**

**PHYSICAL EDUCATION ACTIVITIES (PEAC)**

**BASIC INSTRUCTION IN PHYSICAL EDUCATION (PEAC)**

**SEE PAGE 315 FOR PHYSICAL EDUCATION ACTIVITIES (PEAC) COURSES**

**Recreation (RECR)**

• Professor Hunt
• Associate Professors Langsner, Moiseichik
• Assistant Professor Hughes

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 42 and the college requirements as listed on page 161. In addition, all students must take the required general studies for the recreation core requirements listed below. As part of the University Core requirements and College of Education and Health Profession requirements, specific social sciences and science courses are required within the recreation major and concentration requirements. 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. 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. The total hours may vary slightly depending on the study concentration.

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

**Required General Studies for the Recreation Major**
- PLSC 2003 American National Government
- SOCI 2013 General Sociology

**Recreation Core**
- 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
- 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.)

**Total Hours for Major**
- 51

### Curriculum for a Minor in Recreation

**Minor Requirement**
- RECR 1003 Professional Foundations of Leisure
- RECR 2813 Leadership Techniques in Recreation
- RECR 3833 Program Planning in Recreation
- RECR 3873 Sport and Recreation Risk Management
- RECR elective course selected to compliment major
  (see adviser)

**Total Hours for Minor**
- 15

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**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 Breckenridge, Buron, Kolb-Selby, McConaughy, Meadows, Miller

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 to experience nursing in the practice settings and 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 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. They are responsible for ensuring that knowledge from research is used 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, and
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 Jr., Mervin Harold Davis Jr., Mina Marshall, Mann, Richter, and Stars for Nursing Scholarships. Contact the Eleanor Mann School of Nursing about the guidelines and application deadlines.

**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 hrs of study and is greater than the transfer GPA, the UA GPA will be used. If the student has less than 12 hrs at the University of Arkansas, the transfer GPA will be factored in.)
2. Students will be ranked according to GPA for admission to the program.
3. Applications for admission must be submitted by December 1 for admission consideration. Late applications will be considered on a space-available basis.
4. Selection process will be completed by March 1.
5. All general education courses must be completed at the end of the spring semester prior to beginning the professional program of study.
6. Professional program of study begins in the summer following the sophomore year.
7. Students transferring from another nursing program must be eligible to return to that program to be considered for admission.
8. Students must meet the performance standards for the professional program of study.
9. CPR certification (American Heart Association program) is required.
10. The completed Hepatitis B vaccine series must be verified.
11. Negative Tuberculin skin test or x-ray is required.
12. Health and liability insurance is required (check with the School of Nursing).
13. A car or reliable transportation is required.
14. A criminal background check with fingerprinting is required and reported to the Arkansas State Board of Nursing.
15. 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.

Advanced Placement for Registered Nurses

Applicants to the RN to B.S.N. track must meet the following requirements:

1. College admission requirements
2. Eleanor Mann School of Nursing admission requirements
3. Completion of the general education studies. (R.N. students who have completed 45 hours of the required general studies may petition for exception to this policy if MATH 1203, PSYC 2013, and NURS 3013 have been completed.)
4. Graduation from an Arkansas State Board of Nursing approved program or an accredited out-of-state program
5. Review of nursing courses for transfer credit by the School of Nursing
6. Proof of, and maintenance of, unencumbered licensure to practice as a Registered Nurse in Arkansas
7. Requirements necessary to receive advanced placement may vary with length of time since graduation and length of time of (or since) nursing employment.
8. Credit for courses listed below will be held in escrow. The student will receive credit for these courses upon successful completion of the program.

<table>
<thead>
<tr>
<th>Course</th>
<th>SCPE Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 3032</td>
<td>NURS 3042L</td>
</tr>
<tr>
<td>NURS 3212/3221</td>
<td>NURS 3312</td>
</tr>
<tr>
<td>NURS 3422/3423</td>
<td>NURS 3634/3643</td>
</tr>
<tr>
<td>NURS 3742/3752</td>
<td>NURS 3841L</td>
</tr>
<tr>
<td>NURS 4154/4164</td>
<td>NURS 4443/4453</td>
</tr>
</tbody>
</table>

RN students will be considered as a separate group for admission purposes.

Advanced Placement for Licensed Practical Nurses

Applicants for advanced placement into the LPN/LPTN to B.S.N. track must meet the following requirements:

1. College admission requirements
2. Eleanor Mann School of Nursing admission requirements
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. Students may receive credit for 12 hrs in the nursing program through validation procedures. The student may validate NURS 3634/NURS 3643 through the NLN Profile II Book I examination. They may validate NURS 3042L, NURS 3312, NURS 3032, NURS 3422, and NURS 3423 through successful completion of the remaining courses in Level I of the professional program of study. These courses will be held in escrow. The student will receive credit for escrowed courses upon successful completion of the professional program of study.

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 healthcare 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 rest 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.

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 in the professional program of study has been interrupted may seek readmission following the steps below:

1. Seek readmission into the University of Arkansas (if applicable).

2. Complete Readmission Application to the School of Nursing the semester prior to the semester of intended re-entry into the program. (Readmission is limited by space availability.)

3. If the student’s 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.

Requirements for Bachelor of Science in Nursing

<table>
<thead>
<tr>
<th>COURSES</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Studies</td>
<td>63</td>
</tr>
<tr>
<td>ENGL 1013 Composition I</td>
<td></td>
</tr>
<tr>
<td>ENGL 1023 Composition II</td>
<td></td>
</tr>
<tr>
<td>ENGL 2003 Advanced Composition</td>
<td></td>
</tr>
<tr>
<td>(exemption by examination or credit in ENGL 2013 or grade of at least “B” in ENGL 1013 and “A” in ENGL 1023 at Fayetteville campus)</td>
<td></td>
</tr>
<tr>
<td>COMM 1313 Fundamentals of Communication</td>
<td></td>
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<tr>
<td>Literature (3 hrs), World Literature</td>
<td></td>
</tr>
<tr>
<td>recommended</td>
<td></td>
</tr>
<tr>
<td>Fine Arts/Humanities Elective (3 hrs) to</td>
<td></td>
</tr>
<tr>
<td>meet State Core</td>
<td></td>
</tr>
<tr>
<td>PHIL 2103 or PHIL 3103 Ethics</td>
<td></td>
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<tr>
<td>HIST 2003 or HIST 2013, or PLSC 2003</td>
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<tr>
<td>PSYC 2003 General Psychology</td>
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<tr>
<td>SOCI 2003 General Sociology, or</td>
<td></td>
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<tr>
<td>SOCI 2013 or ANTH 1023</td>
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<tr>
<td>HESC 1403 Lifespan Development</td>
<td></td>
</tr>
</tbody>
</table>

MATH 1203 College Algebra
PSYC 2013 Intro. to Statistics for Psych, or
EDFD 2403 Statistics in Nursing
NURS 3013 Computers in Health Care Systems
CHEM 1074/1071L Fundamentals of Chemistry
BIOL 1543/1541L Principles of Biology
BIOL 2013/2011L General Microbiology
BIOL 2213/2211L Human Physiology
BIOL 2443/2441L Human Anatomy

Professional Nursing Program

Level I
NURS 3022 Intro. to Professional Nursing Concepts
NURS 3032 Therapeutic Comm.
NURS 3042L Professional Nursing Skills: Basic
NURS 3212 Teaching and Health Promotion
NURS 3221 Professional Role Implementation I: Teacher
NURS 3312 Pharmacology
NURS 3314 Pathophysiology
NURS 3321 Health Assessment
NURS 3422 Nursing Concepts: Foundations of Professional Practice
NURS 3423 Professional Role Implementation II: Caregiver

Level II
NURS 3634 Nursing Concepts: Adult Health and Illness
NURS 3643 Professional Role Implementation III: Caregiver
NURS 3841L Professional Nursing Skills: Advanced
NURS 3842 Research in Nursing
NURS 3742 Nursing Concepts: Mental Health/Illness
NURS 3752 Professional Role Implementation IV: Caregiver
NURS 4154 Nursing Concepts: Children and Family
NURS 4164 Professional Role Implementation V: Teacher
NURS 4422 Management in Nursing
NURS 4263 Nursing Concepts: Older Adult Health/Illness
NURS 4273 Professional Role Implementation VI: Manager

Level III
NURS 4443 Nursing Concepts: Critical Care
NURS 4453 Professional Role Implementation VII: Role Synthesis
NURS 4603 Nursing Concepts:Communities
NURS 4613 Professional Role Implementation VIII: Role Synthesis
NURS 4712 Seminar in Nursing

Total for Nursing

128

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.

DEPARTMENT OF REHABILITATION, HUMAN RESOURCES, AND COMMUNICATION DISORDERS (RHRC)

Barbara E. Hinton
Department Head
100 Graduate Education Building
479-575-4758
E-mail: bhinton@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. An M.Ed. in adult education, M.Ed. in vocational education, M.A.T. in vocational education, M.S. with an emphasis in speech pathology, M.S. in rehabilitation, Ed.S. in adult education, Ed.D. in vocational education, and Ph.D. in rehabilitation are also offered.

**Adult Education (ADED)**
- Professors Dutton, Hinton
- Associate Professors Lyle, Thompson (D.)
- Assistant Professors Brooks, Nafukho
- Visiting Assistant Professor Carder
- Adjunct Assistant Professor Lofton

SEE PAGE 237 FOR ADULT EDUCATION (ADED) COURSES

**Communication Disorders (CDIS)**
201 Speech and Hearing Clinic  
479-575-4509
- Professor Shadden
- Associate Professor Toner
- Assistant Professors Henrickson, 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 161.

**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**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Core and General Studies, page 42, 161</td>
<td>47-50</td>
</tr>
<tr>
<td>Communication Disorders Core</td>
<td>41</td>
</tr>
<tr>
<td>CDIS 2253 Intro. to Communicative Disorders</td>
<td></td>
</tr>
<tr>
<td>CDIS 3103 Intro. to Audiology</td>
<td></td>
</tr>
<tr>
<td>CDIS 3124 Normal Phonological and Articulatory Processes, and CDIS 3120L Phonetic Transcription Lab</td>
<td></td>
</tr>
<tr>
<td>CDIS 3203 Articulation Disorders</td>
<td></td>
</tr>
<tr>
<td>CDIS 3213 Anatomy and Physiology of Speech and Hearing Mechanisms</td>
<td></td>
</tr>
<tr>
<td>CDIS 3224 Language Development in Children</td>
<td></td>
</tr>
<tr>
<td>CDIS 3220L Language Transcription Lab</td>
<td></td>
</tr>
<tr>
<td>CDIS 3233 Intro. to Clinical Practice</td>
<td></td>
</tr>
<tr>
<td>CDIS 4133 Intro. to Aural Rehab</td>
<td></td>
</tr>
<tr>
<td>CDIS 4213 Intro. to Speech and Hearing Science</td>
<td></td>
</tr>
<tr>
<td>CDIS 4183 Clinical Assessment of Speech and Language Disorders</td>
<td></td>
</tr>
<tr>
<td>CDIS 4223 Language Disorders in Children</td>
<td></td>
</tr>
<tr>
<td>CDIS 4253 Neurological Bases of Communication</td>
<td></td>
</tr>
<tr>
<td>CDIS 4273 Communication Behavior and Aging</td>
<td></td>
</tr>
<tr>
<td>Electives to meet 124 hours</td>
<td>36-39</td>
</tr>
</tbody>
</table>

**Total for Communication Disorders 124**

SEE PAGE 251 FOR COMMUNICATION DISORDERS (CDIS) COURSES

**Rehabilitation (RHAB)**
100 Graduate Education Building  
479-575-4758
- University Professor Roessler
- Professors Anderson, Cook, Watson
- Research Professors Boone, Schroedel
- Assistant Professor Williams
- Research Assistant Professors Cantrell, Cochran, Miller, Sabik

SEE PAGE 325 FOR REHABILITATION (RHAB) COURSES

**Vocational Education (VOED)**
- Professors Biggs, Hinton, Thompson (C.)
- Associate Professors De Vore, Orr, Park, Thompson (D.)
- Assistant Professors Brooks, Nafukho
- Visiting Assistant Professor Carder
- Instructor Wills

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 concentrations in vocational education are: business education (BUED) and family and consumer sciences (FCSE).

**Professional Pre-Education Core Requirements in Vocational Education**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum and Instruction</td>
<td>9</td>
</tr>
<tr>
<td>CIED 1002 Intro. to Education</td>
<td></td>
</tr>
<tr>
<td>CIED 1011 Intro. to Education Practicum</td>
<td></td>
</tr>
<tr>
<td>CIED 3023 Survey of Exceptionalities</td>
<td></td>
</tr>
<tr>
<td>CIED 3033 Classroom Learning Theory</td>
<td></td>
</tr>
<tr>
<td>Educational Technology</td>
<td>3</td>
</tr>
<tr>
<td>ETEC 2001 Educational Technology</td>
<td></td>
</tr>
<tr>
<td>ETEC 2002L Educational Technology</td>
<td></td>
</tr>
</tbody>
</table>
Vocational Education  
VOED 4003 Intro. to Professionalism  
VOED 4013 Presentation Techniques  

General Studies Requirements  
The general requirements for all under-graduate programs in the College of Education and Health Professions are found under general studies.

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 330 FOR VOCATIONAL EDUCATION (VOED) COURSES.

Business Education (BUED)  
Advisers:  
Fredrick Muyia Nafukho  
108 Graduate Education Building  
479-575-4758  
Ok Park  
112 Graduate Education Building  
479-575-4759

Completion of the Bachelor of Science in Education degree has two concentrations: non-licensure and licensure. Requirements for initial teacher licensure may be completed 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.

Basic Plan  
In addition to the general studies (see note) 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 of business education courses excluding marketing and computer technology.

HOURS  
Business courses by consent of adviser  
WCOB 1012 Legal Environment of Business  
ECON 2143 Basic Economics  
VOED 480V Problems in VOED (Keyboarding II)  
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  
VOED 4122 Leadership Development  
VOED 4303 Business Communication in Education  
Business electives  
Total

NOTE: ECON 2143 will satisfy the economics requirement in general studies and the prerequisite requirement for MKTT 3433.

Family and Consumer Sciences Education (FCSE)  
Adviser:  
Cecelia K. Thompson  
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 completing 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.

HOURS  
Technical Requirements  
HESC 1403 and HESC 2413  
(must be taken as part of the general education requirements in social studies.)

Study of the Family—Select 2 courses:  
HESC 3443 Family in Crisis  
HESC 4433 Dynamic Family Interaction  
HESC 4453 Parenting and Family Dynamics  
SCWK 3233 Juvenile Delinquency  
SCWK 4133 Family Preservation  
SCWK 4143 Addiction and the Family

Human Development—Select 1 course  
HESC 2402/2401L Infant and Toddler Development  
HESC 2433 Child Development  
HESC 3423 Adolescent Development

Management  
HESC 3763L Family Resource Management Lab  
Consumer Economics Select 1 course  
HESC 4753 Family as Consumers  
FINN3003 Personal Financial Management

Nutrition and Food  
HESC 1213 Nutrition in Health  
HESC 2112/2111L Foods I  
HESC 2123/2120L Catering for Healthy Lifestyles, or  
HESC 2203 Nutrition for Exercise and Sports

Clothing and Textiles  
HESC 1013 Intro. to Clothing Concepts  
HESC 2053/2050L Intro. to Textile Science

Housing  
VOED 480(3)

Professional Concerns (Recommended but not required)  
HESC 1501 Orientation to HESC  
HESC 4303 Professional Development  
CNED3053 The Helping Relationship  
EXED 3023 Intro. to the Cooperative Extension Service  
EXED 4173 Principles of Extension Teaching

Electives—26 credits from any department in the University. Use elective credits to strengthen your area of family and consumer science or complete work toward and additional licensure plan (ALP).

NOTE: The minimum number of hours required to receive a baccalaureate degree at the University of Arkansas is 124 semester hours.
For professional education requirements for Master of Arts in Teaching (M.A.T.), see the Graduate School Catalog or see page 158 in this catalog.

**Human Resource Development (HRDV)**

Advisers:
Dale E. Thompson
111 Graduate Education Building
479-575-6640

Phil Gerke
117A Graduate Education Building
479-575-4690

This concentration is open only to adult learners, employed full-time, who have five years of work experience. Departmental approval is mandated before taking any of the required courses in this concentration. The accelerated degree-completion plan of study permits credit for experiential learning. This concentration is offered by the University of Arkansas at selected off-campus locations via distance learning technology on a two-year rotation plan in cooperation with the UA Division of Continuing Education. Details can be found on the Web at <http://www.uark.edu/hrd>. This is not a teacher preparation concentration.

**Human Resource Development Concentration**

<table>
<thead>
<tr>
<th>HOURS</th>
<th>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 HRD Technical requirements.</th>
</tr>
</thead>
</table>

**Human Resource Development Professional Courses (taught in a two-year rotation of weekend classes by distance learning)**
VAED 3113, VAED 3123, VAED 3133, VAED 3213, VAED 4113, VAED 4133, VAED 4213, VAED 4233 24

**Human Resource Development Internship**
ITED 459V, HRDV Internship (Applied HRD theory and concepts in the workplace) 12

**General Studies Requirements**
55

**Total**
124

**Industrial and Technical Education (ITED)**

Advisers:
Jack B. DeVore, Jr.
102 Graduate Education Building
479-575-7285

Fred A. Wills
109 Graduate Education Building
479-575-5114

**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 294 FOR INDUSTRIAL AND TECHNICAL EDUCATION (ITED) COURSES AND PAGE 330 FOR VOCATIONAL AND ADULT EDUCATION (VAED) COURSES
College of Engineering

Dean of the College  
4183 Bell Engineering Center  
479-575-7455

Associate Deans  
4188 Bell Engineering Center  
479-575-6010

Assistant Deans  
3189 Bell Engineering Center  
479-575-6012

Dean  
Ashok Saxena, Ph.D.  
University of Cincinnati

Associate Deans  
Jim L. Gattis, Ph.D.  
Purdue University  
William D. Brown, Ph.D.  
University of New Mexico

Assistant Deans  
William K. Warnock, Ph.D.  
Oklahoma State University  
Thomas Carter III, B.S.  
Henderson State University

Undergraduate Programs and Services  
Student Information  
3188 Bell Engineering Center  
479-575-3052

Recruitment  
4183 Bell Engineering Center  
479-575-7780

Diversity, Retention and Scholarship  
3165 Bell Engineering Center  
479-575-5009

Cooperative Education  
607 Arkansas Union  
479-575-6265

Engineering Research Center  
479-575-6407

ENGINEERING ADVISORY COUNCIL

Bami Bastani  
ANADIGICS, Inc.  
Warren, New Jersey

R.R. Baxter  
Baxter Associates, Inc.  
Palatine, Illinois

O.T. Beasley  
(Dept.) Chemical Market Associates, Inc.  
Houston, Texas

George Combs  
Combs Equity Management, Inc.  
Fort Smith, Arkansas

Ansel L. Condrey  
(Dept.) Exxon Mobil International, Limited  
Dallas, Texas

William L. Cravens  
(Dept.) Alltel Information Services, Inc.  
Little Rock, Arkansas

Robert Davidson  
ABF Freight System, Inc.  
Fort Smith, Arkansas

J. Cliff Eason  
(Dept.) Southwestern Bell Telephone  
San Antonio, Texas

David D. Foust  
(Dept.) Seneca Wire & Manufacturing Co.  
Rogers, Arkansas

Charles B. Friley  
The North American Coal Co.  
Dallas, Texas

Mike Gilliam  
SBC Communications, Inc.  
San Antonio, Texas

Mary L. Good  
Donaghey College of Information Science and Systems Eng.  
Little Rock, Arkansas

Wesley Haisty  
(Dept.) Detroit Tool and Engineering Co.  
Lebanon, Missouri

Edward M. Harvey  
Harvey Industries  
Little Rock, Arkansas

James S. Keel Jr.  
Improved Results, LLC  
Cincinnati, Ohio

World Wide Web  
http://www.engr.uark.edu/
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 which 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.

HISTORICAL BENCHMARKS

As the only comprehensive engineering program in Arkansas, the College of Engineering offers undergraduate, graduate, and doctoral degrees through seven academic departments. UA engineering programs have been continuously accredited by the Accreditation Board of Engineering and Technology (ABET) since 1936.

The college has a long and distinguished history:

- 1871 the University of Arkansas was established.
- 1873 the first courses in civil engineering were offered.
- 1888 the first civil engineering degree was awarded.
- 1897 a separate civil engineering department and a department of electrical engineering were established.
- 1903 a department of mechanical engineering was established, and a chemical engineering curriculum was established in the department of chemistry.
the College of Engineering was organized as a college of the University.
the Engineering Experiment Station was established by the state legislature to investigate and study engineering problems of general interest to Arkansas.
the first master’s degree in engineering was awarded.
chemical engineering became part of the College of Engineering.
the departments of agricultural engineering and industrial engineering were established.
a Doctor of Philosophy degree was approved.
a curriculum in engineering science was offered.
the Engineering Extension Center was formed to provide continuing education opportunities to practicing engineers.
a computer science engineering program was initiated within the industrial engineering department.
the engineering science curriculum merged with the mechanical engineering curriculum.
the college took possession of an empty manufacturing plant that evolved into the Engineering Research Center.
computer science engineering became a separate department, and the Arkansas Center for Technology Transfer was established.
the Engineering Distance Education Center was created to offer off-campus engineering education, and the GENESIS Technology Incubator was established.
the department of agricultural engineering became the department of biological and agricultural engineering.
the computer science engineering department name changed to computer systems engineering.
the Engineering Distance Education Center expanded to include undergraduate course offerings.
computer systems engineering merged with the computer science department housed in the J. William Fulbright College of Arts and Sciences, which created the department of computer science and computer engineering.
the biological and agricultural engineering program name was changed to biological engineering.

The following educators have served the college as dean:
William N. Gladson 1913-1936
George P. Stocker 1936-1948
George F. Branigan 1948-1971
Loren R. Heiple 1971-1979
James E. Halligan 1979-1982
Otto J. Loewer 1996-2002
Ashok Saxena 2003-Present

PROGRAMMATIC ACTIVITIES

Undergraduate Education
Undergraduate education is a core mission of the College of Engineering. A full array of accredited undergraduate degrees is offered in outstanding teaching facilities and laboratories. The college faculty brings considerable industrial experience to the classroom, thus adding to the value of the formal course work. Students who graduate from any of the college’s undergraduate programs can be confident that they have received an engineering education of exceptionally high quality that makes them nationally and internationally competitive in the marketplace of their respective disciplines.

Graduate Education and Research
Graduate education and research go hand in hand and are major programmatic activities in each of the seven departments in the College of Engineering. Research coordination is achieved through the Engineering Experiment Station, which was established for that purpose by an act of the Arkansas Legislature in 1920.
The overall goal of graduate education and research in the College of Engineering is to provide engineering solutions to important problems that face our society while, at the same time, educating nationally and internationally competitive students at the cutting edge of technology. Student involvement in research is especially important in that it helps link students to the needs of their future employers. All seven engineering departments — biological and agricultural, chemical, civil, computer science and computer engineering, electrical, industrial, and mechanical — conduct research over a broad spectrum of subjects that fall largely into the college’s areas of emphasis. Funding for research comes primarily through external contracts between the college and its government and industry partners. Much of the external research funding goes to support student employees who work on the various research projects.

Continuing Education and Technology Transfer
The College of Engineering embraces continuing education and technology transfer as programmatic activities that help meet the engineering community’s need for life-long learning. In recognition of its responsibilities to the technical community of the state, the College of Engineering formed the Engineering Extension Center on July 1, 1975, to provide continuing educational services for practicing engineers.
The primary objective of this center is to provide the very latest information required for maintaining and enhancing the technical competency of the practitioner and helping industry remain economically viable. This is accomplished through various offerings such as seminars, short courses, conferences, consulting, and institutes, as well as through regular course offerings. An additional objective is to provide a productive interface among faculty, practitioners, and industry.

Technology-based Business Incubation and Job Creation
The College of Engineering is very active in promoting technology-based economic development in Arkansas and the region. The major unit involved in this is the GENESIS Technology Incubator. GENESIS is a national award-winning program located within the Engineering Research Center in close proximity to the college’s research laboratories. Office and laboratory space in the Engineering Research Center is rented to companies that satisfy the GENESIS criteria. Companies, for a fee, have access to certain University of Arkansas resources. Companies that become part of the GENESIS program generally are developing technology-based products for the marketplace, and they need access to faculty expertise, highly specialized laboratories, and student employees. The goal of GENESIS is to help companies grow, thus adding more technology-based employment opportunities in the state and region. In fact, since its creation in 1987, GENESIS companies have created a new job in Arkansas about every four working days.

FACILITIES AND LABORATORY FEE

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.

Laboratory Fee

In order to maintain the college’s state-of-the-art instructional and computer laboratories each student enrolled in an engineering course is assessed a laboratory fee for that term. This fee is used not only to purchase and maintain equipment but also to operate and staff the engineering laboratories.

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.

Engineering Distance Education Center

In the spirit of providing quality engineering education that fits the needs of today’s students, the College of Engineering offers distance education opportunities for degree-seeking graduate and undergraduate students, surveyors, registered professional engineers, and others who require on-going training.

The Engineering Distance Education Center offers the Master of Science in Engineering degree as a work-at-home series. This is a fully accredited graduate program whose candidates are engineers holding undergraduate degrees. The program is accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools. The M.S.E. program is taught by the University of Arkansas College of Engineering’s graduate faculty.

The M.S. in Operations Management (MSOM) degree program is available to both civilians and military personnel; classes for this program are held at the college’s Graduate Resident Centers, which are located on the UA campus and at military installations in Arkansas, Tennessee, and Florida. Professional development and continuing education credits can be earned through the College of Engineering’s Professional Development Center. These courses provide on-going training on technical and engineering topics for Professional Engineers, land surveyors, and others in the technical and engineering professions.

ENGINEERING PROGRAM

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 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.

The College of Engineering offers undergraduate programs leading to the Bachelor of Science (B.S.) degree, graduate programs leading to the Master of Science (M.S.) degree, and a program of advanced study leading to the Doctor of Philosophy (Ph.D.) degree. For information regarding graduate programs, consult the Graduate School Catalog.

DEGREES OFFERED

The College of Engineering offers curricula accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) leading to the following seven undergraduate degrees:

- 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.)

Other undergraduate degrees awarded:

- Bachelor of Science in Computer Science (B.S.)

Students can be awarded a second bachelor’s degree in engineering by satisfying all the requirements for both degrees. In doing this, the student must complete a minimum of 30 semester hours of studies for the second degree, which are not used to satisfy any requirement for the first degree.

ADMISSION REQUIREMENTS

Freshmen admitted to the University of Arkansas, Fayetteville, are eligible to enroll in the College of Engineering.

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 spread sheets. All engineering departments either recommend or require that incoming students deficient 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 to the electrical engineering program or the computer engineering program, international students will be required to present a score of 50 or higher on the Test of Spoken English (TSE) exam and either a score of 1000 or higher on the SAT, or a score of 25 or higher on the ACT.

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 department granting credit. 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. 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.

Three-Two Transfer Plan
The College of Engineering recognizes that a graduate engineer, to be of full service to his 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 emphasizes 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 AND DEPARTMENTAL 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 College of Engineering Office of Diversity, Retention, and Scholarship at 575-3009 or e-mail tic@engr.uark.edu.

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 the undergraduate academic work on a year-round basis. The co-op student often returns to the same employer for all work assignments.

The Co-op Program allows a participating student to integrate industrial experience with formal academic training, earn a substantial part or all of remaining college expenses, gain professional practice in engineering, and try a tentative career choice at a stage when change can readily be made in the academic program. 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 curriculum. 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.

HONORARY AND PROFESSIONAL ORGANIZATIONS
The following are honorary-scholarship and professional societies to which engineering students at the University of Arkansas may aspire:

- Tau Beta Pi (Engineering)
- Alpha Epsilon (Biological/Agricultural Engineering)
- Omega Chi Epsilon (Chemical Engineering)
- Chi Epsilon (Civil Engineering)
- Eta Kappa Nu (Electrical Engineering)
- Alpha Pi Mu (Industrial Engineering)
- Pi Tau Sigma (Mechanical Engineering)
- PhiEtaSigma (freshmen)
- Phi Kappa Phi (juniors and seniors)
- Pi Mu Epsilon (Mathematics)
- Theta Tau, (a professional engineering fraternity, maintains a chapter house on the campus and is active in university and college affairs)
- Phi Sigma Rho, (professional engineering sorority)
- Alpha Chi Sigma (a professional chemistry fraternity)

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 Society of Civil Engineers
- American Society of Hispanic Engineers
- American Society of Mechanical Engineers
- Institute of Electrical and Electronics Engineers
- Institute of Chemical Engineers
- American Society of Agricultural Engineers
- Institute of Industrial 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 Women in Engineering
• Institute of Transportation Engineers
• Transportation and Logistics Association
• American Chemical Society
• Amateur Radio Club of the University of Arkansas
• American Society of Heating, Refrigeration, and Air-Conditioning
• Society of Manufacturing Engineers
• American Nuclear Society

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.

Pre-Professional Program

Engineering students follow essentially the same schedule of courses during the freshman year regardless of their intended field of specialization. Certain courses normally taken in the first year comprise the pre-professional curriculum.

The pre-professional curriculum consists of the following courses:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1013 Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1023 Technical Composition II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1103 CHEM 1101L, CHEM 1123, CHEM 1121L (University Chemistry I &amp; II and Labs)</td>
<td>8</td>
</tr>
<tr>
<td>MATH 2554 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2564 Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>Total semester hours</td>
<td>22</td>
</tr>
</tbody>
</table>

Satisfactory completion of the pre-professional curriculum is a prerequisite for enrollment in any 2000-level or higher engineering course. Satisfactory completion is defined as a grade of “C” or better in each course, or, alternatively, a grade-point average of at least 2.20 for the courses comprising the pre-professional curriculum. If courses are repeated, all attempts are included in the computation of the grade-point average.

Additional courses are included in the pre-professional curriculum for some engineering programs:

• Electrical engineering students must complete PHYS 2054/2050L Univ. Physics I (and laboratory) in addition to the above college pre-professional requirements.
• Industrial engineering students must complete INEG 1103 Principles of Industrial Engineering rather than CHEM 1123/1121L in the college pre-professional requirements.
• Computer engineering students must complete CENG 1113/1111L Intro. to Computers, rather than CHEM 1123/1121L in the college pre-professional requirements and CENG 1123/1121L Intro. to Programming.

Satisfactory completion for electrical engineering and industrial engineering students is defined as a grade of “C” or better in each course and a grade-point average of at least 2.50 for the courses comprising the pre-professional curriculum. Satisfactory completion for computer engineering students is defined as a grade of “C” or better in each course and a grade-point average of at least 2.75 for the courses comprising the pre-professional curriculum. If courses are repeated, the best attempt is used in computing the grade-point average.

Students who enroll in 2000-level or higher engineering courses without satisfactorily completing the pre-professional program will be administratively dropped from those courses. Limited exceptions can be made by the department head with the approval of the dean when extenuating circumstances exist that are beyond the control of the student.

During the second, third, and fourth years of work, the student pursues a prescribed curriculum of technical and non-technical courses as preparation for professional practice in a chosen engineering field.

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 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.

State Minimum Core, Humanities and Social Sciences Requirements

Every student seeking a baccalaureate degree from the College of Engineering must satisfy the University courses that qualify for the State Minimum Core requirements and the humanities and social sciences requirements of the College of Engineering. For a listing of the University Core requirements, see the chapter on Academic Regulations. 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-
level or above may be in the fine arts/humanities area, the social sci-
ence area, or divided between the two areas. Since some of the
humanities/social science courses are specified in some of the curric-
ula, 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>Category</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 Comp. 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>U.S. History or Government</td>
<td>3</td>
</tr>
<tr>
<td>(See chapter on Academic Regulations)</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2554 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>Science</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 2054/2050L Univ Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 2074/2070L Univ Physics II</td>
<td></td>
</tr>
<tr>
<td>Fine Arts/Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Select from list from chapter on Academic Regulations and from list of approved upper-level humanities/science courses.</td>
<td></td>
</tr>
<tr>
<td>(See adviser.)</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Select from list from chapter on Academic Regulations and from list of approved upper-level social science courses.</td>
<td></td>
</tr>
<tr>
<td>(See adviser.)</td>
<td></td>
</tr>
</tbody>
</table>

Special Courses

The curricula outlined on the following pages will be followed by
the majority of engineering students. There are, however, courses in
several departments, such as English, Western civilization, and math-
ematics, for students who qualify for honors courses. For students
not ready to pursue the regular courses in the engineering curricu-
ulum, certain preparatory courses in English, mathematics, and chem-
istry are offered on the basis of placement scores.

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
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 profes-
sional 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 engi-
neers shall:
1. be objective and truthful in professional reports, statements, or
testimony;
2. not falsify or permit misrepresentation of their academic or pro-
essional 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 question-
able 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:

1. Submission, as one’s own, of any work prepared totally or in
part by someone else;
2. Plagiarism, i.e., the unacknowledged incorporation of another
person’s work, either verbatim or in substance, in work submit-
ted for credit;
3. Unauthorized collaboration with another person in preparing
work submitted for credit;
4. Unauthorized submission, for credit, of work previously credit-
ed in another course;
5. Unauthorized alteration of work submitted for re-grading;
6. The use of unauthorized materials or aids during examinations;
7. Copying from the examination paper of another student or giv-
ing aid to, or seeking aid from, another student during an
examination;
8. Using, obtaining, or attempting to obtain by any means the
whole or any part of an unadministered examination, or of
information pertaining thereto;
9. Taking, or attempting to take, an examination for another stu-
dent, or allowing another student to take or attempt to take an
examination for oneself;
10. Any conduct expressly stated to be unethical by the instructor
in a particular course;
11. 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 con-
duct; (b) signed written statements regarding unethical conduct
by another student. (This means may be used by students to ini-
tiate 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 submit-
ted 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 aca-
demic 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 require-
ments 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.

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 University Core requirements for graduation (see chapter on Academic Regulations), a candidate for a degree from the College of Engineering must also meet the following requirements:

Candidates for engineering degrees must meet the minimum curricular requirements established by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

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.

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.

All ROTC classes are elective. Unspecified electives may be satisfied with any course except those courses, or prerequisite courses, needed to satisfy the student’s curriculum, and those courses considered remedial to the programs in engineering.

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 experience 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 undergraduate 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 undergraduate 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 undergraduate 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 3.50 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.

ELECTRONICS MANUFACTURING

The College of Engineering offers a non-degree Certificate of Achievement in Electronics Manufacturing for students seeking undergraduate or graduate degrees in the college. The objectives of the program are to introduce electronics manufacturing as a career option and to prepare engineers for entry-level participation in the world electronics industry that is characterized by rapid technological change, intense global competition, and team-based project activity. The following courses are available in this program:

- CHEG 5613 Microelectronics Fabrication and Materials
- ELEG 5213 Integrated Circuit Fabrication Technology
- ELEG/MEEG 5273 Electronic Packaging
ELEG 5293L Integrated Circuits Fabrications Laboratory
ELEG/MEEG 6273 Advanced Electronic Packaging
INEG 4513/ELEG 4273 Electronics Manufacturing Process
INEG 4533 Applications of Machine Vision
INEG 4563 Applications of Robotics
INEG 5423 Engineering in Global Competition
INEG 5653 Modeling and Analysis of Semiconductor Manufacturing
MEEG 4443 Thermal and Vibration Analysis and Testing of Electronics
MEPH 5713 Advanced Nanomaterials Chemistry
MEPH 5723 Science of Nanostructures
MGMT 5383 Intra/Entrepreneurship of Technology
Special Topics courses as approved by Microelectronics-Photonics

Graduate Program
A student who completes either INEG 4513/ELEG 4273 or INEG 5653, along with any two of the other program courses, will receive the Certificate of Achievement in Electronics Manufacturing.

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 and Agricultural Engineering (M.S.B.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 Engineering (M.S.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 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 Microelectronics-Photonics (M.S.)
- Master of Science in Cellular and Molecular Biology (M.S.)
- Doctor of Philosophy in Microelectronics-Photonics (Ph.D.)
- Doctor of Philosophy in Cellular and Molecular Biology (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.

Departments, Degree Programs and Courses

BIOLGICAL AND AGRICULTURAL ENGINEERING (BENG)
Lalit Verma
Head of the Department
203 Engineering Hall
479-575-2351

- Professors Griffis, Li, Loewer, Verma, Vories
- Associate Professors Carrier, Costello, Matlock
- Assistant Professors Bajwa, Chaubey, Kavdia, Kim, Osborn
- Research Professor Gardisser

- Research Associate Professors Huitink, Murphy, Tacker, VanDevender
- Adjunct Professor Ang, Clausen, Ingels
- Adjunct Associate Professors Beitle, Deaton, Yang
- Adjunct Assistant Professors Haggard, Howell, Ward, 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, environmental, food, and microbial) with the tools of engineering and biotechnology. Biological engineers: improve human health through biomedical engineering; ensure a safe, nutritious food supply and create critical, new medicines through food and bioprocess engineering; secure a healthy and safe environment through ecological engineering; and create tools to manage agriculture, the environment, and the products of biotechnology through bioresource engineering.

Biological Engineering is an ABET accredited program leading 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 128 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 phenomena (plants, animals, humans, microbes, and the environment) 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 four areas of concentration in biological engineering are as follows:

- Biomedical Engineering – an overview of instrumentation, physiological modeling, biomechanics, biomaterial replacement in the body, rehabilitation engineering, and assistive technology for the disabled. This area is excellent preparation for medical, veterinary, or dental school as well as for graduate programs in biomedical engineering.

- Bioresource Engineering – remote sensing, application of computer and satellite technology for managing agriculture, designing machines to interface with living systems.

- Ecological Engineering – removing and preventing pollution of the environment, improving and maintaining high water quality, balancing competing interests for natural resources, stream restoration, and managing ecological services.

- Food and Bioprocess Engineering – food processing, food safety, developing new products from biomaterials, biotechnology, bioinformatics, proteomics, using bacteria to produce products, extracting nutrients and drugs from natural products.

Each student is required to complete 12 semester hours of approved electives in his or her area of concentration. Six of these hours must be from the biological engineering design elective courses. The remaining six 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 department maintains a list of approved electives.

The areas of technical concentration and the recommended elective courses for each are listed here. Note that additional Biological Engineering Design Elective courses (beyond the six hours required) may be taken to satisfy Technical Elective requirements.
Biomedical Engineering

**NOTE:** 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.

**Design Electives:**
- BENG 4113 Risk Analysis for Biological Systems
- BENG 4123 Biosensors and Bioinstrumentation
- BENG 4203 Introduction to Biomedical Engineering
- BENG 4213 Applications of Biomedical Engineering
- BENG 4623 Biological Reactor Systems Design
- BENG 4403 Controlled-Environment Structures

**Technical Electives:**
- 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
- BIOL 2533/2531L Cell Biology
- BIOL 4233 Microbial Genetics
- KINS 3353 Mechanics of Human Movement
- ELEG 2903 Digital Systems
- HESC 3204 Nutrition

Bioresource Engineering

**Design Electives:**
- BENG 4113 Risk Analysis for Biological Systems
- BENG 4123 Biosensors and Bioinstrumentation
- BENG 4703 Food and Bioprocess Engineering

**Technical Electives:**
- BENG 4803 Precision Agriculture
- MEEG 3113 Machine Dynamics and Control
- MEEG 4123 Finite Element Methods in Mechanical Engineering
- INEG 4533 Application of Machine Vision

Ecological Engineering

**Design Electives:**
- BENG 4113 Risk Analysis
- BENG 4403 Controlled-Environment Structures
- BENG 4623 Biological Reactor Systems Design
- BENG 4903 Natural Resources Engineering
- BENG 4913 Bioenvironmental Engineering
- BENG 4923 Nonpoint Source Pollution Engineering

**Technical Electives:**
- CVEG 3243 Environmental Engineering
- CVEG 4243 Environmental Engineering Design
- CSES 2203 Soil Science
- CSES 4043 Environmental Impact and Fate of Pesticides
- BENG 4803 Precision Agriculture
- GEOG 4543 Geographic Information Systems
- ENSC 4033 Water Quality Analysis

Food and Bioprocess Engineering

**Design Electives:**
- BENG 4113 Risk Analysis for Biological Systems
- BENG 4123 Biosensors and Bioinstrumentation
- BENG 4623 Biological Reactor Systems Design
- BENG 4703 Food and Bioprocess Engineering

**Technical Electives:**
- FDSC 4304/4300L Food Chemistry
- FDSC 4124/4120L Food Microbiology
- FDSC 3103 Principles of Food Proc.
- CHEM 3453/3451L Elements of Physical Chemistry
- MEEG 4413 Heat Transfer
- CHEG 4423 Auto. Process Control

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.

**BIOLOGICAL ENGINEERING PROGRAM**

**Freshman Year - First Semester**
- 2 BENG 1012 Biological Engineering Design Fundamentals I
- 2 GNEG 1122 Introduction CAD
- 3 ENGL 1013 Composition I
- 3 CHEM 1103 University Chemistry I
- 4 MATH 2554 Calculus I
- 3 Humanities/Social Studies elective

17 semester hours

**Second Semester**
- 2 BENG 1022 Biological Engineering Design Fundamentals II
- 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

**Sophomore Year - First Semester**
- 2 BENG 2612 Quantitative Biological Engineering I
- 3 ELEG 2103 Electronic Circuits
- 1 ELEG 2101L Electronic Circuits Lab
- 3 MEEG 2013 Dynamics
- 3 MEEG 2403 Thermodynamics
- 3 CHEM 2613 Organic Physiological Chemistry
- 1 CHEM 2611L Organic Physiological Chemistry Lab

18 semester hours

**Second Semester**
- 2 BENG 2622 Quantitative Biological Engineering II
- 2 BENG 3712 Engr Properties of Biol Materials
- 4 PHYS 2054 University Physics I
- 4 MATH 2574 Calculus III
- 3 BIOL 2013 General Microbiology*
- 1 BIOL 2011L General Microbiology Lab
- 3 Humanities/Social Studies Elective

17 semester hours

**Junior Year - First Semester**
- 2 BENG 3722 Biological Process Eng I
- 3 ELEG 2103 Electronic Circuits
- 1 ELEG 2101L Electronic Circuits Lab
- 3 MEEG 2013 Dynamics
- 3 CHEM 3813 Intro. to Biochemistry
- 4 MATH 3404 Differential Equations

16 semester hours
College of Engineering

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 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.

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.

### CHEMICAL ENGINEERING (CHEG)

**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, Penney, Spicer, Ulrich  
- Professors Emeriti Couper, Oxford, Springer, Welker  
- Research Professors Cross, Silano  
- Associate Professors Ackerson, Beitle, Thoma  
- Instructor Myers  
- Visiting Assistant Professor Teo  
- Visiting Instructors Bushkuhl  
- Adjunct Professors Muralidhara, Murphy, Siebenmorgen

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 environ-

### CHEMICAL ENGINEERING PROGRAM

**Freshman Year - First Semester**

1. **CHEM 1123 University Chemistry II**  
2. **CHEG 1113 Intro. to Chem Engr**  
3. **ENGL 1013 Composition I**  
4. **MATH 2554 Calculus I**

**Second Semester**

1. **CHEG 1113 Intro. to Chem Engr**  
2. **CHEM 1123 University Chemistry II**  
3. **CHEG 1113 Intro. to Chem Engr**  
4. **ENGL 1013 Composition I**  
5. **MATH 2554 Calculus I**

**Junior Year - First Semester**

1. **CHEG 3803 Chemical Engineering Design**  
2. **CHEG 3143 Chemical Process Dynamics**  
3. **CHEG 3803 Chemical Engineering Design**

**Senior Year - First Semester**

1. **CHEG 3803 Chemical Engineering Design**  
2. **CHEG 3143 Chemical Process Dynamics**  
3. **CHEG 3803 Chemical Engineering Design**  
4. **CHEG 3143 Chemical Process Dynamics**

**Total Hours Required**

- 128 Total hours required

**Students in the Pre-Medical focus area must see faculty adviser for alternate scheduling and elective course requirements.**

**See note under Focus Area description for Pre-Medical.**

**SEE PAGE 247 FOR BIOLOGICAL ENGINEERING (BENG) COURSES**
Second Semester
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

Sophomore Year - First Semester
4 MATH 2574 Calculus III
3 CHEM 3603 Organic Chemistry I
1 CHEM 3601L Organic Chemistry I Lab
3 PHYS 2054 University Physics I
1 PHYS 2050L University Physics Lab I
3 CHEG 2133 Fluid Mechanics
3 CHEG 2313 Thermodynamics of Single Component Systems
18 semester hours

Second Semester
4 MATH 3404 Differential Equations
3 CHEM 3613 Organic Chemistry II
1 CHEM 3611L Organic Chemistry II Lab
3 PHYS 2074 University Physics II
1 PHYS 2070L University Physics II Lab
1 CHEG 3221 Professional Practice Seminar
3 CHEG 3323 Thermodynamics of Multicomponent Systems
16 semester hours

Junior Year - First Semester
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

Second Semester
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 2143 Principles of Macro-economics may be substituted.)
16 semester hours

Senior Year - First Semester
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

Second Semester
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
CHEG 5523 Bioprocess Engineering
CHEM 3813 Introduction to Biochemistry, or
CHEM 5813 Biochemistry I, or
CHEM 5843 Biochemistry II
BIOL 3323/3321L 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 Food and Bioprocess Engineering
BENG 4712 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
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 as follows:
1. To produce graduates who are prepared for entry-level positions in foundation and earthwork design and analysis; environmental engineering; transportation planning, design, materials, and operation; and concrete and steel structural design and analysis.
2. To prepare graduates for advanced civil engineering studies. To this end, 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 a major design project (CVEG 4994 Civil Engineering Design).
Senior Year - First Semester
3 CVEG 4143 Foundation Engineering
3 CVEG 4243 Environmental Engr Design
3 CVEG 4303 Reinforced Concrete Design I
3 CVEG 4433 Transportation Pavements & Materials
3 Civil Engineering elective
3 Humanities/social science elective
18 semester hours

Second Semester
3 CVEG 4513 Construction Mgmt
4 CVEG 4994 Civil Engineering Design
6 Civil Engineering electives
3 Humanities/social science elective
16 semester hours

136 Total hours required

Civil Engineering Electives

Students must select a nine-hour technical elective program in conference with their adviser. Selection should be made from 4000-level civil engineering courses. Only in unusual circumstances will a senior student 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, GEOL 3513 and GEOL 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.

SEE PAGE 265 FOR CIVIL ENGINEERING (CVEG) COURSES

COMPUTER SCIENCE

AND COMPUTER ENGINEERING (CSCE)

Kazem Sohraby
Head of the Department
311 Engineering Hall
479-575-6197

- Professors Crisp, Deaton, Lala, Skeith, Sohraby, Starling, Thompson (C.)
- Associate Professors Apon, Beavers, Li, Lusth, Panda
- Assistant Professors Hhexmoor, Parkerson, Thompson (D.)
- Instructors Baker, Holmes, Johnson, McPherson, Wiggins

The department offers Bachelor of Science degrees in computer engineering and computer science, a bachelor of arts degree in computer science, and master of science and doctor of philosophy degrees in both computer engineering and computer science. The Computer Science and Computer Engineering department embarks on multidisciplinary academic research, course offerings, and student projects in areas such as: DNA computing and bio-informatics, computational mechanics, Earth and geological sciences, statistical visualization, high performance and scientific computing, and the like. The graduate degrees are described in the Graduate School Catalog.

Requirements for the Bachelor of Arts degree are listed in the Fulbright College of Arts and Sciences section of this catalog.

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 in such areas as engineering, science, law, medicine, or business; 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 curriculum has required sequences of courses in both hardware and software aspects of computer applications. A computer engineer must understand techniques 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 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. A list of these electives is available on the college Web page or in the dean's office. 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 and Computer Science degrees 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.

COMPUTER ENGINEERING PROGRAM

Freshman Year - First Semester
4 MATH 2554 Calculus I
3 CHEM 1103 General Chemistry
1 CHEM 1101L General Chemistry Lab
3 CENG 1113 Intro. to Computers
1 CENG 1111L Intro. to Computers Lab
3 ENGL 1013 English Composition
15 semester hours

Second Semester
4 MATH 2564 Calculus II
3 PHYS 2054 University Physics I
1 PHYS 2050L University Physics I Lab
3 CENG 1123 Intro. Programming
1 CENG 1121L Intro. Programming Lab
3 ENGL 1023 Technical Composition
3 MATH 2103 Discrete Math
18 semester hours

Sophomore Year - First Semester
4 MATH 2574 Calculus III
3 PHYS 2074 University Physics II
1 PHYS 2070L University Physics II Lab
3 CENG 2113 Digital Techniques I
0 CENG 2110L Digital Techniques I Lab
3 CENG 2143 Data Structures
3 Humanities/social sciences elective
17 semester hours
College of Engineering

Second Semester
4 MATH 3404 Differential Equations
3 ELEG 3933 Circuits and Electronics
3 CENG 2133 Assembly Language
3 CENG 2123 Digital Techniques II
0 CENG 2120L Digital Techniques II Lab
3 Basic science elective
16 semester hours

Junior Year - First Semester
Rising Junior Exam
3 CENG 3953 Logic Synthesis-VHDL
3 Technical Elective
3 CSCE 3313 Algorithms
3 History/Government requirement
3 Humanities/social sciences elective
15 semester hours

Second Semester
Advanced English Exam
3 Free Elective
3 PHIL 3103 Ethics and the Professions
3 Technical Elective
3 CENG 3213 Computer Organization
3 STAT 3013 Introduction to Probability and Statistics
  (INEG 3313 may be substituted)
15 semester hours

Senior Year - First Semester
3 CSCE 4513 Software Engineering
1 CENG 4571 Senior Design Project I
3 CSCE 4413 Operating Systems
3 Technical electives/hardware
3 Technical electives/software
3 Humanities/social sciences elective
16 semester hours

Second Semester
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 required

COMPUTER SCIENCE PROGRAM

Freshman Year - First Semester
4 MATH 2554 Calculus I
3 Science
1 Science lab
3 CENG 1113 Intro. to Computers
1 CENG 1111L Intro. to Computers Lab
3 ENGL 1013 English Composition
15 semester hours

Second Semester
4 MATH 2564 Calculus II
3 Science I
1 Science I Lab
3 CSCE 1123 Intro. to Programming
1 CSCE 1121L Intro. to Programming Lab
3 ENGL 1023 Technical Composition
3 MATH 2103 Discrete Mathematics
18 semester hours

Sophomore Year - First Semester
3 MATH 3083 Linear Algebra
3 Science II
1 Science 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
16 semester hours

Second semester
3 MATH 3103, Combinatorics
3 Science elective
3 CENG 2133, Assembly Language
3 Humanities/social sciences elective
3 History/government requirement
15 semester hours

Junior Year - First semester
Rising Junior Exam
3 STAT 3013 Intro to Probability and Statistics
  (INEG 3313 can be substituted)
3 CENG 3213 Computer Organization
3 CSCE 3313 Algorithms
3 Humanities/social sciences elective
3 Humanities/social sciences elective
15 semester hours

Second semester
Advanced English Exam
3 CSCE 4413 Operating Systems
3 CSCE 4313 Programming Languages
3 Free elective
3 Free elective
3 PHIL 3103 Ethics & the Profession
15 semester hours

Senior Year  - First semester
1 CSCE 4561 CS Capstone I
3 CSCE 4513 Software Engineering
3 CSCE 4523 Database Management
3 CSCE elective
3 Free elective
3 Humanities/social sciences elective
16 semester hours

Second semester
3 CSCE 4963 CS Capstone II
3 CSCE elective
3 CSCE 4323 Formal Languages
3 Free elective
3 Humanities/social sciences elective (3000+)
15 semester hours

125 Total hours required

Degree Program Changes

Students must meet all requirements of their degree programs and are expected to keep informed concerning current regulations, poli-
cies, 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.

SEE PAGE 252 FOR COMPUTER ENGINEERING (CENG) COURSES AND PAGE 263 FOR COMPUTER SCIENCE COURSES (CSCE)

ELECTRICAL ENGINEERING (ELEG)

Aicha Elshabini
Head of the Department
3217 Bell Engineering Center
479-575-3009

- Distinguished Professor Elshabini, Yeargan
- University Professors Brown (W.D.), Schmitt
- Professors Ang, Balda, Mantooth, Martin, Naseem, Schaper, Waite
- Associate Professors Barlow, Brown (R.L.), Burkett, Caldwell, Gattis, McCann, Wang
- Assistant Professors El-Shenawee, Lee
- Professors Emeritus Jones, Mix, Stephenson, Webb

Electrical engineering is a profession in charge of designing electrical devices and assemblies to benefit mankind. This may encompass systems such as satellite antennas, microelectronics, portable or wireless electronics, or embedded computers in everyday consumer 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 dominating influence of the computer in modern society, and a host of other developments. The increased use of electronic equipment for measurement and control has spread into such diverse areas as improved health care, transportation, recreation, agricultural production, marketing, manufacturing, 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 continuous 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 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 that exhibit the following attributes:
1. are recruited in a competitive market and valued as reliable and competent employees by a wide variety of industries, in particular electrical 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 undergraduate program offers a Master of Science degree in Electrical 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
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, or management. Students progressively build their design experience throughout the curriculum and demonstrate this ability in the senior design lab. Equally important, the curriculum introduces students to subjects in the humanities, social sciences, 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 is the pre-professional curriculum, which concentrates on development of a sound understanding of basic science and mathematics. Due to the crucial importance of this foundation material to the study of electrical engineering, satisfactory completion of the pre-professional curriculum is required prior to admission to entry-level electrical engineering courses. 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. 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. The following section contains the list of courses required for the Bachelor of Science in Electrical 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.

### ELECTRICAL ENGINEERING PROGRAM

**Freshman Year - First Semester (Pre-Professional Curriculum)**

- 1 ELEG 1001 Intro. to Electrical Engineering
- 3 ENGL 1013 Composition I
- 4 MATH 2554 Calculus I
- 4 PHYS 2054 University Physics I
- 3 History/Government Requirement

15 semester hours

**Second Semester**

- 1 ELEG 1011 Engineering Success and Ethics
- 3 ENGL 1023 Technical Composition II
- 4 MATH 2564 Calculus II
- 3 CHEM 1123 University Chemistry II
- 1 CHEM 1121L University Chemistry II Lab
- 4 PHYS 2074 University Physics II

16 semester hours

**Sophomore Year - First Semester (Professional Curriculum)**

- 3 CENG 1113 Intro. to Computers
- 1 CENG 1111L Intro. to Computers Lab
- 3 ELEG 2103 Electric Circuits I
- 1 ELEG 2101L Electric Circuits I Lab
- 3 ELEG 2903 Digital Design I
- 4 MATH 2574 Calculus II
- 3 Humanities/social science elective

18 semester hours

**Second Semester**

- 3 CENG 1123 Intro. to Programming
- 1 CENG 1121L Intro. to Programming Lab
- 3 ELEG 2103 Electric Circuits II
- 1 ELEG 2111L Electric Circuits II Lab
- 3 ELEG 2903 Digital Design II
- 4 MATH 3404 Differential Equations

16 semester hours

**Junior Year - First Semester**

- 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 3703 Electromagnetics I
- 3 ELEG 3923 Microprocessor System Design
- 3 MEEG 2023 Introductory Mechanics
- 0 ENGL 2003 Advanced Composition

17 semester hours

**Second Semester**

- 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 Conversion Lab
- 3 ELEG 3143 Stochastic Signal Processing
- 3 Humanities/social science elective

18 semester hours

**Senior Year - First Semester**

- 3 Electrical Eng Technical Elective
- 3 Technical Elective
- 3 Humanities/social science elective
- 3 Upper-level humanities/social science elective

16 semester hours

**Second Semester**

- 1 ELEG 4071 Electrical Engineering Design II
- 6 Electrical Eng Technical Elective
- 3 Technical Elective
- 3 Upper-level humanities/social science elective

13 semester hours

**128 Total hours required**

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.

### 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.

### 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 with the approval of an adviser. 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 5613 Intro. to Telecommunications
- ELEG 5623 Information Theory
- ELEG 5633 Detection and Estimation
- ELEG 5643 Computer Comm Networks
- ELEG 5653 Artificial Neural Networks
ELEG 5673 Pattern Recognition  
ELEG 5683 Image Processing  
ELEG 5713 Antennas and Radiation Computers  

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  
CENG 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 5413 Stochastic Control Systems  
ELEG 5423 Optimal Control Systems  
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 5423 Optimal Control Systems  
ELEG 5453 Adaptive Filtering and Control  
ELEG 5653 Artificial Neural Networks  

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 Elec 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  
(Devices, Modeling, Fabrication, Design, Test)  
ELEG 4203 Semiconductor Devices  
ELEG 4223 Design and Fabrication of Solar Cells  
ELEG 4233 Intro. 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 5213 Integrated Circuit Fabrication Technology  
ELEG 5233 Solid State Electronics I  
ELEG 5253L Integrated Circuit Design Lab I  
ELEG 5263L Integrated Circuit Design Lab II  
ELEG 5273 Electronic Packaging  
ELEG 5283 Mixed Signal Test Eng II  
ELEG 5293L Integrated Circuits Fabrication Lab  
ELEG 5313 Power Semiconductor 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 3443 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 with the approval of the student’s adviser.  
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 3113 Analytical Mechanics  
PHYS 3544 Optics  
PHYS 2094 University Physics III  
BIOL 2213 Human Physiology  
MEEG 3703 Numerical Methods I  

The following courses are applicable to all of the technical specialization areas listed above.  
INEG 3113 Law and Ethics  
INEG 3213 Safety Engineering  
INEG 3443 Engineering Management  

Microelectronics  
(Devices, Modeling, Fabrication, Design, Test)  
ELEG 4203 Semiconductor Devices  
ELEG 4223 Design and Fabrication of Solar Cells  
ELEG 4233 Intro. 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 5213 Integrated Circuit Fabrication Technology  
ELEG 5233 Solid State Electronics I  
ELEG 5253L Integrated Circuit Design Lab I  
ELEG 5263L Integrated Circuit Design Lab II  
ELEG 5273 Electronic Packaging  
ELEG 5283 Mixed Signal Test Eng II  
ELEG 5293L Integrated Circuits Fabrication Lab  
ELEG 5313 Power Semiconductor 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 3443 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 with the approval of the student’s adviser.  
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 3113 Analytical Mechanics  
PHYS 3544 Optics  
PHYS 2094 University Physics III  
BIOL 2213 Human Physiology  
MEEG 3703 Numerical Methods I  

SEE PAGE 271 FOR ELECTRICAL ENGINEERING (ELEG) COURSES  

INDUSTRIAL ENGINEERING (INEG)  
John English  
Head of the Department  
4207 Bell Engineering Center  
479-575-3156  
• Distinguished Professor White  
• Professors English, Johnson  
• Associate Professors Fant, Pohl, Rossetti  
• Assistant Professors Cassady, Chimka, Mason, Nachtmann,  
• Adjunct Associate Professor Gattis  
• Adjunct Instructor Harrelson  

University of Arkansas, Fayetteville  
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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 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.

The total graduation requirement in industrial engineering is 130 hours. For further information please visit us on the World Wide Web at <http://web.ineg.uark.edu>.

INDUSTRIAL ENGINEERING PROGRAM

Freshman Year - First Semester
3 INEG 1103 Principles of Indust 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

Second Semester
4 MATH 2564 Calculus II
3 INEG 1403 Industrial Cost Analysis
3 ENGL 1023 Technical Composition II
3 Science elective
2 GNEG 1122 Introduction CAD
15 semester hours

Sophomore Year - First Semester
4 MATH 2574 Calculus III
3 Computer Elective I
3 INEG 3413 Eng Economic Analysis
4 PHYS 2054 University Physics I
3 ECON 2143 Basic Economics
(Humanities/social science elective)
17 semester hours

Second Semester
4 MATH 3404 Differential Equations
3 Computer Elective II
3 INEG 2513 Manuf System Design
3 INEG 3313 Engineering Statistics
4 PHYS 2074 University Physics II
17 semester hours

Junior Year - First Semester
3 INEG 3713 Methods and Standards
3 Engineering Science Elective I
3 INEG 4333 Industrial Statistics
3 ELEG 3903 Electric Circuits and Machines
6 Humanities/social science elective
(History or government requirement: HIST 2003, HIST 2013, or PLSC 2003)
18 semester hours

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MECHANICAL ENGINEERING (MEEG)

William F. Schmidt
Head of the Department
204 Mechanical Engineering Bldg.
479-575-4153

- Professors Bhat, Jong, Schmidt, West
- Associate Professors Couvillion, Gordon, Malshe, Nutter, Roe, Springer
- Assistant Professor Tung, Zou
- Instructor Davis

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. In addition to the curriculum below, all students must meet the exemption requirements or take ENGL 2003 Advanced Composition.

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.
**MECHANICAL ENGINEERING PROGRAM**

**Freshman Year - First Semester**
- 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**

**Second Semester**
- 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**

**Sophomore Year - First Semester**
- 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**

**Second Semester**
- 4 MATH 3404 Differential Equations
- 3 MEEG 2013 Dynamics
- 3 MEEG 2403 Thermodynamics
- 3 MEEG 3703 Numerical Methods
- 3 ELEG 3903 Electric Circuits and Machines
  
**16 semester hours**

**Junior Year - First Semester**
- 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**

**Second Semester**
- 2 MEEG 3212 Mechanical Engr Lab II
- 3 MEEG 4413 Heat Transfer
- 3 Technical/Science elective
- 3 ECON 2143 or ECON 2013
- 3 Humanities/social science elective (lower-level)
  
**14 semester hours**

**Senior Year - First Semester**
- 2 MEEG 4033 Creative Project I
- 1 MEEG 491V Special Project
- 3 MEEG 4103 Machine Element Design
- 2 MEEG 4202 Mechanical Engr Lab III
- 3 MEEG 4483 Thermal Systems Analysis & Design
- 3 Technical/Science elective
- 3 Humanities/social science elective (3000 - 4000 level)
  
**17 semester hours**

**Second Semester**
- 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 required**

**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 305 FOR MECHANICAL ENGINEERING (MEEG) COURSES**

**OPERATIONS MANAGEMENT (OMGT)**

Offered through Graduate Resident Centers

Sandra C. Parker  
Interim Chair of Studies  
4207 Bell Engineering Center  
479-575-7426  
Web: <www.opnsmgmt.uark.edu>  
E-Mail: omgt@engr.uark.edu

- Professors Asfahl, English, Parker  
- Visiting Assistant Professors Bailey, Benamom, Berthelot, Carmichael, Caviness, Collier, Daniell, Dansby, Day, Donaldson, Donatelli, Ellixson, Garner, Heintz, Hurd, Lamphear, Maksi, Martin, McCaa, Miller, Moores, Moorhead, Nethercutt, Noland, O’Neal, Pennington, Rasmussen, Roy, Sloan, Soler, Teague, Ton, Vash, Wilke, Yeager, Zilinsky

**Degree Conferred: M.S. (OMGT)**

The Master of Science program in operations management is directed toward the acquisition of practical knowledge in the areas of project planning, quality assurance, safety management, inventory techniques, and human factors analysis.

The operations management program is offered at Graduate Resident Centers in Arkansas, Tennessee, and Florida. Courses are offered in eight-week terms, five terms an academic year.

The operations management curriculum is aimed at the needs of both military and civilian working managers of technical and logistics operations, regardless of the major they selected as an undergraduate student. The subject matter is patterned after the industrial engineering curriculum but is less technical and does not require a calculus mathematics background.

Before students complete more than 12 hours of course work toward the operations management degree, they must successfully complete the following courses (or equivalent courses or demonstrate knowledge of subject areas):

- OMGT 4313 Law and Ethics  
- OMGT 4323 Industrial Cost Analysis  
- OMGT 4333 Applied Statistics  
- OMGT 4853 Data Processing Systems
These courses are offered at the undergraduate level and may not be applied toward the requirements for a Master of Science degree. To fulfill requirements for the M.S. degree, a student must earn a total of 30 semester hours credit in the program.

SEE PAGE 314 FOR OPERATIONS MANAGEMENT (OMGT) COURSES

OPERATIONS RESEARCH (ORES)
John R. English
Department Head of Industrial Engineering
4207 Bell Engineering Center
479-575-3156
E-Mail: jre@uark.edu

Scott J. Mason
Graduate Studies Chairman
4207 Bell Engineering Center
479-575-5521
E-Mail: mason@uark.edu
Web: http://www.ineg.uark.edu

- Distinguished Professor White
- Professors Asfahl, English, Johnson
- Associate Professors Fant, Rossetti
- Assistant Professors Cassady, Collins, Mason, Nachtmann
- Adjunct Associate Professor Gattis
- Adjunct Assistant Professor Chimka

Degree Conferred: M.S.O.R. (ORES)

The Department of Industrial Engineering offers a graduate program leading to the Master of Science in Operations Research (M.S.O.R.) for engineering, science, and other non-engineering graduates. Candidates for the degree must possess or obtain mathematical training through multivariate calculus, knowledge of probability theory and statistics, and either linear algebra or undergraduate operations research. Minors in the areas of mathematics, computer science, and statistics are also available under the program.

In addition to the requirements of the Graduate School and the College of Engineering, the following program requirements must be satisfied. A number of undergraduate prerequisites exist that are specified in the Department’s Handbook for Advanced Degrees.

1. All candidates for the Master of Science in Operations Research degree (M.S.O.R.) must successfully complete three core courses: INEG 5313 Probability Theory and Stochastic Processes, INEG 5613 Optimization Theory I, and INEG 5823 Systems Simulation.

2. Candidates for a Master of Science in Operations Research degree (M.S.O.R.) who present a thesis are required to complete a minimum of 24 semester hours of course work and six semester hours of thesis.

3. Candidates for the degree who present a project are required to complete 30 semester hours of course work and three hours credit for INEG 513V Master’s Research Project and Report.

4. Candidates for the degree who do not present either a thesis or project are required to complete 36 semester hours of course work.

5. All candidates must successfully complete a master’s oral examination that is conducted by the candidate’s faculty committee.

6. Attendance at INEG graduate seminar is required of all graduate students in industrial engineering.

COURSE Listings AND DESCRIPTIONS MAY BE FOUND UNDER INDUSTRIAL ENGINEERING.
The School of Law

University of Arkansas School of Law
107 Waterman Hall

Dean of the School
107 Waterman Hall
479-575-4504
E-mail: ratkins@uark.edu

Law School Admissions
479-575-3102
E-mail: jkmiller@uark.edu

National Agricultural Law Center
479-575-7640
Web site: http://www.NationalAgLawCenter.org/

Dean
Richard B. Atkinson, A.B., M.Div., J.D.
Duke University and Yale University

Associate Dean for Academic Affairs
Carol R. Goforth, B.A., J.D.
University of Arkansas

Associate Dean for Students
James K. Miller, B.S.B.A., J.D.
University of Arkansas

World Wide Web
http://law.uark.edu/

LAW FACULTY

- Distinguished Professors Gitelman, Killenbeck (M.), Laurence
- Professors Beard, Brill, Brummer, Flaccus, Goforth, Guzman,
  Judges, Leflar, Matthews, Moberly, Mullane, Norvell, Watkins
- Associate Professors Atkinson, Bailey, Kelley, Kilpatrick, Nance,
  Schneider, Seligmann, Sheppard
- Clinical Associate Professors Baker, Coats, Foster, Killenbeck (A.),
  Sampson, Tarvin
- Assistant Professors Circo, Ewelukwa

GOALS 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 fill the vital role of the lawyer as a community leader.

The School of Law has certain widely shared objectives for its educational program. There are a number of important skills and qualities every lawyer should possess. The major objectives of legal study are to see that graduates possess these skills and qualities upon completion of their legal studies.

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 Law School strive to maintain mutually beneficial relationships with judges and practicing lawyers. Appellate courts regularly schedule cases at the School of Law. The judges meet with students informally after the arguments.

While only full-time faculty members teach first-year courses and other required substantive law courses, practice skill courses such as legal clinic and trial advocacy and activities such as moot court and client counseling depend on the assistance of the practicing bar.

The School of Law educational program is directed to lawyers and judges as well as to law students. The study of law cannot end with the receipt of a diploma. Significant and rapidly changing developments in substantive and procedural law and in the way that law is practiced has created the need for a quality program of continuing legal education. Recognizing this need, the University of Arkansas School of Law, in cooperation with the organized bar, provides lawyers and judges with the opportunity to enhance their knowledge and skills through seminars, workshops, and publications. These programs attempt to blend practical considerations in the solution of legal problems with policy, theoretical, and ethical considerations.

The University of Arkansas School of Law also has a strong sense of responsibility to the people of Arkansas. Thus, 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 at the School and by special court appointments from time to time. Students and faculty also serve on bar, civic, and legislative committees and task forces. A number of faculty and students contribute time and expertise to state agencies and law reform groups. All of these activities offer to students a laboratory of legal work that is eminently real, while at the same time enabling the University of Arkansas School of Law to be of service to the people of Arkansas.

FACILITIES

The Robert A. Leflar Law Center facility includes two buildings, Waterman Hall and the Law Programs Center.

Waterman Hall houses the Young Law Library and includes court-room space, classrooms, seminar rooms, student lounges, and office space for student organizations, faculty and staff. The Law Programs Center houses the legal clinic, the National Agricultural Law Center, and the Arkansas Law Review.

Improvements have been and continue to be made to the Leflar Law Center as the need for expansion arises. In recent years, substantial renovations have been made to the student lounges and classrooms. In addition to the cosmetic improvements, a generous gift of more than $500,000 from alumnus Ron LeMay enabled the school to update and expand its electronic infrastructure to accommodate new technology, which includes a videoconferencing system, multi-media retrieval system, structured wiring system, and data equipment.

A capital campaign is currently underway as the School of Law seeks to complete funding for an addition to house more library space and classrooms that will readily accommodate state-of-the-art technology. The expansion project is scheduled to commence in 2004 and when finished, will offer students and other members of the Law School community access to a superior facility.

Robert A. and Vivian Young Law Library

The 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. We have also begun collecting international legal materials to support the curriculum and faculty research.

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 Library’s Web page help students identify and use appropriate resources. Computer labs are available for student use. 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 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.

TEACHING METHODS

Legal training involves the learning of principles through discussion and of skills by practice. The student must be, by definition, an active participant in that process.

Socratic or Inductive Teaching

The “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 the student 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. The perceptive student will soon learn that a key to the realization of maximum benefit from these interchanges is the ability to listen with discrimination.

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.

Problem Solving

In some of the first-year courses, and in many later courses, students are given practical legal problems. These problems may involve the drafting of legal documents or the formulation of a course of action for a hypothetical client.

Seminars

By the time students reach their third year, and sometimes earlier, 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.

Clinical Experience

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 Law School plans to continue to offer students the opportunity to participate in a tobacco control clinic and a mediation clinic.

Individual Research

During the second and third years, students will be permitted to engage in research and writing projects for credit under the supervision of, and in consultation with, a selected faculty member, in an area of particular interest to the student.

Skills Classes

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.
ADMISSION TO THE SCHOOL OF LAW

For complete details concerning admission to the University of Arkansas School of Law, see the School of Law Catalog or write to School of Law Office of Admissions, Leflar Law Center, University of Arkansas, Fayetteville, AR 72701, or telephone 479-575-3102.

General Information

Except for students in the “3/3 Programs” described later, applicants must have completed all requirements for a bachelor’s degree from an accredited institution prior to the date of 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 the applicant’s undergraduate grade-point average and his or her LSAT test score. 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 an applicant may have, the interview as a device for the applicant to “sell” herself or himself 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, as well as in other states. Arrangements may be made by writing to Law School Admissions Services, Box 2000, Newton, PA 18940. 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 by writing directly to Law School Admissions Services, Box 2000, Newton, PA 18940. 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 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 received 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 not 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.

3/3 Programs

The School of Law and the J. William Fulbright College of Arts and Sciences have agreed on a program that will enable outstanding students to enter law school after their third year of college. 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. he or she has completed all University, college, and major course requirements for their undergraduate degree;
2. he or she has acquired a cumulative grade-point average of at least 3.50; and
3. he or she has scored at least 159 on the Law School Admission Test.

Such students will receive a bachelor of arts or a bachelor of science degree after the completion of sufficient hours of law school work 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 of law school work.

In addition to the 3/3 program with the J. William Fulbright College of Arts and Sciences, the Law School 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 law school course work.

It is a requirement of the Law School’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.
Joint J.D./M.B.A. Program (Business Administration)

The School of Law and the Sam M. Walton College of Business cooperate in offering an opportunity for a student to pursue a juris doctor (J.D.) degree and a master’s of business administration (M.B.A.) degree concurrently. Students working to pursue their degrees concurrently 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 offering 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 a student seeks to enter the dual degree program after enrolling in either the law school or the M.P.A. program, he or she must obtain admission to the other degree program and the dual 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.

FINANCIAL INFORMATION

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; also, some courses in the upper-division curriculum are 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. This information must be submitted to the Office of Financial Aid by April 1. Specific fees and costs are listed in the School of Law Catalog.

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 complete the final two semesters of law study at the University of Arkansas School of Law.

 Failure to disclose attendance at another college or law school or expulsion or suspension therefrom 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.

LAW (LAW)

For course information, see the School of Law Catalog. Contact the School of Law Office of Student Affairs for a copy of the current catalog: University of Arkansas School of Law, Leflar Law Center, Waterman Hall 147, Fayetteville, AR 72701, 479-575-3102.
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, 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.

For students having a minimum of two academic years remaining in school (undergraduate, graduate, or a combination of the two), an alternate two-year program is offered. Students entering 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 through multiple scholarship programs to qualified students enrolled in ROTC courses. Air Force ROTC offers four-, three-, and two-year scholarships to qualified students. If accepted, all scholarship students 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 237 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. 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 $250 to $400.

Army ROTC cadets attend a paid five-week advanced camp 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 five-week 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 $250 to $400, payment of all tuition expenses, textbook payment ($600 per year), and payment of certain other fees. Additionally, all qualified four- and three-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 computer literacy, American military history, and communications prior to commissioning.

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 an Advanced Course student to be enrolled in Army ROTC while simultaneously serving with a Reserve or National Guard unit. Financial benefits of this program presently provide approximately $600 to $1,100 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 308 FOR U.S. ARMY ROTC (MILS) COURSES
University Faculty

NOTE: 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), 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. (Western Kentucky University), M.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.

Allen, Charles T. – B.S., M.S. (Texas Tech University), Ph.D. (Louisiana State University), Adjunct Associate Professor of Entomology, 1997.


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.

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 Marie McAlister – B.S., M.S. (University of Arkansas), Ph.D. (Oklahoma State University), Assistant Professor of Human Environmental Sciences, 2000.

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. (Avila 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.


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. (Talladega 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.

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Baker, Lindlee – A.B. (Georgetown University), M.Sc. (London School of Economics and Political Science), J.D. (University of Arkansas), Clinical Associate Professor of Law, 1994, 2002.

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Breckenridge, Leigh Ann – B.S.N. (Mississippi College), M.S.N. (University of Kentucky), Instructor of Nursing, 1999.

Breeding, Steve – B.S., M.S., D.M.V. (North Carolina State University), Adjunct Assistant Professor of Poultry Science, 1998.

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Collins, Kathleen – B.A., M.A., Ph.D. (University of California at Santa Barbara), Assistant Professor in Special Education, 2002.

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Dye, Judith – B.A. (Michigan State University), M.S.L.S. (Atlanta University), Associate Professor and Associate Librarian, 2002.

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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.

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Graff, Thomas Oscar – B.S., M.A. (Western Illinois University), Ph.D. (University of Kansas), Associate Professor of Geography, 1973, 1979.

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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 Nebraska), Ph.D. (Oklahoma State University), Associate Professor of Animal Science, 1996, 2002.

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Gupta, Rajendra – B.Sc, M.Sc. (Agra University), Ph.D. (Boston University), Professor of Physics, 1978, 1985.

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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.

Hansen, Kenneth N. – B.A., M.A. (California State University, Fullerton), Ph.D. (Texas Tech University), Assistant Professor of Political Science, 2001.

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Heath, Douglas P. – B.A. (University of Wisconsin, Madison), M.A., Ph.D. (University of Iowa), Associate Professor of Finance, 1989.

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Henrickson, Larry K. – B.E.E. (University of Minnesota), M.S. (Colorado State University), Ph.D. (Stanford University), Assistant Professor of Audiology, 1999.

Henry, Ralph L. – B.S.E. (University of Kansas), M.S., Ph.D. (Kans State University), Associate Professor of Biological Sciences, 1996, 2002.

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Herman, Gregory S. – B.Arch. (University of Cincinnati), M.Arch. (Rice University), Associate Professor of Architecture, 1991, 1998.

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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.


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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.


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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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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.

Kegley, Elizabeth – B.S. (UPI State University), M.S., Ph.D (North Carolina State University), Associate Professor of Animal Science, 1996, 2002.

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Kellogg, D. Wayne – B.S.A., M.S. (University of Missouri), Ph.D. (University of Nebraska), Professor of Animal Science, 1981.


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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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Koepp, Roger E. – A.B. (Haverford College), Ph.D. (California Institute of Technology), University Professor of Chemistry and Biochemistry, 1979, 1996.


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Creider, David L. – B.S.A. (University of Arkansas), M.S. (Oklahoma State University), Ph.D. (University of Arkansas), Associate Professor of Animal Science, 1986, 1991.

Kring, Timothy J. – B.A. (Quinnipiac College), M.S., Ph.D. (Texas A&M University), Professor of Entomology, 1985, 1994.

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Kuenzel, Wayne – B.S., M.S. (Bucknell University), Ph.D. (University of Georgia), Professor of Poultry Science, 1999.

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Kulczak, Deborah E. – B.A., M.L.S. (Kent State University), Associate Professor and Associate Librarian, 1988, 2000.

Kultermann, Eva – B. Arch. (University of Arkansas), Clinical Assistant Professor of Architecture, 1996.

Kurtz, David – B.A. (Davis and Elkins College), M.B.A., Ph.D. (University of Arkansas), University Professor of Marketing and Logistics and R.A. and Vivian Young Chair in Business Administration, 1988, 2000.

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Lyons, Jack C. – B.A. (Valparaiso University), M.A., Ph.D. (University of Arizona), Assistant Professor of Philosophy, 2001.


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Miller, Jefferson D. – B.A. (Northeastern State University, Oklahoma), M.A., Ph.D. (Oklahoma State University), Assistant Professor of Agricultural and Extension Education, 2001.

Miller, Katrina R. – B.A. (University of Alaska), M.S. (Western Oregon University), Ed.D. (Lamar University), Clinical Assistant Professor of Rehabilitation, 2001.

Miller, Michael – B.S. (University of Missouri, Rolla), M.S. (University of Colorado), Visiting Assistant Professor of Operations Management, 2001.


Miller, Nancy G. – B.A., B.S. (Iowa State University), M.S., Ph.D. (University of Minnesota), Assistant Professor of Interior Design, 2002.

Miller, Phyllis – B.S., M.Ed. (Lamar University), Ph.D. (Texas A&M University), Associate Professor of Journalism, 1991, 1993.

Miller, Wayne P. – B.S. (Purdue University), M.S. (University of Illinois), Ph.D. (University of Wisconsin), Adjunct Professor of Agricultural Economics and Agribusiness, 1989, 1992.


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Moberly, Robert M. – B.S., J.D. (University of Wisconsin), Professor of Law, 1999.

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Morris, Barney P. – Major, U.S. Army, B.S., M.S. (University of Arkansas), Assistant Professor of Military Science, 1993.

Morris, Justin R. – B.S., M.S. (University of Arkansas), Ph.D. (Rutgers, the State University of New Jersey), Distinguished Professor of Food Science, 1964, 1997.

Morris, Manford – B.S., M.S., Ph.D. (Berkley), Adjunct Professor of Food Science, 2001.


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Mozaffari, Morteza – B.S., M.S. (University of Massachusetts), Ph.D. (University of Delaware), Research Assistant Professor, Soil Testing and Research Laboratory, 2002.


Muir, John H. – B.S., M.S. (North Dakota State University), Ph.D. (University of Nebraska), Associate Professor of Soil Fertility, 1999.

Mullaney, Michael W. – B.A., J.D. (University of Notre Dame), Professor of Law, 1999.


Muralidhara, H.S. – B.S., M.S. (University of Bangalore, India), M.T. (University of Nagpur, India), M.S. (Southern Illinois University), Ph.D. (West Virginia University), Adjunct Professor of Chemical Engineering, 2002.

Murphy, J. Bradford – B.S. (Colorado State University), M.Phil., M.S., Ph.D. (Yale University), Professor of Horticulture, 1976, 1993.

Murphy, Rong Y. – B.S., M.S. (Tiajin Institute of Light Industry, China), M.S.-FDSC, M.S.Ch.E., Ph.D. (University of Arkansas), Research Assistant Professor of Biological and Agricultural Engineering, 1999; Adjunct Research Assistant Professor of Food Science, 2001.


Murray, Kathleen Teresa – B.S. (Mt. Mercy College), M.A., Ph.D. (University of Iowa), Assistant Professor of Psychology, 2000.


Nafukho, Fredrick Muyia – B.Ed., M.Ed. (Kenyatta University), Ph.D. (Louisiana State University), Assistant Professor of Vocational and Adult Education, 2001.

Nance, Cynthia E. – B.S. (Chicago State University), J.D., M.A., Ph.D. (University of Iowa), Associate Professor of Law, 1994, 1999.


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Noggle, Kellar – B.S.E., M.S.E. (University of Central Arkansas), Ed.D. (University of Arkansas), Assistant Professor of Educational Administration, 1978.


Norman, Richard J. – B.S., M.S. (University of Missouri), Ph.D. (University of Illinois), Professor of Crop, Soil, and Environmental Sciences, 1983, 1992.

Norvell, Phillip E. – B.A., J.D. (University of Oklahoma), Professor of Law, 1975, 1983.

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Nugent III, Russell A. – B.S. (Pennsylvania State University), M.S. (Virginia Polytechnic Institute and State University), Adjunct Professor of Animal Science, 1998.


Oliver, Lawrence R. – B.S.A., M.S. (University of Arkansas), Ph.D. (Purdue University), University Professor of Crop, Soil, and Environmental Sciences, 1972, 1994.

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Osborn, Tommy – B.S. (Arkansas State University), Major (Field Artillery, U.S. Army), Assistant Professor of Military Science and Leadership, 2001.

Owens, Casey M. – B.S., M.S., Ph.D. (Texas A&M University), Assistant Professor of Poultry Science, 2000, Adjunct Assistant Professor of Food Science, 2003.

Ozment, John D. – B.S.B.A., M.B.A. (University of Tulsa), Ph.D. (University of Minnesota), Professor of Marketing and Logistics, Oren Harris Chair in Transportation, 1986, 1996.

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Panda, Brajendra – M.S. (Utkal University, India), Ph.D. (North Dakota State University), Associate Professor of Computer Science and Computer Engineering, 2001.


Park, Ok D. – B.A. (Seoul National University), M.A. (University of Missouri), Associate Professor of Vocational Education, 1980, 1984.

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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.

Parkerson, James Patrick – B.S.E.E., M.S.E.E., Ph.D. (University of Arkansas), Assistant Professor of Computer Science and Computer Engineering, 1999.


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.

Pearson, Matthias J. – B.S. (John Brown University), M.Arch. (University of Minnesota), Adjunct Assistant Professor, 2002.

Pederson, Donald O. – B.S. (Texas Technological College), Ph.D. (Rice University), Professor of Physics, 1972, 1984.

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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.

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Petris, Giovanni – B.S. (Università 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.

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Piga, Giovanna P. – Dipl. Arch. (University of Rome), Adjunct Assistant Professor, 1994.

Pincus, J. David – B.A., M.A., Ph.D. (University of Maryland, College Park), Research Professor of Communication, 1996.

Pincus, Karen V. – B.S., M.B.A., Ph.D. (University of Maryland), C.P.A., Professor of Accounting and S. Robson Walton Chair in Accounting, 1995.

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.E.E. (Air Force Institute of Technology), M.S.R.E., Ph.D. (University of Arizona), Associate Professor of Industrial Engineering, 2004.

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Popp, Jennie S. – B.S. (University of Scranton), M.S., Ph.D. (Colorado State University), Assistant Professor of Agricultural Economics and Agribusiness, 1998.


Porter, Jon G. – B.A. (Park College), M.S. (Drury College), Adjunct Professor of Poultry Science, 1996.
Powell, F. Allen – M.S. (Amher University, Dallas), Instructor of Human Environmental Sciences, 2003.


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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.


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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, 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.

Rennie, Craig G. – B.A. (University of Toronto), M.B.A. (Dalhousie University), Ph.D. (University of Oregon), Assistant Professor of Finance, 2001.

Renwick, Janet S. – B.A., M.A. (University of Arkansas at Little Rock), Ph.D. (University of Indiana), Clinical Assistant Professor of Information Systems, 1995.

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 Monterry), Ph.D. (Texas A&M University), Assistant Professor of Economics, 2003.

Roads, 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.

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.

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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, Jimmie N. – B.A. (Southern State College), M.A. (University of Arkansas), Ph.D. (Florida State University), Professor of Communication, 1967, 1983.

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Ruiz, M. Reina – B.A. (University of Leon, Spain), M.A. (Kansas State University), Ph.D. (Washington University), Assistant Professor of Foreign Languages, 2001.


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Sagers, Cynthia L. – B.A. (University of Iowa), Ph.D. (University of Utah), Associate Professor of Biological Sciences, 1994, 2000.


Saladino, David – B.A. (University of Chicago), M.S. (University of Illinois), Ph.D. (Florida State University), Associate Professor of Music, 1997.

Salamo, Gregory J. – B.S. (Brooklyn College), M.S. (Purdue University), Ph.D. (City University of New York), University Professor of Physics, 1975, 1995.


Sampson, Kathryn A. – B.A. (University of Northern Iowa), J.D. (University of Iowa), Clinical Associate Professor of Law, 1995, 1998.

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Sears, Derek W. – B.S. (University of Kent of Canterbury), Diploma in Space Science (University College, London), Ph.D. (University of Leicester), Professor of Chemistry and Biochemistry, 1981, 1989.

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Selvam, Rathinam Panner – 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.


Sexton, Kim Susan – M.A. (State University of New York at Binghamton), M.A., M.Phil., Ph.D. (Yale University), Assistant Professor of Architecture, 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.

Shannon, Graham F. – B.A., B.Arch. (University of Arkansas), M.Arch. in Urban Design (Rice University), Professor of Architecture, 1979, 1990.

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Smith, Kimberly – B.S. (Tufts University), M.S. (University of Arkansas), Ph.D. (Utah State University), Professor of Biological Sciences, 1981, 1992.

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Smith, Tom E.C. – B.S.E., M.Ed. (University of Mississippi), Ed.D. (Texas Tech University), Professor in Curriculum and Instruction, 2002.

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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.

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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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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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Stephen, Frederick M. – B.A. (San Jose State University), Ph.D. (University of California, Berkeley), University Professor of Entomology, 1974, 1992.


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Stripling, Jeffrey S. – B.A. (Stanford University), Ph.D. (University of Colorado), Professor of Psychology, 1976, 1990.


Swartz, James – B.A. (Kent State University), M.A., Ph.D. (Ohio State University), Associate Professor of Educational Technology, 1991, 1997.


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), Ph.D. (Purdue University), Assistant Professor of Human Environmental Sciences, 2001.

Talbert, Ronald E. – B.S., M.S., Ph.D. (University of Missouri), University Professor of Crop, Soil, and Environmental Sciences, 1963, 1990.

Talburt, Dwight E. – B.S. (Arkansas State College), M.S., Ph.D. (University of Arkansas), Professor of Biological Sciences, 1969, 1976.


Tarvin, Timothy R. – B.A. (Hendrix College), J.D. (University of Arkansas), Clinical Associate Professor of Law, 1993, 2002.


Teague, Tina G. – B.S., M.S. (University of Arkansas), Ph.D. (Texas A&M University), Adjunct Professor of Entomology, 1995.

Teague, William Ricky – B.B.A. (Memphis State University), M.S. (Webster University), Visiting Assistant Professor of Operations Management, 2002.

TeBeest, David O. – B.S. (Wisconsin State University), M.S., Ph.D. (University of Wisconsin), University Professor of Plant Pathology, 1975, 2003.

Terry, Laura M. – B.S. in Environmental Design (Auburn University), M.F.A. in Painting (Savannah College of Art and Design), Assistant Professor of Architecture, 1998, 2002.

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 Nolan E. Williams Lecturer, 1983, 1993.

Thomas, Kabin A. – B.M. (University of Michigan), M.M. (University of Wisconsin), Assistant Professor of Music, 1996.


Thompson, Craig – B.S. (Stanford University), M.S., Ph.D. (The University of Texas at Austin), Acxiom Database Chair in Engineering and Professor of Computer Science and Computer Engineering, 2003.


Thompson, Dale R. – B.S., M.S. (Mississippi State University), Ph.D. (North Carolina State University), Assistant Professor of Computer Science and Computer Engineering, 2000.

Thompson, Lynne – B.S. (Kansas State University), M.S., Ph.D. (University of Minnesota), Adjunct Professor of Entomology, 1992.

Thompson, Timothy F. – B.M. (University of North Carolina, Chapel Hill), M.M. (University of Wisconsin), Professor of Music, 1979, 2002.

Thomsen, Michael R. – B.S., M.S. (Utah State University), Ph.D. (University of Minnesota), Assistant Professor of Agricultural Economics and Agribusiness, 1998.

Tingle, Christopher H. – B.S., M.S. (Mississippi State University), Ph.D. (Texas A&M University), Research Assistant Professor of Crop, Soil, and Environmental Sciences, 2001.

Tjani, Maria – B.S. (University of Ionina, Greece), M.S. (Purdue University), Ph.D. (Michigan State University), Instructor, 2001.


Ton, Gary M. – B.S. (University of Mississippi), M.S. (University of Arkansas), Visiting Assistant Professor of Operations Management, 2000.

Toner, Mary Ann – B.S., M.S. (University of Wyoming), Ph.D. (University of Oklahoma), Associate Professor of Communication Disorders, 1990, 1996.

Tooley, Melissa S. – B.S.C.E. (Louisiana Tech University), M.S.C.E., Ph.D. (University of Arkansas), Research Assistant Professor of Civil Engineering, 1998.

Troxel, Tom R. – B.S. (West Texas State University), M.S., Ph.D. (University of Illinois), Adjunct Professor of Animal Science, 1993.

Tsai, Shih-Shan Henry – B.A. (National Taiwan Normal University), M.A., Ph.D. (University of Oregon), Professor of History, 1971, 1983.

Tucker, Janet G. – A.B., M.A., Ph.D. (Indiana University), Professor of Foreign Languages (Russian), 1990, 2002.


Tung, Chao-Hung S. – B.S.M.E. (National Taiwan University), M.S.M.E., Ph.D. (University of Houston), Assistant Professor of Mechanical Engineering, 2000.

Turberville, James M. – B.Sc., Ph.D. (Clemson University), Assistant Professor of Biological Sciences, 1995.


Turner, Lori W. – B.S. (Florida State University), M.S. (Florida International University), M.S. (University of Florida), Ph.D. (University of Alabama), Associate Professor of Health Science, 1997, 2002.


Turpin, Jim L. – B.S.Ch.E., M.S.Ch.E. (University of Arkansas), Ph.D. (University of Oklahoma), P.E., University Professor of Chemical Engineering, 1960, 1995.

Tyndall, C. Patrick – B.A. (Wabash College), M.A. (Miami University at Ohio), Ph.D. (University of Texas), Assistant Professor of Drama, 1999, 2002.

Ulrich, Richard K. – B.S.Ch.E. (University of Texas), M.S.Ch.E. (University of Illinois), Ph.D. (University of Texas, Austin), Professor of Chemical Engineering, 1987, 1995.


VanDevender, Karl – B.S., M.S. (Mississippi State University), Ph.D. (University of Arkansas), Research Associate Professor of Biological and Agricultural Engineering, 1995.

Vann, Stephen R. – B.S., M.S. (Mississippi State University), Ph.D. (Texas A&M University), Adjunct Assistant Professor of Plant Pathology, 2002.

Vardiman, John Phillip – B.S. (Southeast Missouri State University), M.S. (Eastern Kentucky University), Instructor of Kinesiology, 2000, 2002.

Verma, Lalit R. – B.Tech. (J.N. Agricultural University, Jabalpur, India), M.S. (Montana State University), Ph.D. (The University of Nebraska), P.E., Professor of Biological and Agricultural Engineering, 2000.

Vicic, David A. – B.A. (The Johns Hopkins University), M.S., Ph.D. (University of Rochester), Assistant Professor of Chemistry, 2002.

Vitale, Davide – Diploma in Architecture (University of Rome), M.Arch. (Harvard Graduate School of Design), Professor of Architecture, 1985, 1997.


Vories, Earl D. – B.S.Ag.E., M.S.Ag.E. (University of Arkansas), Ph.D. (University of Tennessee), Associate Professor of Biological and Agricultural Engineering, 1988, 1994.

Vyas, Reeta – B.S., M.S. (Banaras Hindu University), Ph.D. (State University of New York at Buffalo), Professor of Physics, 1989, 2002.

Wailles, Eric J. – B.S. (Cornell University), Ph.D. (Michigan State University), Professor of Agricultural Economics and Agribusiness; L.C. Carter Endowed Chair, 1980, 2002.


Walker, James Martin – B.S., M.S. (Louisiana Polytechnic Institute), Ph.D. (University of Colorado), Professor of Biological Sciences, 1965, 1976.

Walker, Mary A. – B.A. (University of Arkansas), M.L.S. (University of North Texas), Assistant Professor and Assistant Librarian, 2001.

Wall, Jerry D. – B. of Arch.Engr. (Oklahoma State University), S.M. (Massachusetts Institute of Technology), Ph.D. (University of Arkansas), Professor of Architecture, 1973, 1979.

Waller, Matthew – B.S. (University of Missouri – Columbia), M.S., Ph.D. (Pennsylvania State University), Associate Professor of Marketing and Logistics, 2002.

Wang, John Jingzhou – B.S. (University of Arizona), M.S. (Xidian University), Ph.D. (State University of Gent), Associate Professor of Electrical Engineering, 2002.


Wang, Ya-Jane – B.S. (National Taiwan University), M.S. (University of Minnesota-Twin Cities), Ph.D. (Iowa State University), Assistant Professor of Food Science, 1999.

Ward, Barry M. – B.A.Mod., M.Sc. (Trinity College, Dublin), Ph.D. (Rutgers University), Assistant Professor of Philosophy, 2002.

Ward, Em – B.S. (Louisiana Tech University), M.S., Ph.D. (University of Arkansas), M.D. (University of New Mexico), Adjunct Assistant Professor of Biomedical Engineering, 2003.

Warnock, Mary M. – B.S., M.Ed. (University of Missouri), Ph.D. (The Ohio State University), Professor of Agricultural and Extension Education, 1992, 1998.

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), Assistant Professor of Interior Design, 1999.


Welker, J. Reed – B.S.Ch.E., M.S.Ch.E. (University of Idaho), Ph.D. (University of Oklahoma), P.E., Professor of Chemical Engineering, 1983.

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., M.Acc. (University of Missouri), Ph.D. (University of Tennessee), Associate Professor of Accounting, 2002.

Westendorf, David H. – B.S. (University of Cincinnati), M.S., Ph.D. (Vanderbilt University), Associate Professor of Psychology, 1974, 1979.

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.

Whitmore, Michael – B.A. (Hendrix), M.Div. (Southwestern Baptist Theological Seminary), M.Acc. (University of Arkansas), Instructor in Accounting, 2002.

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. Darell – B.S.A. (University of Tennessee), M.S., Ph.D. (University of Arkansas), Research Assistant Professor of Agronomy, 1982.


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., Professor of Accounting and Sam M. Walton Leadership Chair, 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), Research Assistant Professor of Agronomy and Extension Rice Specialist, 1993.

Wilson, Darryl D. – B.S.E.E. (Old Dominion University), M.B.A. (Xavier University), Ph.D. (The Ohio State University), Assistant Professor of Information Systems, 2000.

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.

Wright, William F. – B.S.C. (University of Santa Clara), Ph.D. (University of California, Berkeley), Professor of Accounting and Walter B. Cole Chair in Accounting, 2000.

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.


Yeager, Jr., Milton P. – B.S. (University of Southern Mississippi), M.S. (University of Arkansas), Visiting Assistant Professor of Operations Management, 1989.


Yoes, Janice – B.M. (Drake University), M.M. (University of Tulsa), Associate Professor of Music, 1985, 1991.


Young, Juana R. – B.A. (Texas Tech University), M.L.S. (North Texas State University), Professor and Librarian, 1972, 1984.

Young, Margaret S. – B.S.H.E. (University of Arkansas), Instructor in Human Environmental Sciences, 1984, 1999.

Young, Michael – B.A. (Southwest Baptist College), M.Ed. (University of Arkansas), Ph.D. (Texas A&M University), University Professor of Health Sciences, 1980, 2003.

Young, Seth Y. III – B.S. (Mississippi State University), Ph.D. (Auburn University), Professor of Entomology, 1967, 1976.

Yu, Chin – B.S. (Fu-Jen Catholic University, Taiwan), Ph.D. (Florida State University), Professor of Chemistry, 2003.

Zachry, Doy L., Jr. – B.S., M.S. (University of Arkansas), Ph.D. (University of Texas, Austin), Professor of Geology, 1968, 1987.

Zajicek, Anna M. – B.S., M.S. (University of Silesia, Poland), Ph.D. (Virginia Polytechnic Institute and State University), Associate Professor of Sociology, 1994, 2000.

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.


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.
Determination of Residence Status

I. 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.

II. 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 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) shall be classified as “in-state” for fee purposes.

III. 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 IV Procedures).

B. A student previously classified as “out-of-state” may be reclassified as “in-state” for fee purposes if he or she has...
Appendix A: Student Residence Status

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.

IV. 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.

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.

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 of Arkansas 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.”
Appendix B

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.
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.
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A COURSE DESCRIPTION

Courses listed in this section describe all courses (except School of Law courses) approved for offering by 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.

A COURSE DESCRIPTION

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; 2, sophomore; 3 and 4, junior-senior; 5, 6, and 7, graduate level. Any exceptions to this practice are stated in the course descriptions.

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 31.)

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 30.)

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.

**Requisites:** Requisites are requirements that must be fulfilled either before a course may be taken or at the same time a course is taken. Requisites are courses or requirements that must be completed prior to enrolling in a 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.

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 requisites. Students who are in doubt concerning their eligibility for entry into specific courses should consult their academic advisor. Students may be dropped from courses for which they do not have the necessary requisites.
behavior in both formal and informal situations. Emphasis on adult educator's role as a change agent.

aded532 Foundations of Adult Education (FA, SP, SU) 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 classes.

ADED560V Workshop (1-18) (FA, SP, SU) A workshop designed to introduce cadets to the United States Air Force and Air Force Reserve Officer Training Corps. Topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to communication skills. LLAB mandatory for cadets. Corequisite: AERO 1010L.

ADED5101 The Foundations of the United States Air Force I (FA, SP) A survey course designed to introduce cadets to the United States Air Force and Air Force Reserve Officer Training Corps. Topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to communication skills. LLAB mandatory for cadets. Corequisite: AERO 1010L.

ADED5100 Foundations of the Air Force II (FA, SP) Study and practice of Air Force customs and courtesies, drill and ceremonies, and military command. Also a study of the environment of an Air Force officer, and the areas of opportunity available to commissioned officers. Corequisite: AERO 1021.

ADED5010 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 space-age 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. [LLAB mandatory for cadets.] Corequisite: AERO 2020L.

ADED5020L The Evolution of Air and Space Power II Laboratory (FA, SP) Continued study and practice of Air Force customs and courtesies, drill and ceremonies, and military command. Also a study of the environment of an Air Force officer, and the areas of opportunity available to commissioned officers. Corequisite: AERO 2021.

ADED5021 The Evolution of Air and Space Power II (SP) A historical survey of air and space power, from the first balloons and dirigibles to the space-age 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. [LLAB mandatory for cadets.] Corequisite: AERO 2020L.

ADED5027 The Development of Leadership and Management (FA) A survey of the diversity of adult students comprised of research methods in accounting, financial accounting, managerial accounting, behavioral accounting, tax, audit, international accounting, and education.

ADED2503 Contemporary Issues in Adult Education (FA, SP, SU) Examines issues of methodology, theories, materials, and programming currently emerging in the field of adult education; focuses upon topical topics as they appear in the professional publications.

ADED313 The Change Process in Adult Education (FA) Processes available for changing adult
Course Descriptions

performance of other cadets. Corequisite: AERO 3023.
AERO3013L Advanced Leadership Experiences Laboratory (SP) A study of leadership, management fundamentals, professional knowledge, Air Force personnel and 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: AERO 3020L.
AERO3020L The Evolution of Air and Space Power Laboratory (SP) Practice with leadership and management experiences, including the planning and controlling of military activities of the cadet corps, and the preparation and presentation of briefings and other oral and written communications. Also includes interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. Corequisite: AERO 3023.
AERO4013 National Security Affairs and Preparation for Active Duty (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 training, 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: AERO 4010L.
AERO4010L Advanced Leadership Experiences Laboratory I (FA) Practice with leadership and management experiences, including the planning and controlling of military activities of the cadet corps, and the presentation and preparation of briefings and other oral and written communications. Also includes interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. Corequisite: AERO 4013.
AERO4005L 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 training, 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: AERO 4005L.
AERO4005L Advanced Leadership Experiences Laboratory II (SP) Practice with leadership and management experiences, including the planning and controlling of military activities of the cadet corps, and the presentation and preparation of briefings and other oral and written communications. Also includes interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. Corequisite: AERO 4023.

(AGEC) AGRICULTURAL ECONOMICS AND AGribusiness

AGEC1103 Principles of Agricultural Microeconomics (FA, SP) Introduction to agricultural economic theory; surveying 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 and concepts of production and marketing decisions made by managers of agricultural firms is demonstrated. Pre- or Corequisite: MATH 1203. UNIVERSITY CORE COURSE
AGEC2003 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 marketing strategies, agricultural policies and culture. Topics also will include transportation, law and information systems in various geographic regions. Lecture 3 hours per week.
AGEC2103 Principles of Agriculture Macroeconomics (FA, SP) Applications of economic principles to problems of agricultural production, distribution, and income; including a study of the interrelationship between agriculture and the economy; and the dynamic forces in the economy which affect agriculture. Pre- or Corequisite: MATH 1203. UNIVERSITY CORE COURSE
AGEC2303 Introduction to Agribusiness (SP) Introduction to agribusiness issues as they relate to the food processing, wholesale and retail sectors of the agricultural industry. Coverage of methods and tools agribusiness managers use to evaluate business opportunities. Case studies serve to communicate concepts of product distribution, design, promotion and pricing in the development of a marketing plan. Prerequisite: AGEC 1103 or ECON 2023.
AGEC3303 Food and Agricultural Marketing (FA) Surveys consumer trends in food markets and the marketing activities of the food and fiber system. Emphasizes marketing concepts for both commodities and differentiated food products. Topics include consumer price theory, marketing management; structure and performance of the food system; and current agricultural marketing topics. Prerequisite: MATH 1203 and AGEC 2053 or ISYS 1121L (2023).
AGEC3373 Futures and Options Markets (SP) Theory and mechanics of commodity futures and options markets including trading, margin, fees, etc. Price relationship between cash, futures and options. Fundamental and technical price analysis. Price risk management strategies for producers and users of agricultural commodity marketing plan. Speculative and hedging simulation exercises. Prerequisite: AGEC 3303.
AGEC3403 Farm Business Management (FA) Application of economic principles for the profitable organization and operation of the farm business. Focuses upon agricultural production, marketing, decision-making tools; optimal input/output decisions, budgeting techniques (enterprise, partial, whole-farm, cash flow), linear programming, balance sheet, income statement, investment analysis and risk management. Prerequisite: MATH 1203 and AGEC 2053 or ISYS 1121L (2023) are recommended as prerequisites. Prerequisite: AGEC 1103 or ECON 2023.
AGEC3413 Principles of Environmental Economics (FA) 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. Prerequisite: AGEC 1103 or ECON 2023.
AGEC3503 Agricultural Law I (SP) Examination of those areas of law especially applicable to agriculture. Fundamentals of contracts law, torts law, and property law will accompany discussion of major areas of agricultural law; acquisition and disposal of farmland; farm tenancies; rights and limitations in the use and ownership of farmland; water law; environmental law; agribusiness law; and political economy of agricultural land; and the law of sales and secured transactions in an agricultural context.
AGEC400V Special Problems 1-6 (FA, SP, SU) Special studies under the direct supervision of staff members to satisfy the requirements of individual students. May be repeated for 6 hours.
AGEC401V Internship in Agribusiness 1-6 (IR) A supervised practical work experience in an agribusiness firm or a governmental or industrial organization having direct interest in agriculture in order to gain insight and experience which will increase the understanding, motivation, and performance of other cadets. Corequisites: AERO 3023. AERO402V Special Topics 1-3 (IR) Studies of selected topics in agricultural economics not available in regular courses. Prerequisite: AGEC 3403.
AGEC4113 Agricultural Prices and Forecasting (SP) Price theory and techniques for predicting price movements of general economic and agricultural commodities. Individual and group projects to analyze and predict future movement of individual agricultural products will be analyzed. Provides practice in the application of economics and statistics to agricultural price analysis. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: AGEC 1103 (or ECON 2023) and ISYS 2013 (or AGST 4023 or STAT 2023) and MATH 2053 or MATH 2053 C or (MATH 2043) and ISYS 1121L.
AGEC4110L Agricultural Prices and Forecasting Laboratory (SP) A study of agricultural economics not available in regular courses. Prerequisite: AGEC 3403.
AGEC4143 Agricultural Finance (FA) Methods and procedures whereby agricultural firms acquire and utilize funds required for their successful operation. Emphasis is placed upon role of finance and agricultural planning and consideration is given to an understanding of financial firms serving agriculture. ACCT 2013 and ACCT 2023 are recommended. Prerequisite: AGEC 1103 (or ECON 2023) and MATH 2103 (or ECON 2103).
AGEC4163 Agricultural and Rural Development (SU) Examination of agricultural and rural development issues in less developed countries. Alternative agricultural and rural development systems are compared and evaluated. Case studies are examined, and consideration given to the planning and implementation of development programs. Prerequisite: AGEC 1103 (or ECON 2023).
AGEC5303 Advanced Agricultural Marketing Management (SP) Marketing concepts will be developed and applied to the global food and fiber system. The course will use both commodity and product marketing principles and economic theory to analyze agricultural marketing situations. Case studies will be used to demonstrate role that demand analysis and consumer behavior plays in market management. Prerequisite: AGEC 2303 and AGEC 3303.
AGEC5313 Agricultural Resource Management (FA) The planning, organizing, leading and controlling functions of management as they relate to agricultural businesses. Marketing of value-added products, budgeting, organizational structure, cost control, financial statements, capital budgeting and employee supervision and motivation. Case studies are used to teach communication and decision-making skills. Prerequisite: AGEC 2303 or equivalent, ACCT 2013 and ACCT 2023 as well as senior standing is recommended.
AGEC5373 Advanced Price Risk Management (SP) Use of futures markets as risk shifting institutions. Students design and implement hedging and cross hedging strategies for grain farmers, cotton growers, soybean crushers, poultry farmers, etc. Spreadsheets and statistical techniques are used to develop optimal hedging ratios. Prerequisite: AGEC 3073.
AGEC5383 Advanced Farm Business Management (SP) 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 AGME 2903 (or ISYS 1121L).
AGEC4413 Economics of Environmental Management (SP) An economic approach to problems of privatizing and social private benefits and costs of altering the environment. Emphasis given to the interaction of individual, institutional, and technological factors that influence establishing and maintaining an acceptable level of environmental quality. (Same as ENSC 4413) Prerequisite: AGEC 1103 and AGEC 2053.
AGEC4613 Domestic and International Agricultural Policy (FA) Agricultural and food policies studied from domestic and international perspectives. Examines public policy in terms of rationale, content, and consequences. Economic dynamics, and policy issues, economic mechanisms to improve competitive structure, operation, and performance of U.S. and international food and agriculture. Farm, international trade, resource, technology, food marketing, and consumer policies analyzed. Prerequisite: AGEC 1103 or ECON 2023 and (AGEC 2100 or ECON 2103).
AGEC500V Special Problems 1-3 (FA, SP, SU) Individual reading and investigation of a special problem in agricultural economics not available under regular courses.

(AFLS) AGRICULTURAL, FOOD AND LIFE SCIENCES

AFLS1011 Freshman Orientation (IR) Orientation to academic life at the University of Arkansas and orientation to the broad spectrum of modern agriculture. Lecture 2 days per week during the first 8 weeks of the fall semester.
AFLS1011H Honors Orientation (IR) The course will serve as an introduction to the basic information and requirements of the AFLS Honors Program. Information will be available to all students, but is required for students in the honors program. Topics covered will include: purpose and organization of the honors program, course requirements, research and creative activity opportunities, and written and oral communication exercises. Recitation 3 hours per week for the first 5 weeks of the semester.
AFLS102VH Honors Special Topics for Freshmen 1 (FA) Special study of a particular topic. Usually presented primarily for the program for Beginning Scholars and the Honors Program. Must be in Honors program to register for this course. (1-24) (FA, SP, SU).
AFLS400VH Honors Theses 1-6 (FA, SP) May be repeated for 6 hours.
AFLS401VH Honors Special Topics 1-3 (IR) Studies of organized groups. Must be in the Honors program to register for this course. May be repeated for 4 hours.
AFLS4021 Internship for Ambassadors (FA, SP) Practical experience gained through group dynamics, communication, planning and implementing college wide activities. Must be selected as a college Ambassador before enrollment. May be repeated for 6 hours.

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under the supervision of the graduate faculty. Prerequisite: graduate standing.

AGED5011 Seminar (FA, SP) Presentation and discussion of graduate student research. Formal presentations are made by all graduate students. Consideration given to research design, procedure, and presentation of results. Prerequisite: graduate standing.

AGED502V Special Topics (1-3) (IR) Advanced study of selected topics in agricultural economics not available in other courses. May be repeated. Prerequisite: graduate standing.

AGED503V Internship in Agricultural Economics (1-6) (IR) On-the-job application of skills developed in the M.S. program. Credit no credit only. Prerequisite: AGEC 5503.

AGED5113 Agricultural Marketing Analysis (SU) Course prepares students for entrance into graduate courses in consumer behavior,并将被选为农业经济学的典型课程。特别是以下两个领域：

AGED5303 Agricultural Marketing Theory (SP) Survey of the structure of agricultural marketing, including the concept of agricultural marketing and its role in the economy. Prerequisite: Graduate standing.

AGED5403 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 and their application in economic analysis. Emphasis placed on computer applications with continuous progress to economic theory. Prerequisite: graduate standing.

AGED5413 Agribusiness Strategy (FA) Addresses problems of strategy formulation in agribusiness emphasizing current trends and key issues. Survey of modern and classical perspectives on strategy applications to agribusiness. Examines the development and firm level strategies within the structure of the agricultural industries. Corequisite: graduate standing.

AGED5613 Econometrics I (FA) Use of economic theory and statistical methods to estimate economic models. The single equation model is examined utilizing multilinear regression, hypothesis testing, and use of computer software. Prerequisite: AGEC 5503 or ECON 5613 or AGEC 5503.

AGED5623 Econometrics II (SP) Use of economic theory and statistical methods to estimate simultaneous equation models of an economy. Emphasis given to the problem of identification and the methods of estimating system models. Frontier topics are introduced. (Same as ECON 5623) Prerequisite: AGEC 5623 (or RSOC 5623 or HESC 5623 or AGED 5013). Prerequisite: admission to the MAT program.

AGED572V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

AGED700V Doctoral Dissertation (1-6) (FA, SP, SU) Prerequisite: candidacy.

AGED1001 Orientation to Agricultural and Extension Education (FA) Continuation of AGAD 1001, Freshman Orientation, with attention given to sharing of information about the professional and graduate programs. Exploration of anticipated college 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 (1-2) (IR) Topics not covered in other courses or in-depth study of a particular topic. User fee required for Beginning Scholars and the Honors Program.

AGED103 Introduction to Early Field Experience (FA) A thirty-hour field experience designed to give prospective agricultural education teachers an opportunity to observe and participate in a variety of school settings. Corequisite: CIED 1002.

AGED1122 Agricultural Youth Organizations (FA) Survey of agricultural youth organizations including 4-H, FFA, 4-H, FFA, and others pertaining to membership, awards programs, benefits, and special recognition programs. Lecture and discussion. Two periods per week. Corequisite: AGED 3130L. Prerequisite: CIED 1002 and CIED 1011.

AGED1303L Methods in Agricultural Education Laboratory (IR) Must be taken at the same time as AGED 1303. Prerequisite: AGED 3132.

AGED1311: Agri Communications Lab (FA, SP) An overview of communications in the agricultural, food and life sciences, including newsletter design, slide presentations, newswriting, electronic communication and web publishing. Corequisite: AGED 3141L.

AGED1314L Ag Communications Lab (FA, SP) Corequisite: AGED 3141.

AGED1315L Leadership Development in Agriculture (FA, SP) Identification of styles and roles of leadership; development of leadership skills and techniques required in working with organizations; dynamics of group action; methods of resolving conflict; ethical considerations for leaders; and personal skill development. Prerequisite: junior standing.

AGED3942 Professional Development in Agricultural Communications (IR) Overview of professional and technical skills needed to succeed in internships and jobs in the field of agricultural communications. Prerequisite: JOUR 1033 and AGME 2903.

AGED4003D Teaching Methods in Agricultural Education (FA, SP) 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 sciences course. Prerequisite: senior standing.

AGED400V Special Problems in Agricultural and Extension Education (1-6) (FA, SP, SU) Individual study or research for advanced undergraduates in the field of agriculture and extension education.

AGED401 Program Development (FA) Principles and concepts of leadership, program organization, supervision, and the role of the program in the department. Prerequisite: AGED 3133.

AGED401V Special Topics (1-3) (IR) Studies of selected topics in agricultural or extension education not covered in other courses. May be repeated for 4 hours.

AGED4133 Electronic Communications in Agriculture (IR) Theory and application of communication technology in the agricultural, food and life sciences. Prerequisite: AGED 3142 and AGED 3141L.

AGED4243 Publication Production in Agriculture (IR) Theory and application of concepts related to an information producing publication course. Prerequisite: AGED 3142.

AGED4632 Teaching Diverse Populations in Agricultural 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.

AGED4745V Internship in Agric Educ (1-6) (FA, SP, SU) Scheduled practical field experiences under the supervision of a professional practitioner in off-campus secondary school systems. Emphasis includes classroom preparation, teaching, and student evaluation. May be repeated for 6 hours. Prerequisite: admission into Clinical Practice.

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 laboratories, equipment, and maintenance. 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 (IR) Emphasis on shop organization and management, courses of study, unit shop instruction, and development of skills in agricultural mechanics.

AGED503 Developing Leadership in Agricultural Organizations (IR) Organizational concepts, administrative structures and styles; leadership for boards, committees, governmental bodies, and governmental and political processes. Prerequisite: graduate standing.

AGED5031 Ethics in Agricultural and Extension Education (FA) A study of ethics as applied to problems of professional practice. The focus will be on case studies.

AGED5053 Philosophy of Agricultural and Extension Education (IR) 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 management, including project planning and management and on-the-job experiences in program management. Corequisite: AGED 575. Prerequisite: admission into the MAP program.

AGED510V Special Problems (1-6) (FA, SP, SU) 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 (1-6) (IR) Topics not covered in other courses or a more intensive study of specific topics in agricultural education. May be repeated. Prerequisite: graduate standing.

AGED5463 Research Methodology in the Social Sciences (SP, Odd years) Logical structure and the method of science. Basic elements of scientific method, observation, measurement, analytic method, interpretation, verification, presentation of results. Applications to research in economic or sociological problems of agriculture and human environments. (Same as AGEC 5013, HESC 5463) 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 agriculturally related professions. 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 EDUF 5393) and AGED 5463 (or RSOC 5463 or HESC 5463 or AGED 5013).

AGED550V College Teaching in Agriculture and Related Disciplines (1-3) (IR) For students who are pursuing graduate degrees where emphasis is on preparation for a research career, but who also may desire or expect to teach. Provides theory and practice in planning and executing college-level courses in agricultural laboratories.

AGED575V Internship in Agricultural Education (1-6) (FA, SP) Scheduled practical field experiences under supervision of a professional practitioner in off-campus secondary school systems. Emphasis includes classroom preparation, teaching, and student evaluation. May be repeated for 6 hours. Prerequisite: admission into Clinical Practice.

AGED600V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.
AGME 1613 Fundamentals of Agricultural Systems Technology (SP) Introduction to basic physical concepts important in agricultural technical systems: applied machines, power, machinery management, agricultural structures, and soil and water conservation. Lecture 3 hours per week. Prerequisite: MATH 1203.

AGME 1611L Fundamentals of Agricultural Systems Technology Laboratory (SP) 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. Corequisite: AGED 1613. Prerequisite: MATH 1203.

AGME 2123 Metals and Welding (FA) An introduction to agricultural mechanics shop work to include hot and cold metal work, and welding and gas welding and cutting. Lecture 2 hours, laboratory 3 hours per week. Corequisite: AGME 2120L.

AGME 2120L Metals and Welding Laboratory (FA) Must be taken at the same time as AGME 2123 to receive degree credit. Corequisite: AGME 2123.

AGME 2903 Agricultural and Human Environmental Sciences Applications of Microwaves in Agriculture (SP) Lecture and laboratory assignments covering the contemporary use of microwaves in agricultural research, production, and home economics. Major emphasis placed on learning to select, appropriate software packages. Lecture 2 hours per week, laboratory 2 hours per week.

AGME 3042 Agricultural Construction Technology (SP) Principles of building design and construction. Includes site selection calculating structural loads and computerized packages for building design. Safety practices, selection of building materials and determining costs are also included. Lecture 1 hour and lab is 2 hours per week. Prerequisite: MATH 1203 and junior standing.

AGME 3102 Small Power Units/Turf Equipment (SP) Principles of operation, adjustment, repair, maintenance, and trouble shooting of small air-cooled engines and power units, including engine systems, service and maintenance of turf equipment and machinery. Lecture 2 hours per week. Corequisite: AGME 3101L. Prerequisite: MATH 1203.

AGME 3101L Small Power Units/Turf Equipment Laboratory (SP) Testing, evaluation, and maintenance of engines, hydrotropic power transmission systems, and equipment commonly used in the turf and landscaping industries. Corequisite: AGME 3102. Prerequisite: MATH 1203.

AGME 3153 Surveying in Agriculture and Forestry (FA) (Formerly AGME 2153) Techniques and procedures for surveying, 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 survey. Lecture and laboratory 6 hours per week. Prerequisite: MATH 1203.

AGME 3173 Electricity in Agriculture (FA) Principles of electricity; wiring of home, farmstead and other agricultural structures; selection of electric motors and their care and application 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: AGME 3170L.

AGME 3170L Electricity in Agriculture Laboratory (FA) Corequisite: AGME 3173.

AGME 400V Special Problems (1-6) (FA, SP) Individual research projects in electification, irrigation, farm power, machinery, or buildings. May be repeated. Prerequisite: senior standing.

AGME 4011 Senior Seminar (IR) For agricultural education, communication and technology majors. Covers how to prepare and present a report on a current topic, job opportunities, and professionalism. Prerequisite: senior standing.

AGME 402V Special Topics in Agricultural Mechanics and Water Conservation (1-6) Topics not covered in other courses or a more intensive study of special topics in agricultural mechanization. May be repeated.

AGME 4200L Mechanized Systems Management Laboratory (FA, SP, SU) Corequisite: AGME 4203.

AGME 4963 Soil Conservation Technology (SP, Even years) Management and conservation of soil and water resources in agriculture. Analysis of the nature of natural resources in agriculture and problems arising from their abuse. Analytical solutions to soil and water management problems including estimating runoff and erosion and effective control. Recitation 2 hours per week, laboratory 3 hours per week. Prerequisite: AGME 1613.

AGME 4960L Soil and Water Conservation Technology Laboratory (FA, Even years) Corequisite: AGME 4963.

AGME 4973 Irrigation (SP, Odd years) Methods of applying supplemental water to soils to supply moisture essential for plant growth, sources of water, measurement of irrigation water, pumps, conveyance systems, economics, and irrigation for special crops. Lecture 2 hours, laboratory 3 hours per week. Corequisite: AGME 4970L. Prerequisite: MATH 1203.

AGME 4970L Irrigation Laboratory (SP, Odd years) Corequisite: AGME 4973.

AGME 4983 Agricultural Meteorology (FA, Even years) Meteorological phenomena, their observation and measurements and their interaction with agricultural biological systems. Lecture 3 hours per week. Prerequisite: MATH 1203.

AGME 5014 Experiment Station Operations I (IR) Planning and design of experiment stations; general, personal, fiscal, and computer operations on an experiment station. Lecture 3 hours, laboratory 3 hours per week. Corequisite: AGME 5010L.

AGME 5010L Experiment Station Operations I Laboratory (IR) Corequisite: AGME 5014.

AGST 400V Special Problems (1-6) (FA, SP) Work on special problems of agricultural statistics or related areas. AGST 4011 SAS Programming for Agricultural Sciences (FA, SP) An introduction to the SAS programming language with an emphasis on the reading and restructuring of data files, and the displaying of data in tabular and graphic forms. The course is taught using a hands-on approach.

AGST 4023 Principles of Experimentation (FA, SP) Fundamental concepts of experimental and statistical methods as applied to agricultural research. Lecture 3 hours per week. Prerequisite: MATH 1203 or higher level.

AGST 5014 Experimental Design (SP) Types of experimental designs, their analysis and application to agricultural research. Lecture 3 hours and laboratory 2 hours per week. Corequisite: AGST 4011 and (AGST 4023 or STAT 4003).

AGST 5010L Experimental Design Laboratory (SP) Corequisite: AGST 5014.

AGST 504V Special Topics (1-4) (IR) Topics not covered in other courses or a broader-based study of specific topics in statistics and related areas. May be repeated. Prerequisite: graduate standing.

AGST 5719 Applied Regression Analysis for Agricultural Sciences (FA) Analysis of agricultural experiments which contain quantitative factors through regression procedures. Lecture 3 hours per week. Corequisite: AGST 4011 and (AGST 4023 or STAT 4003).

AGST 5803 Case Studies in Biometry (SP) Non-standard statistical problems arising in the agricultural, food, environmental, and life sciences not available under existing courses. May be repeated for 6 hours. Prerequisite: STAT 5113 and STAT 5131 and either (AGST 5014 or AGST 5001L) or STAT 4373.

AGST 5901 Statistical Consulting Practicum (SP) Supervised statistical consulting. Prerequisite: STAT 5313 and AGST 5901 and either (AGST 5014 or STAT 4373).

AIST 4003 Asian Studies Colloquium (FA) An interdisciplinary colloquium with an annual change of subject, required of students in the Asian studies program. May be repeated for 6 hours. Prerequisite: sophomore standing.

AIST 4003H Honors Asian Studies Colloquium (FA) An interdisciplinary colloquium with an annual change of subject, required of students in the Asian studies program. May be repeated for 6 hours. Prerequisite: sophomore standing.

AIST 4313 Language and Society of Japan (FA) The primary objective of this course is to investigate the way Japanese people think about themselves, their society, and their culture. Students will be introduced to the major cultural concepts and the way they are reflected in the customs and beliefs 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. May be repeated for 6 hours. Prerequisite: junior standing.

AMST 2003 Introduction to American Studies (FA) Introduction to American Studies as an interdisciplinary field of study. Examination of a selected topic from various methodological perspectives.

ANS 1001L Introductory to Animal Sciences Laboratory (FA) Study of facilities used in production, processing, and management in animal agriculture. Identification, selection evaluation and testing of livestock, meat, and milk. Laboratory 3 hours per week.

ANS 1032 Introductory Animal Sciences (FA) Students will be introduced to biological sciences associated with modern systems of care and management of livestock. Foundation sciences include topics in genetics, growth and development, physiology, nutrition, animal health, and animal behavior. Course will meet M, T, W, and R for the first eight weeks of the fall semester.

ANS 1041 Introduction to Companion Animal Industry (FA) The importance of companion animals and their allied industries will be discussed. Application of scientific principles to the care and management of companion animals, specifically dogs, cats and horses, will be emphasized. Course will meet on M and R during the second eight weeks of the fall semester. Prerequisite: ANSC 1032.

ANS 1051 Introduction to Livestock and Meat Industry (FA) The importance of livestock and their allied industries will be discussed. Application of scientific principles to the care and management of livestock, specifically beef and dairy cattle, swine, sheep, and horses will be emphasized. Course will meet on M and W during the second eight weeks. Prerequisite: ANSC 1032.

ANS 2003 Introduction to Equine Industry (SP) Examination of careers and business opportunities in the equine industry. Students will gain the opportunity to identify high quality horses through evaluation of conformation and locomotion. Students will also gain skill at oral presentation and be knowledgeable of costs and responsibilities associated with horse ownership.

ANS 2213 Behavior of Domestic Animals (FA) Behavior associated with domestication. Effects of selective breeding, physical and social environments, and developmental stage on social organization, aggressive behavior, sexual behavior, productivity, and training of domestic animals.

ANS 2252L 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.

ANS 2304 Equine Behavior and Training (FA, IR) 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 less-traumatic learning for the horse and trainer. Lecture two hours and laboratory six hours per week.

ANS 2300L Equine Behavior and Training Laboratory (FA) ANSC 2482 Introduction to Companion Animal
Meat processing, preservation, and meat safety concerns will also be considered. Lecture 3 hours per week. Prerequisite: CHEM 2613 or CHEM 3603.

ANSC3691 Meats Judging (SP) Training in judging meat based on federal grading standards. Laboratory 4 hours per week. Prerequisite: ANSC 3613.

ANSC3723 Horse and Livestock Merchandising (FA, SP) Various types of merchandising programs for specific livestock enterprises will be presented. Students will evaluate the effectiveness of each method and study how to organize, advertise, and manage a purebred auction sale of livestock.

ANSC400V Special Problems (1-6) (FA, SP, SU) Special problems in the animal sciences for advanced undergraduate students. Prerequisite: ANSC 3143.

ANSC410V Special Topics in Animal Sciences (1-4) (IR) Topics not covered in other courses or a more intensive study of specific topics in animal sciences. May be repeated. Prerequisite: ANSC 1032.

ANSC4252 Cow-Calf Management (FA) Systems of cow-calf management including the practical application of the principles of nutrition, reproduction, and management of 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 5133 and ANSC 5123.

ANSC4263 Swine Production (FA) Methods in producing purebred and commercial swine with specific emphasis on the management programs needed for profitable pork production in Arkansas. Lecture 3 hours and laboratory 3 hours per week. Corequisite: ANSC 4260L. Prerequisite: ANSC 1032 and ANSC 3143 and ANSC 3133.

ANSC4260L Swine Production Laboratory (FA) Corequisite: ANSC 4263.

ANSC4272 Sheep Production (SP, Odd years) Purebred and commercial sheep management emphasizing the programs of major importance in lamb and wool production in Arkansas. Lecture 2 hours and laboratory 3 hours per week. Corequisite: ANSC 4270L. Prerequisite: ANSC 1032 and ANSC 3143 and ANSC 3123.

ANSC4283 Horse Production (SP) Production, use and care of horses and ponies including breeding, feeding, handling, and management. Lecture 2 hours, laboratory 3 hours per week. Corequisite: ANSC 4280L. Prerequisite: ANSC 1032 and ANSC 3143 and ANSC 3123.

ANSC4280L Horse Production Laboratory (SP) Corequisite: ANSC 4283.

ANSC4291 Livestock Senior Judging Team Activity (SP) Training for membership on judging teams. Offered under 1 hour per week. Prerequisite: ANSC 3032 or ANSC 3034L.

ANSC4452 Milk Production (SP) Principles of breeding, feeding, and management of dairy cattle will be reviewed, and course will include field trip touring dairy industry. Lecture one 2 hours and laboratory two 2 hours per week. Prerequisite: ANSC 3032 and ANSC 3143.

ANSC4652 Stocker-Feeder Cattle Management (SP) Production and management systems for stocker and feedlot cattle including practical applications of forage systems, feeding, health management and economics of production of these livestock. Lecture one hour per week and laboratory one hour per week. Prerequisite: ANSC 3032 and ANSC 3143 and senior standing.

ANSC500V Special Problems (1-6) (FA, SP, SU) Work in special problems of animal industry.

ANSC5013 Domestic Animal Energetics (SP, Odd years) An introduction to the biochemical aspects of energy metabolism of domestic animals and their applications to livestock production. Lecture 3 hours per week. Prerequisite: grade standing.

ANSC510V Special Topics in Animal Sciences (1-4) (IR) Topics not covered in other courses or a more intensive study of specific topics in animal sciences. May be repeated. Prerequisite: grade standing.

ANSC5123 Advanced Animal Genetics (FA, Even years) Specialized study of animal genetics. Lecture 3 hours per week. (Same as POSC 5123) Prerequisite: ANSC 3133.

ANSC5133 Quantitative Inheritance (SP, Odd years) Advanced study of the genetic basis of variation and the genetic control of quantitative traits in populations. Lecture 3 hours per week. Prerequisite: ANSC 3133.

ANSC5143 Biochemical Nutrition (FA, Even years) Interrelationship of nutrition and physiological chemistry; 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. (Same as POSC 5143) Prerequisite: CHEM 3813.

ANSC5152 Protein and Amino Acid Nutrition (SP, Even years) Students will be introduced to the basic principles of protein digestion, amino acid absorption, transport, metabolism, and utilization along with how biochemical functions of proteins and their participation in protein metabolism and their importance for animals and man. Prerequisite: CHEM 3813.

ANSC5253 Advanced Livestock Production (FA, Even years) Comprehensive review of recent advances in research relative to the various aspects of animal production. Prerequisite: ANSC 4522 (or ANSC 4623) and ANSC 3133 (or ANSC 3132). (Same as CES 5353) Prerequisite: CSES 3113 and ANSC 3152 and ANSC 3151L.

ANSC5743L Advanced Analytical Methods in Animal Sciences Laboratory (FA) Advanced analytical techniques used in animal research. Two 3-hour laboratory periods per week.

ANSC5853 Advanced Meats Technology (SU, Odd years) 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 regulatory status for animals and man. Prerequisite: ANSC 3133.

ANSC5901 Seminar (FA, SU, SP) Critical review of the literature. Lecture 1 hour per week. Prerequisite: senior standing.

ANSC5922 Neuroscience (FA) Course covers cellular through neural systems, major brain functions and comparative neuroanatomy between mammals and birds. Specific topics include coverage of ion channels, membrane potentials, action potentials, synaptic integration, neurotransmitters, major brain regions of mammals and birds, sensory systems and the autonomic nervous system. Lecture 3 hours; Neuroscience Journal Club 1 hour per week (first 8 weeks of semester). (Same as POSC 5922) (Same as POSC 5922) Prerequisite: CHEM 3813 or CHEM 3813D. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042.

ANSC5920D Neuroscience Drill (FA) Corequisite: ANSC 5920.

ANSC5933 Environmental Physiology of Domestic Animals (FA, Odd years) Study of the environment of domestic animals and its effect on physiological systems that affect maintenance, growth, production, and reproduction. Lecture 3 hours per week. (Same as POSC 5933) Prerequisite: ANSC 3032 (or POSC 3032) and CHEM 3813 (or equivalent).

ANSC5932 Cardiovascular Physiology of Domestic Animals (FA, Odd years) 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 (first 8 weeks of semester). (Same as POSC 5932) Prerequisite: CHEM 3813 or CHEM 3813D. Corequisite: ANSC 5930D. Prerequisite: CHEM 3813D and POSC/ANSC 3042.

ANSC5942 Endocrine Physiology of Domestic Animals (FA, Odd years) Endocrine physiology, including mechanisms of hormone secretion, function, and regulatory systems. Mechanisms associated with the endocrine system will be discussed for domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (first 8 weeks of semester). (Same as POSC 5942) (Same as POSC 5942) Prerequisite: CHEM 3813; Corequisite: ANSC 5940D. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042.

ANSC5940D Endocrine Physiology of Domestic Animals Drill (FA) Corequisite: ANSC 5942.
Course Descriptions

ANTHC5952 Respiratory Physiology of Domestic Animals (SP) Respiratory physiology, including mechanisms of lung function and gas exchange. Mechanisms associated with the interaction of the respiratory system with other body systems in domestic animals and poultry will be discussed. Lecture 3 hours; drill 1 hour per week for first 8 weeks of semester (Same as POSC 5962) Pre- or Corequisite: CHEM 3813. Corequisite: ANSC 5960D. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042.

ANTHC5950 Physiological Physiology of Domestic Animals Drill (SP) Corequisite: ANSC 5952.

ANTHC5962 Gastrointestinal/Digestive Physiology of Domestic Animals (SP) Gastrointestinal and hepatic physiology, including mechanisms of digestion, absorption of nutrients, and cellular control mechanisms in domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (for second 8 weeks of semester). (Same as POSC 5962) Pre- or Corequisite: CHEM 3813. Corequisite: ANSC 5960D. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042.

ANTHC5960D Gastrointestinal/Digestive Physiology of Domestic Animals Drill (SP) Corequisite: ANSC 5962.

ANTHC5972 Renal Physiology (SP) Renal physiology, including mechanisms of renal clearance with emphasis on cellular control mechanisms in domestic animals and poultry. Lecture 3 hours; drill 1 hour per week (for second 8 weeks of semester). (Same as POSC 5972) Pre- or Corequisite: CHEM 3813. Corequisite: ANSC 5970D. Prerequisite: POSC/ANSC 3032 and POSC/ANSC 3042.

ANTHC5970D Renal Physiology Drill (SP) Corequisite: ANSC 5972.

ANTHC600V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: Dependent on topic.

ANTHC6143 Minerals in Animal Nutrition (SP, Odd years) Mineral nutrients, their sources and functions, as related to nutrition of domestic animals. Lecture 3 hours per week. Prerequisite: ANSC 4143 or POSC 4343.

ANTHC6243 Ruminant Nutrition (FA, Odd years) Anatomy and physiology of the rumen. The nutrient requirements of microbial organisms and the relation of microbial digestive processes to the nutrition of cattle, sheep and other ruminants. Lecture 3 hours per week. Prerequisite: graduate standing.

ANTHC6253 Forage-Ruminant Relations (SP, Odd years) Advanced chemical, physical, and botanical characteris- tics of forage plants, the dynamics of grazing, intake and digestion, and techniques of measuring forage utilization and systems analysis at the plant-animal interface. Lecture 3 hours per week. (Same as CSES 6253) Prerequisite: ANSC 3143 and CSES 3113.

ANTHC6343 Vitamin Nutrition in Domestic Animals (SP, Even years) The vitamins required by domestic animals, their sources, and role in nutrition. Lecture 3 hours per week. Prerequisite: ANSC 4143 or POSC 4343.

ANTHC6383 Reproduction in Domestic Animals (SP, Even years) Comprehensive review of current theory of reproductive function in domestic animals. Lecture 3 hours per week. (Same as POSC 6633) Prerequisite: ANSC 3433.

ANTHC700V Doctoral Dissertation (1-6) (FA, SP, SU) Prerequisite: graduate standing.

[ANTHY ANTHROPOLOGY]

ANTHC1013 Introduction to Biological Anthropology (FA) An introduction to the field of physical anthropology using human evolution as a unifying concept. Areas include human genetics, race, specification, pri- mate evolution, and human variation and adaptation. Co- prerequisite: ANTH 4003. Pre- or Corequisite: ANTH 4043.

ANTHC1011L Introduction to Biological Anthropology Laboratory (FA) Laboratory exercises illustrating concepts of physical anthropology. Corequisite: ANTH 1011.

ANTHC1011M Honors Introduction to Biological Anthropology Laboratory (FA) Laboratory exercises illustrating concepts of physical anthropology. Corequisite: ANTH 1011.

ANTHC1023 Introduction to Cultural Anthropology (FA, SP, SU) 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. UNIVERSITY CORE COURSE

ANTHC1023H Honors Introduction to Cultural Anthropology (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. UNIVERSITY CORE COURSE

ANTHC1020D Introduction to Cultural Anthropology Drill (FA, SP, SU) UNIVERSITY CORE COURSE

ANTHC3032 World Prehistory (IR) Survey of the prehistoric and early historic cultures of the Americas, Asia, and Africa.

ANTHC3023 Approaches to Archeology (FA, SP) Study of the field of archeology including method, theory, analysis and interpretation with substantive worldwide examples.

ANTHC3021L Archeology Laboratory (FA, SP) Laboratory exercises illustrating concepts of archeology. Corequisite: ANTH 3021.

ANTHC3123 The Anthropology of Religion (SP) An exploration of rituals, symbols, and rules that shape religious life. Religion is viewed broadly, considering activities that invoke powers beyond the reach of ordinary sense.

Examining a variety of cultures, we explore what people see and do as they participate in activities such as magic, heal- ing, pilgrimage, and contemporary religious movements.

ANTHC3163 Cultural and Biological Overview (FA) A comparative study of male and female roles in culture in relation to human biology and socialization.

ANTHC3173 Introduction to Linguistics (SP) Introduction to language study with stress upon modern lin- guistic theory and analysis. Data drawn from various lan- guages reveal universal linguistic 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. (Same as COMM 3173, ENGL 3173) Prerequisite: junior standing.

ANTHC3203 Native Americans Today (IR) Study of contemporary Native Americans of North America; reserva- tion and non-reservation life; social problems; social move- ments.

ANTHC3213 Indians of North America (SP) Survey of the Indians of North America and Mexico emphasizing lifeways at early White contact and subsequent acculturation.

ANTHC3253 Cultures of the South (SP) Survey of the diverse ethnic and racial groups of the American South with special emphasis on social and cultural traits related to contemporary developments. (Same as SOCI 3253)

ANTHC3263 Peoples of Arkansas and the South (FA) Study of the traditional lifeways and prehistoric backgrounds of Indians living in the Southern United States, including Arkansans.

ANTHC3333 Anthropology of Ethnicity (FA) Anthropological approaches to the study of race and ethnic- ity, 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)

ANTHC3423 Human Osteology (SP) Study of the human skeleton, identification of bones, allometric growth, sexual dimorphism, osteological genetic inheritance and environment variables and literature. Lectures and demonstration.

ANTHC3421L Human Osteology Laboratory (SP) Laboratory exercises illustrating concepts of human osteologi- cal anthropology. Corequisite: ANTH 3423.

ANTHC3423 Human Evolution (SP) A study of hominid evolution from origin to the present, including trends in comparative primate evolution and functional development of human form as a result of cultural and biological interac- tion.

ANTHC3433 Criminalistics: Forensic Sciences (SP) Introduction to forensic science 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 and their application of legal issues within an investigative framework. Topics include inorganic remains, fiber, tissue, human identification, fingerprints, tools, and weapons.

ANTHC3503 Power and Popular Protest in Latin America (FA) This course focuses on the historical forma- tion of Latin America by examining conflicts between the region’s rich and poor. It includes both a historical perspec- tive on the formation of ethnic, gender, and class relations in Latin America, and a discussion of contemporary social prob- lems.

ANTHC3513 Latinos in the U.S. (SP) Why, when, and from where did differently situated groups of Latin Americans cross the border and become involved in U.S. agriculture. Over the U.S., where did they settle, for whom did they work, and how did they organize (politically as well as cultur- ally)?

ANTHC3523 Gender and Politics in Latin America (FA) This course examines the ways in which political strug- gles surrounding 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 such struggles shaped by gender?

ANTHC3533 Medical Anthropology (SP) Survey of the interrelationship of human biology, culture and environ- ment as reflected in disease processes from an evolutionary and cross cultural perspective. Special emphasis on stress.

ANTHC3903 Topics in Anthropology (FA, SP, SU) Covers a special topic or issue. May be repeated for 12 hours.

ANTHC3923H Honors Colloquium (IR) Covers a spe- cial topic or issue, offered as part of the honors program. May be repeated. Prerequisite: honors candidacy (not required for anthropology majors).

ANTHC399VH Honors Course (1-6) (FA, SP) May be repeated for 12 hours. Prerequisite: junior standing.

ANTHC4013 History of Anthropological Thought (FA) Detailed consideration of major thought processes through study of its historical development. The research paper in this course fulfills the Fulbright College research paper requirement for anthropology majors.

ANTHC4023 Epistemology (IR) Explores multiple aspects of Ancient Egyptian civilization including chronology, art, reli- gion, literature and daily life. Prerequisite: junior standing.

ANTHC4033 Popular Culture (SP) Study of national and international cultural phenomena such as music, film, dance, fashion, and the media. Emphasis will be given to both ethnocultural approaches, which focus on the investiga- tion of production and consumption of cultural forms and to cultural studies approaches, which see culture as a terrain of struggle.

ANTHC4093 The Archeology of Death (IR) Study of the analysis and interpretation of archeological mortuary remains and sites. Key anthropological and archaeological sources that have influenced major theoretical developments are reviewed.

ANTHC4123 Ancient Middle East (SP) The archeologi- cal record and historiography upon the inter- action of ecology, technology and social structure as it per- tains to domestication and urbanization.

ANTHC4143 Ecological Anthropology (FA, SP, SU) Ecological perspectives on the relationships among human populations and their ecosystems.

ANTHC4153 Latinos in the U.S. (SP) Why, when, and from where did differently situated groups of Latin Americans cross the border and become involved in U.S. agriculture. Over the U.S., where did they settle, for whom did they work, and how did they organize (politically as well as cultur- ally)?

ANTHC4173 The Latin American City (IR) This course explores the social, political, and cultural aspects of the modern Latin American city from an interdisciplinary per- spective. The course includes an introduction to urban stud- ies concepts, and each semester is organized around a specific set of case studies. (Same as GEOG 4173, HIST 4173, LAST 4173)

ANTHC4183 Global Politics of Food (SP) This course explores the politics of food production, processing, distribution, and consumption, particularly in the context of world agricultural systems. (IR) This course explores the politics of food production, processing, distribution, and consumption, particularly in the context of world agricultural systems. (IR)
ANTH2456 Archeological Field Session (SU) Practical field and laboratory experiences in archeological research. May be repeated for 12 hours. May be repeated for 12 hours.

ANTH2453 Peoples and Cultures of World Regions (IR) The anthropology (prehistory, peoples, and cultures) of a selected world region. Regional emphasis may vary but may include China, Europe, Northeast Asia, India or the Arctic. May be repeated for 12 hours. May be repeated for 12 hours.

ANTH2383 Identity and Culture in the U.S.-Mexico Borderlands (IR) 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, social hierarchy, hybridity, social marginalization, race and gender, from an anthropological perspective, paying special attention to the border as theoretical construct as well as material reality.

ANTH3533 Laboratory Methods in Archeology (IR) Theory and practice of describing, analyzing, and reporting upon archeological materials.

ANTH3513 Mycmons, National Culture, and Popular Imagination (FA) Museums as ideological sites and thus as sites of potential contestation produce cultural and moral systems that legitimate existing social orders. This course focuses on the structures of representation and the continuous process of negotiating social and cultural hierarchies with and through objects that are displayed.

ANTH4743 North American Prehistory (IR) Survey of the archeology and prehistory of the North American Continent north of Mexico.

ANTH448V Individual Study of Anthropology (1-6) (FA, SP, SU) Reading course for advanced students with special interests in anthropology.

ANTH449V Special Problems in Museum Work (1-6) (IR) Individual research, exhibit design and execution, or other problems of museum work.

ANTH4531 Ancestors: Gods, Witches, Ancestors (SP) An exploration of African religions from a variety of anthropological perspectives, exploring how religious experience is perceived and interpreted by adherents, highlighting the roles of the individual and group, and how these are constructed, maintained and contested within religious contexts. Readings reflect the vast diversity of religious life in Africa.

ANTH4523 Dental Science (FA) Introduction to the study of the human dentition including its anatomy, morpholgy, growth, 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 8 hours.

ANTH4543 Geographic Information Systems (SP) Computer 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 completion of GEOG 4543 (Computer Mapping) 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 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 ARCINFO and relational data bases. (Same as GEOG 4563)

ANTH4573 Introduction to Grass Application in GIS (FA) An introduction to geographic information systems (GIS) and geographic information systems (GIS) applications in marketing, resource and planning, and related areas. Lectures focus on development of principles, parallel by workstation-based laboratory exercises using Arc-Point-based software and relational data bases. (Same as GEOG 4563)

ANTH4573 Introduction to Grass Application in GIS (FA) An introduction to geographic information systems (GIS) and geographic information systems (GIS) applications in marketing, resource and planning, and related areas. Lectures focus on development of principles, parallel by workstation-based laboratory exercises using Arc-Point-based software and relational data bases. (Same as GEOG 4563)

ANTH4583 Peoples and Cultures of Sub-Saharan Africa (FA) Exploration of the people and places of Africa from a variety of anthropological perspectives. Classic and contemporary works will be studied in order to underscore 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.

ANTH4590 Primate Adaptation and Evolution (FA) Introduction to the biology of the order of Primates. This course considers the comparative anatomy, behavioral ecology and paleontology of our nearest living relatives. (Same as BIOL 4103) Prerequisite: ANTH 1013 or BIOL 1543 and BIOL 1541L.

ANTH4633 Archeological Prospection & Remote Sensing (SP, Odd years) 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. (Same as GEOG 4633)

Corequisite: ANTH 4631L.

ANTH4631L Archeological Prospection & Remote Sensing (SP, Odd years) 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. (Same as GEOG 4633)

Prerequisite: ANTH 4543 or GEOG 4543 or ANTH 4573 or GEOG 4573 or GEOG 4573 or GEOL 1113 and ANTH 3023.

ANTH4653 Advanced Raster GIS (SP, Odd years) Advanced raster topics are examined beginning with a theoretical and methodological review of Tobler’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 making. Students are examined with links to statistical analysis software. (Same as GEOG 4653) Prerequisite: ANTH 4553 or GEOG 4553.

ANTH4803 Historical Archeology (IR) Review of the development of historical archeology and discussion of contemporary theory, methods, and substantive issues. Lab sessions on historic artifact identification and analysis.

ANTH4813 Ethnographic Approaches to the Past (IR) 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.

ANTH4863 Quantitative Archeology (FA) Introductory statistics course for archeology students examines probability theory, nature of archeological data, data gathering and data reduction, and archeological data analysis. A test for means and variances, categorical and rank methods, ANOVA, correlation and regression. Lectures focus on theory and methods, utilize archeological data, and a statistical software laboratory. (Same as GEOG 4663)

ANTH4860L Quantitative Archeology Laboratory (FA) ANTH4803 Seminar in Anthropology (FA, SP, SU) Research, discussion, and projects focusing on a variety of topics. May be repeated for 12 hours. May be repeated for 12 hours.

ANTH4913 Topics of the Middle East (FA, SP, SU) Covers a special topic or issue. May be repeated for 9 hours.

ANTH4923 Karl Marx: Life, Work, and Legacy (FA) This course examines the writings of Karl Marx. Students will read and discuss his major works, including Capital, The German Ideology, and Grundrisse. In order to understand Marx’s writings, students will also explore his life, times, and legacy.

ANTH500V Advanced Problems in Anthropology (1-18) (FA, SP) Individual research at graduate level on clearly defined problems or problem areas.

ANTH5013 Research Methods in Anthropology (FA) Investigation of the nature of inquiry; scientific and other approaches to anthropological research; conceptualization of anthropological data; the development and use of research models; organization of observations; numerical and other methods of analyzing and interpreting data.

ANTH5023 Physical Anthropology (SP) Practical prob- lems of archeology in relation to federal and state needs, legal and regulatory requirements, contact reporting, public support and information need, and the job market.

ANTH5033 Settlements, Sites, and Models (SP, Even years) The modeling of potential archaeological resource locations within the region. Includes computer models of the distribution of 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 the important role of GIS technology and statistical methods. Prerequisite: ANTH 4543 or GEOG 4543 or ANTH 4653 or GEOG 4553.

ANTH5053 Quaternary 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. (Same as GEOG 5053, GEOG 5053)

ANTH5303 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 (FA, SP, SU) Graduate level seminar with varied emphasis on topics relating to cultural anthropology. May be repeated.

ANTH5253 Indians of Arizona and the South (FA) Study of the traditional lifeways and prehistoric backgrounds of Indians living in the southern United States, including Arizona.

ANTH5303 Applications of Method and Theory in Biological Anthropology (IR) Review of the nature and history of biological archeology; recent theories and the practical implications and applications of various methods of acquiring, analyzing, and interpreting archeological 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 terminological analysis, marriage, and current developments in social structure.

ANTH535V Topics in Physical Anthropology (1-6) (FA, SP) Graduate level seminar with varied emphasis on topics relating to physical anthropology. May be repeated.

ANTH5413 Bioarcheology Seminar (SP, Even years) Intensive coverage of bioarchaeological method and theory with the context of both academic and cultural resources research explored.

ANTH5423 Human Evolutionary Anatomy (IR) Paleobiologists reconstruct past lifeways and systematic relationships of our ancestors using comparative studies of bony niches and the morphological and functional adaptation of fossil and associated soft tissue elements. Students are provided with an introduction to 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. (Same as BIOL 5423) Prerequisite: ANTH 1013 and BIOL 1543.

ANTH5443 Cultural Resource Management I (IR) 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 community relations aspects of the field.

ANTH546V Special Problems in Museum Work (1-6) (IR) Individual research, exhibit design and execution, or other problems of museum work.

ANTH561V Field Research in Anthropology (1-6) (IR) Directed graduate level archeological fieldwork.

ANTH600V Master’s Thesis (1-6) (FA, SP, SU) ANTH610V Internship (1-18) (FA, SP) ANTH620V Graduate Seminar in Cultural Anth (3-9) (FA, SP) Variable topics in Cultural Anthropology will be explored in depth.

ANTH682V Seminar: Archeology (3-9) (FA, SP) Variable topics in Archeology will be explored in depth.

ANTH683V Seminar: Biological Anth (3-9) (FA, SP) Variable topics in Biological Anthropology will be explored in depth.

ANTH700V Doctoral Dissertation (3-9) (FA, SP)
Prerequisite: ARAB 1013 or ARAB 1016.

Prerequisite: ARAB 2003.

Continued development of speaking, comprehension, reading, and writing. Emphasizes morphology and syntax with increased focus on reading and writing. Students begin to express ideas and opinions. Corequisite: ARCH 2026. Prerequisite: ARCH 2003.

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ARCH4023 Advanced Architectural Studies (FA, SP) Archit and art history in special subjects to special interest to students and faculty. May be repeated.
ARCH4023H Honors Advanced Architectural Studies (FA, SP) Advanced seminars in subjects to special interest to students and faculty. May be repeated.
ARCH4154 Architectural Technology V (FA, SP) Introduction to high-rise, specialty and contemporary structural systems. Computer analysis of structural systems. Advanced design of structural systems. Stress, strain, and deflection of systems. Selection of building materials. Introduction to the study of acoustics and intelligent building systems. Introduction to organization, preparation, and context of construction drawings. Three hours lecture and one hour laboratory exercises in practical application of architectural technology each week. Prerequisite: ARCH 3144.
ARCH4154H Honors Architectural Technology V (FA, SP) Introduction to high-rise, specialty and contemporary structural systems. Computer analysis of structural systems. Advanced design of structural systems. Stress, strain, and deflection of systems. Selection of building materials. Introduction to the study of acoustics and intelligent building systems. Introduction to organization, preparation, and context of construction drawings. Three hours lecture and one hour laboratory exercises in practical application of architectural technology each week. Prerequisite: ARCH 3144.
ARCH4432 History of Architecture III (FA, SP) Critical study of the history and theories of modern architecture from the mid-nineteenth century to the present. Prerequisite: ARCH 2323 and ARCH 2423 (or HESC 2883 and HESC 3433).
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 2323 and ARCH 2423 (or HESC 2883 and HESC 3433).
ARCH4443 History of Architecture IV (SP, SU) An intensive study of the history and theory of architecture since 1895, through critical inquiry and analysis of seminal ideas and artifacts that have shaped the built environment and our ways of knowing it. Prerequisite: ARCH 2323 and ARCH 2423 and ARCH 4433.
ARCH4623 East Art and Architecture (IR) A study of the development of Indian, Chinese, and Japanese art forms with an emphasis on architecture.
ARCH483 Architecture of the Americas (IR) Study of the development of architecture in the Americas from the Pre-Columbian cultures to the present day. Lecture and slides 3 hours per week.
ARCH4841 Architecture Cooperative Education I (FA, SP, SU) A practicum which introduces and engages the student in the practice and application of the profession. Prerequisite: completion of all three year program requirements, 2.5 minimum GPA and permission of the faculty.
ARCH4841H Architecture Cooperative Education II (FA, SP, SU) A practicum which introduces and engages the student in the practice and application of the profession. Prerequisite: completion of all three year program requirements, 2.5 minimum GPA and permission of the faculty.
ARCH4842 Architectural Education I (FA, SP, SU) A practicum which introduces and engages the student in the practice and application of the profession. Prerequisite: completion of all three year program requirements, 2.5 minimum GPA and permission of the faculty.
ARCH4842H Honors Architectural Education I (FA, SP, SU) A practicum which introduces and engages the student in the practice and application of the profession. Prerequisite: completion of all three year program requirements, 2.5 minimum GPA and permission of the faculty.
ARCH4913 Design Thinking: Relationships Between Theory and Process (IR) Studies of the relationship between design theory and process using examples from the practitioner's work in contemporary development and roots. Prerequisite: ARCH 4433.
ARCH5016 Architectural Design IX (FA, SU) Comprehensive project with complex program covering issues in both architectural and structural scales. Students synthesize the knowledge and critical thinking acquired during the previous four years of their education including theory, history and technology and programming. Corequisite: ARCH 5161.
ARCH5026 Architectural Design X (FA, SP, SU) Final design studio. Offers projects with complex building programs, site and context issues. Students are expected to demonstrate skills in generating design ideas supported by clear understanding of issues, carrying designs from initial concept to final project, and ability to integrate building technology and function.
ARCH5162 Architectural Technology VI (FA) Synthesis of building technologies, systems selection, system design, and construction methods appropriate for comprehensive studio projects. Prerequisite: ARCH 5016. Required readings in emerging technologies of building construction. Corequisite: ARCH 5016 and ARCH 5026. Prerequisite: ARCH 4154.
ARCH5253 Architectural Structures Seminar (IR) 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 architect's office; contracts and other documents; risk management strategies; and the preparation of the technical specifications and bidding documents of the Project Manual. Prerequisite: ARCH 4026.
ARCH5523 Legal Aspects of Architecture and Practice (IR) A study of the various legal doctrines affecting architecture and their impact on its practice. Topics include the contracting process, professional liability, risk management, architectural design, e.g., land use controls, building codes, and copyright law. Ethical and economic issues are also considered.
ARCH5493 History of Urban Form (IR) 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 2323 and ARCH 2423 and ARCH 4433.
ARCH5643 Architectural Computer Applications (IR) Digital computer programming and introduction to the use of computers as design and realization tools.
ARCH5993 Preservation and Restoration (IR) 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.

(ARED) ART EDUCATION

ARED3063 Public School Art for Elementary Schools (FA, SP, SU) Selection, preparation, and use of instructional materials for art in the elementary school. Artistic development, social concerns, and decisions to learning in art and other academic areas. Prerequisites: ARTS 1003 and ARHS 1003 and admission to teacher education. ARED3063 Public School Art I (IR) Selection, preparation, and use of instructional materials in elementary and secondary schools. For students seeking teaching certification in art. Prerequisites: ARTS 1013 and ARTS 1313 and ARTS 1323 and ARTS 2013.
ARED3643 Teaching Art in Elementary Schools (SP) Methods and materials used in teaching elementary school art. Prerequisite: ARED 3613.
ARED3653 Teaching Art in Secondary Schools (FA, SP, SU) Methods and materials used in teaching secondary school art. Prerequisite: ARED 3603 or ARED 3613.
ARED476V Student Teaching in Art (6-12) (FA, SP, SU) A minimum of 6 weeks will be spent in an off-campus school. During this time the student teacher will have an opportunity under supervision to observe, to teach and participate in other activities involving the school and community. Prerequisite: BFA degree in Art Education.

(ARHS) ART HISTORY

ARHS1003 Basic Course in the Arts: Art Lecture (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. UNIVERSITY CORE COURSE

ARHS3003H Honors Basic Course in the Arts: Art Lecture (IR) 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. UNIVERSITY CORE COURSE

ARHS2913 Art History Survey I (FA) Survey of art works from Stone Age through Medieval. ARHS2923 Art History Survey II (SP) Survey of art from Renaissance to the present.

ARHS4813 The History of Photography (IR) Survey of photography from 1868 to present.

ARHS4833 Ancient Art (SP, Even years) Study of the visual arts of Mesopotamia, Egypt, Rome, and The Roman Empire. Prerequisite: ARHS 2913.

ARHS4843 Medieval Art (FA, SP, SU) Study of Early Christian, Byzantine, Early Medieval, Romanesque, and Gothic styles. Prerequisite: ARHS 2913.

ARHS4843H Honors Medieval Art (FA, SP, SU) Study of Early Christian, Byzantine, Early Medieval, Romanesque, and Gothic styles. Prerequisite: ARHS 2913.

ARHS4853 Italian Renaissance Art (FA, SP, SU) Study of Proto-Renaissance, Early, High Renaissance, and Manierist styles in Italy. Prerequisite: ARHS 2923.

ARHS4853H Honors Northern Renaissance Art (FA, SP, SU) Study of Late Gothic and the Early Renaissance in the Netherlands, Germany, and France. Prerequisite: ARHS 2923.

ARHS4863H Honors Northern Renaissance Art (FA, SP, SU) Study of Late Gothic and Renaissance styles in the Netherlands, Germany, and France. Prerequisite: ARHS 2923.

ARHS4863H 19th Century European Art (FA, SP) Study of Neo-Classical, Romanticist, Realist, Impressionist, and Post-Impressionist styles. Prerequisite: ARHS 2923.

ARHS4863H 19th Century European Art (FA, SP, SU) Study of the major styles and movements of the century, including Cubism, Fauvism, German Expressionism, and Surrealism. Prerequisite: ARHS 2923.

ARHS4913H Honors American Art Since 1900 (FA, SP, SU) The visual arts in the United States from their beginning in Colonial times through the nineteenth century. Prerequisite: ARHS 2923.

ARHS4923H Honors American Art to 1900 (FA, SU) The visual arts in the United States from their beginning in Colonial times through the nineteenth century. Prerequisite: ARHS 2923.

ARHS4923 American Art Since 1900 (FA, SP, SU) The visual arts in the United States from the turn of the century to the contemporary era. Prerequisite: ARHS 2923.

ARHS4923H Honors American Art Since 1900 (FA, SP, SU) The visual arts in the United States from the turn of the century to the contemporary era. Prerequisite: ARHS 2923.

ARHS4943 Seminar in Art Criticism (FA, SP, SU) Study and problems in the criticism of art forms and ARHS4943H Honors Seminar in Art Criticism (FA, SP, SU) Study and problems in the criticism of art forms.

ARHS4963 Individual Research in Art History (FA, SP) Independent study in specific areas of art history and criticism. Prerequisite: 12 hours of art history.

ARHS4963H Honors Individual Research in Art History (FA, SP) Independent study in specific areas of art history and criticism. Prerequisite: 12 hours of art history.

ARHS4973 Seminar in Art History (FA, SP, SU) Special studies of periods and styles of art. Prerequisite: 6 hours of art history.

ARHS4983 Special Topics in Art History (IR) Subject matter not covered in regularly offered courses, and relating to the history of art before the nineteenth century. May be repeated (for different topics) for up to 6 hours. May
be repeated for 6 hours. Prerequisite: ARHS 2913 or ARTS 2923.

ARTS459V Individual Instruction (1-6) (FA, SP) Continued instruction in any area of art in which the catalog sequence of courses has been completed. May be repeated for 6 hours. Prerequisite: ARTS 3503 or ARTS 3513, ARTS 3523 or ARTS 3533.

ARTS458V Special Problems in Ceramics (1-3) (FA, SP) Individual projects in ceramic techniques. May be repeated for 6 hours. Prerequisite: ARTS 3503 or ARTS 3523.

ARTS459V Individual Instruction (1-6) (FA, SP) Special projects on an arranged basis. May be repeated for 6 hours. Prerequisite: ARTS 3503 or ARTS 3513, ARTS 3523 or ARTS 3533.

ARTS458V Digital Photography (FA, SP) Introduction to digital photography production, techniques and theory. Digital input from scanning (flatbed & slide/negative), digital cameras, video and Internet sources. Computer assisted manipulation of imagery for correction and abstraction. Output to a digital printer. Prerequisite: ARTS 3803 (film recorder), servers and Internet. Prerequisite: ARTS 3803.

ARTS458V Special Problems in Color Photography I (IR) (FA, SP) Continued advanced study in any area of art in which the catalog sequence of courses has been completed. May be repeated for 6 hours. Prerequisite: ARTS 3803.

ARTS458V Special Problems in Graphics (1-6) (FA, SP) Continued advanced study in any area of art in which the catalog sequence of courses has been completed. May be repeated for 6 hours. Prerequisite: ARTS 3503 or ARTS 3523.

ARTS458V Special Problems in Ceramics (1-3) (FA, SP) Individual projects in ceramic techniques. May be repeated for 6 hours. Prerequisite: ARTS 3503 or ARTS 3523.

ARTS458V Digital Photography (FA, SP) Introduction to digital photography production, techniques and theory. Digital input from scanning (flatbed & slide/negative), digital cameras, video and Internet sources. Computer assisted manipulation of imagery for correction and abstraction. Output to a digital printer. Prerequisite: ARTS 3803 (film recorder), servers and Internet. Prerequisite: ARTS 3803.

ARTS4483 Printmaking IV (FA, SP) Continued advanced study in various printmaking media. Prerequisite: ARTS 4463 or ARTS 4473.

ARTS459V Special Problems in Graphic Design (1-6) (FA, SP) Advanced individual projects in graphic design. May be repeated for 6 hours. Prerequisite: ARTS 4363 or ARTS 4373 or ARTS 4383.

ARTS4463 Etching III (FA, SP) Continued study of intaglio or relief. Prerequisite: ARTS 3413.

ARTS4473 Lithography III (FA, SP) Continued advanced study of lithography techniques. Prerequisite: ARTS 3433.

ARTS4483 Printmaking IV (FA, SP) Continued advanced study in various printmaking media. Prerequisite: ARTS 4463 or ARTS 4473.

ARTS4553 Ceramics-Handbuilding III (FA, SP) Continued advanced work in handbuilding techniques and glaze calculation. Prerequisite: ARTS 3513.

ARTS4563 Ceramics-Wheelthrown III (FA, SP) Continued advanced work in wheel-throwing techniques and glaze calculation. Prerequisite: ARTS 3503 or ARTS 3523.

ARTS4373 Graphic Design: Symbols (FA, SP) Projects focus on the development of logos, pictographs, symbols, and conceptual thinking, with study of the history of symbol generation. Ideas are visualized through traditional and computer techniques. Presentation of work and development of portfolio pieces are emphasized. Prerequisite: ARTS 3363.

ARTS4383 Graphic Design: Layout (FA, SP) Projects focus on the organizational principles and practices of layout design, with a study of contemporary design and graphic design history. Ideas are visualized through traditional and computer techniques. Presentation of work and development of portfolio pieces are emphasized. Prerequisite: ARTS 3363.

ARTS4223 Sculpture IV (FA, SP) Continued work in sculpture techniques with emphasis on casting. Prerequisite: ARTS 3213.

ARTS4243 Sculpture V (FA, SP) Continued work in sculpture techniques with emphasis on ferrous and non-ferrous welding. Prerequisite: ARTS 3203 and ARTS 3213.

ARTS423V Special Problems in Sculpture (1-6) (SP, IR) Individual projects in sculptural work with emphasis on materials exploration. May be repeated for 6 hours. Prerequisite: ARTS 4223.

ARTS4343 Advanced Design (SP) Studio problems in the relationships of two and three-dimensional elements in traditional and experimental media. Prerequisite: ARTS 1313 and ARTS 1323.

ARTS434V Special Problems in Design (1-6) (FA, SP) Extended projects in sculptural work with emphasis on functional design; encouraged use of imaginative materials. May be repeated for 6 hours. Prerequisite: ARTS 4343.

ARTS4363 Graphic Design Typography (FA, SP) The primary emphasis of this course is on the aesthetics of letter forms and understanding the symbolic communication inherent in different type faces. Typographic relationships will be investigated through experimental projects and problems such as logos, posters, and brochures. Prerequisite: ARTS 3363.

ARTS4373 Graphic Design: Symbols (FA, SP) Projects focus on the development of logos, pictographs, symbols, and conceptual thinking, with study of the history of symbol generation. Ideas are visualized through traditional and computer techniques. Presentation of work and development of portfolio pieces are emphasized. Prerequisite: ARTS 3363.

ARTS4383 Graphic Design: Layout (FA, SP) Projects focus on the organizational principles and practices of layout design, with a study of contemporary design and graphic design history. Ideas are visualized through traditional and computer techniques. Presentation of work and development of portfolio pieces are emphasized. Prerequisite: ARTS 3363.

ARTS4373 Graphic Design: Symbols (FA, SP) Projects focus on the development of logos, pictographs, symbols, and conceptual thinking, with study of the history of symbol generation. Ideas are visualized through traditional and computer techniques. Presentation of work and development of portfolio pieces are emphasized. Prerequisite: ARTS 3363.

ARTS4383 Graphic Design: Layout (FA, SP) Projects focus on the organizational principles and practices of layout design, with a study of contemporary design and graphic design history. Ideas are visualized through traditional and computer techniques. Presentation of work and development of portfolio pieces are emphasized. Prerequisite: ARTS 3363.
ARTS484V Special Problems in Photography (1-6) (FA, SP) Individual instruction for advanced undergraduates and graduate students. Special projects in photography designed by the instructor in consultation with the student. May be repeated for up to 6 hours. Prerequisite: ARTS 3803 and (ARTS 3813 or ARTS 4823 or ARTS 4833).

ARTS490V Honors Thesis (1-6) (FA, SP, SU) Special problems in studio art, art history, art criticism, art education, or a combination of these. May be repeated for up to 12 hours. Prerequisite: junior standing.

ARTS491V Internships in Art (1-3) (FA, SP, SU) Credit for students who have designed and completed internships in studio art, art history, gallery practices and/or art education. Report required from intern and field supervisor on significant accomplishments and/or progress. May be repeated for up to 6 hours. Prerequisites: 3200, 4920 and art major.

ARTS4921 Workshop: Professional Practices in Art (SP) A workshop in professional art practices including portfolio presentation, marketing, 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 (1-6) (FA, SP, SU) Credit for practice experienced gained through internship in graphic design. Report required from intern and field supervisor on progress and significant accomplishments. 3 credits per semester. May be repeated for up to 6 hours. Prerequisites: ARTS 4363 or ARTS 4373 or ARTS 4383.

ARTS495V Special Topics (1-6) (IR) May be offered in a subject not specifically covered by the courses otherwise listed. May be repeated for up to 6 hours.

ARTS499V Senior Thesis (1-3) (FA, SP) ARTS5013 Graduate Drawing (FA) Graduate level study of drawing materials and techniques. Prerequisite: graduate standing.

ARTS5013 Graduate Drawing (FA, SP, SU) Art faculty review and critique of M.F.A. student’s art work. Prerequisite: admission into the M.F.A. program.

ARTS5912 Graduate Seminar in Studio Art (FA, SP) 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 MFA program.

ARTS6010 Master of Fine Arts Exhibition (1-6) (FA, SP, SU) Production and presentation of one person exhibition of art work. The M.F.A. candidate will be responsible for mounting and publishing the exhibition and exhibition statements. Prerequisite: M.F.A. candidacy. ARTS602V Graduate Drawing (1-6) (FA, SP, SU) Individual problems in drawing techniques. May be repeated. Prerequisite: graduate standing.

ARTS612V Graduate Painting (1-6) (FA, SP, SU) Individual problems in painting techniques. May be repeated. Prerequisite: graduate standing.

ARTS622V Graduate Sculpture (1-6) (FA, SP, SU) Individual problems in sculptural techniques. May be repeated. Prerequisite: graduate standing.

ARTS642V Graduate Printmaking (1-6) (FA, SP, SU) Individual problems in printmaking techniques. May be repeated. Prerequisite: graduate standing.

ARTS652V Graduate Ceramics (1-6) (FA, SP, SU) Individual problems in ceramic techniques. May be repeated. Prerequisite: graduate standing.

ARTS682V Special Studio Problems (1-6) (FA, SP, SU) Individual problems in areas on arranged basis. May be repeated. Prerequisite: graduate standing.

ARTS695V Special Topics (1-6) (IR) Subject matter not covered in other courses. May be repeated for up to 12 hours. Prerequisite: graduate standing.

ARTS2003 Survey of the Universe (FA, SP, SU) An introduction to the content and fundamental properties of the cosmos. Topics include planets and other objects of the solar system to their origin and evolution; the birth and death of stars, neutron stars, pulsars, black holes, the Galaxy, clusters of galaxies, and cosmology. UNIVERSITY CORE COURSE.

ARTS2003H Honors Survey of the Universe and Laboratory (FA, SP, SU) In 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, black UNIVERSITY CORE COURSE.

ARTS2001L Survey of the Universe Laboratory (FA, SP, SU) Daytime and nightime observing with telescopes and indoor exercises on selected topics. UNIVERSITY CORE COURSE.

ARTS2001M Survey of the Universe and Laboratory, Honors (FA, SP, SU) 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, black UNIVERSITY CORE COURSE.

ARTS301V Observational Astronomy (1-3) (FA, SP) Individual experimental or observational problems studied with small telescopes, cameras, and other basic equipment. No credit for Bachelor of Arts program or as an elective for undergraduates in related areas. Prerequisite: PHYS 2033 and PHYS 2031.

ARTS3033 Solar System Astronomy (IR) 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. Prerequisites: PHYS 2033 and PHYS 2031.

ARTS4013 Astronomical Survey (FA, Odd years) Introduction to astrophysics for seniors and graduate students. The course covers stellar evolution, interstellar medium, galactic nucleogenesis and observational cosmology. Prerequisites: PHYS 3614, CHEM 3804, or graduate standing.

ARTS5033 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, magnetospheres, and the solar wind; planetary interiors. Theoretical and observed properties of exoplanetary systems; astrobiology.

BENG1012 Biological Engineering Design Fundamentals (FA) 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 methodology, including analysis and design, as 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: BENG 1010L.

BENG1010L Biological Engineering Design Fundamentals Laboratory (FA) Corequisite: BENG 1012.

BENG1022 Biological Engineering Design Studio I (SP) Continued practice of biological engineering design in the Biological Engineering Design Studio. Design projects exploring the unique problems associated with engineering applied to biological systems. Group activities to teach teamwork 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. Corequisite: BENG 1020L. Prerequisite: BENG 1012.

BENG1020L Biological Engineering Design Studio I Laboratory (SP) Corequisite: BENG 1012.

BENG2103 Electronic Applications in Biological Engineering (SP) Introduction to the physical, chemical, and thermal properties and characteristics of basic electronic components, and the application of electronics and instrumentation to the analysis and design of biological and production processes. Prerequisite: BENG 2622.

BENG3723L Biological Engineering Design Studio (SP) Formerly BENG 3722) Design of basic unit operations typical of biological engineering practice; unit operations include pump-pipe, fan-duct, moist air (psychrometric) processes (cooler/heater/humidifier/dryer), air mixing, aeration, refrigeration and more. BENG 3723L unit operations design will account for unique constraints imposed by biological systems. Lecture 2 hours and lab 3 hours per week. Prerequisites: (MEEG 2403 or CHEG 2133) and (CVEG 3213 or CHEG 2133).

BENG3723L Biological Engineering Design Studio (SP) Corequisite: BENG 3722.

BENG3733 Transport Phenomena in Biological Systems (FA) (Formerly BENG 3733) Application of the principles of kinetics and heat and mass transfer to the analysis and design of biological engineering processes. Biological engineering processes will encompass examples in the realms of bio-processes, environmental, biochemical, and biomedical engineering. Lecture 3 hours per week. Prerequisites: (CHEG 2431 or MEEG 2431) and (CHEG 2431 or MEEG 2431) and CHEG 2313 and MATH 2144.

BENG3733L Biological Engineering Design Studio (SP) Corequisite: BENG 3732.

BENG3735A Introduction to the Mechanical Design Process (FA, SP) Corequisite: BENG 3732) Introduction to the mechanical design process applied to biological engineering, with examples of mechanical components interfacing with biological systems. Engineering properties of materials, loading, combined stress analysis, theories of failure. Systems approach in design, including safety, reliability and cost. 2 lecture hours, laboratory 3 hours per week. Corequisite: BENG 3800L. Prerequisite: MEEG 2303.

BENG3800L Mechanical Design in Biological Engineering Laboratory (FA, SP) Corequisite: BENG 3800.

BENG4103 Instrumentation in Biological Engineering (SP) Formerly BENG 4103) Introduction to the instrumentation of biological systems. Lecture 3 hours, laboratory 3 hours per week. Corequisites: BENG 4100L. Prerequisite: BENG 2103 or ELEC 2103.

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: BENG 4100L. Prerequisite: BENG 2103 or ELEC 2103.

BENG4100L Instrumentation in Biological Engineering Laboratory (SP) Corequisite: BENG 4103.

BENG4100M Honors Instrumentation in Biological Engineering Laboratory (SP) Corequisite: BENG 4103.
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Biological Engineering Laboratory (SP) Corequisite: BENG 4103.

BENG 4195 Biotechnology for Biological Systems (FA, Odd years) Principles of risk assessment including exposure assessment and dose response, and risk management. Methods of risk analysis modeling and simulation with computer software. Applications of risk analysis to food and environmental systems. Prerequisite: MATH 2564 and MBO 2103.

BENG4123 Biosensors & Bioinstrumentation (SP, FA, SU, VP, VQ) Principles of biological based sensing elements and interfacing techniques. Design and analysis methods of biosensing and transducing components in biostimulation. Applications of biosensors and biointerferometric in biotechnological and biomedical engineering. Lecture 2 hours, laboratory 3 hours per week. Corequisite: BENG 4120L. Prerequisite: MBO 2103 and BENG 4103.

BENG4120L Biosensors & Bioinstrumentation Laboratory (SP) Corequisite: BENG 4123.

BENG4203 Introduction to Biomedical Engineering (FA) Engineering principles 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. Topics include: overview of anatomy and physiology, medical devices, instrumentation and signal processing; physiological modeling, biomechanics, and fluid mechanics. Lecture 3 hours per week. Prerequisite: MEEG 2013, (MEEG 2403 or CHEG 2133), ELEG 2103, (MEEG 3334 or MEEG 3332 or MEEG 3103), MEEG 3103, and BIOL 1543.

BENG4213 Applications of Biomedical Engineering (SP) Continuation of BENG 4203. Biomedical engineers use fundamental principles of physics to design and analyze engineering systems that address human, veterinary, and environmental health problems. Lecture 2 hours, laboratory 3 hours per week. Corequisite: BENG 4203.


BENG4400L Controlled-Environment Structures for Biological Systems (IR) Corequisite: BENG 4400. INENG 4400. Laboratory 3 hours per week. Corequisite: MEEG 3103, (MEEG 3334 or MEEG 3332 or MEEG 3103), MEEG 3103, and BIOL 1543.

BENG4511H Honors Thesis (1-6) (SP, SU) Prerequisite: Honors candidacy.

BENG 4511 Honors Thesis in Biological Engineering (1-6) (IR) Special topics in biological engineering not covered in other courses. May be repeated. May be repeated for hours 8.

BENG4623 Biological Reactor Systems Design (FA, Even years) 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, bio-processing and organic (food/animal) waste treatment. Corequisite: MEEG 3733. Prerequisite: BENG 3733.

BENG4620L Biological Reactor Systems Design Laboratory (FA, Even years) Corequisite: BENG 4623.

BENG4703 Food & Bioprocess Engineering (SP, Even years) Introduction to engineering principles involved in the design of systems for handling, conditioning, and storage of agricultural materials. Lecture 2 hours, laboratory 3 hours per week. Corequisite: BENG 4700L. Prerequisite: BENG 3723 or CHEG 3723. Prerequisite: BENG 4620L.

BENG4700L Food & Bioprocess Engineering Laboratory (SP, Even years) Corequisite: BENG 4703.

BENG4803 Precision Agriculture (FA, Odd years) Introduction to passive and active remote sensing, remote sensing systems, optical radiation models, sensor models, data models, spectral transmirs, spatial transfers, correction and calibration, geo-rectification, classification, vegetative indices. Introduction to GIS, spatial interpolation, spatial modeling. Applications in agriculture, vegetation remote technology, hydrology, agriculture, remote monitoring, crop modeling. Prerequisite: GEOL 4413.

BENG5110L Agricultural Remote Sensing and GIS Laboratory (FA, Even years) Corequisite: BENG 4703.

BENG5123 Imaging and Remote Sensing Analysis of Biological and Agricultural Materials (FA, Odd years) Techniques of imaging and non-invasive analyses of biological and agricultural materials. Covering spectral sens- ings (IR, ray, UV, VIS), optical, imaging and analytical approaches, with emphasis on digital analysis, on-line monitoring and vision-based controls. Applications to automated food/fruit inspections, detect/contaminant detect- tion, and characterization of food non-food materials in real-time applications. Lecture 2 hours, laboratory 3 hours per week. Corequisite: BENG 4810L. Prerequisite: BENG 4800L.

BENG5140L Senior Biological Engineering Design I Laboratory (FA, Even years) Corequisite: BENG 4813.

BENG5141L 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 presentations. 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 Natural Resources Engineering (FA, Odd years) Engineering principles for the design of systems for utilization of surface water and ground water. Includes frequency analysis of rainfall, infiltration, runoff, evapotranspiration, hydraulic control structures, ground water pumping, drainage and irrigation. Lecture 2 hours, laboratory 3 hours per week. Corequisite: BENG 4905L. Prerequisite: CVEG 3213 or MEEG 3503.

BENG4900L Bioenvironmental Engineering Laboratory (FA, Odd years) Corequisite: BENG 4903. BENG4913 Bioenvironmental Engineering Seminar (SP, Even years) Engineering principles for the design of systems for the biological treatment and utilization of organic byproducts from animal and crop production and food and crop processing. Design of best management practices to protect bioenvironmental resources by minimizing non-point pollution (off-site movement of sediment, nutrients and other constituents) and by minimizing nuisance odors associated with land applied organic residues, inorganic fertilizers and pesti- cides. Emphasis on economic utilization of beneficial compo- nents of typical wastes. Lecture 2 hours, laboratory 3 hours per week. Pre- or Corequisite: BENG 4903 or CVEG 3223. Corequisite: BENG 4900L. Prerequisite: CVEG 3213 or MEEG 3503.

BENG4910L Bio-Environmental Engineering Laboratory (SP, Even years) Corequisite: BENG 4913.

BENG4923 Non-Point Source Pollution Engineering (SP, Even years) Corequisite: BENG 4923. Discussion of best management practices to protect bioenvironmental resources by minimizing non-point pollution (off-site movement of sediment, nutrients and other constituents) and by minimizing nuisance odors associated with land applied organic residues, inorganic fertilizers and pesticides. Emphasis on economic utilization of beneficial components of typical wastes. Lecture 2 hours, laboratory 3 hours per week. Pre- or Corequisite: BENG 4903 or CVEG 3223. Corequisite: BENG 4900L. Prerequisite: CVEG 3213 or MEEG 3503.

BENG4920L Non-Point Source Pollution Engineering (SP, Odd years) Corequisite: BENG 4923.

BENG500V Advanced Topics in Biological Engineering (1-6) (FA, SP, SU) Special problems in fundamental and applied research. Prerequisite: graduate standing.

BENG5103 Advanced Instrumentation in Biological Engineering (SP, Even years) Applications of advanced instrumentation in biological systems. Emphasis on updated sensing and transducing tech- nologies, data analysis, and analytical instrumentation. Prerequisite: BENG 4103.

BENG5100L Advanced Instrumentation Laboratory (SP, Even years) Corequisite: BENG 5103.

BENG5113 Agricultural Remote Sensing and GIS (FA, Even years) Introduction to passive and active remote sensing, remote sensing systems, optical radiation models, sensor models, data models, spectral transmirs, spatial transfers, correction and calibration, geo-rectifica-
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ZOOLOGY 4420L Comparative Physiological Laboratory (SP) Comparative demonstrations of cell processes involved in growth, metabolism, transport, excitation, signaling and motility, with emphasis on function and regulation in eukaryotic, primarily animals. Lecture 3 hours. Corequisite: BIOL 2533 and BIOL 2531L and CHEM 3813 and PHYS 2033.

ZOOLOGY 4403L Vertebrate Embryology Laboratory (SP) Vertebrate Embryology Laboratory. 30 hours per week. Corequisite: BIOL 4540L and BIOL 4541L or equivalent and junior standing.

ZOOLOGY 4450L Comparative Vertebrate Embryology Laboratory (SP) Comparative Vertebrate Embryology Laboratory. 2 hours per week. Corequisite: BIOL 4540L and BIOL 4541L or equivalent and Junior standing.
BIO5434 Population Evolution (FA, Even years) Advanced survey of the mechanisms of evolutionary change with special emphasis on advances since the Modern Synthesis. Historical, theoretical, and population genetic approaches are discussed. Recommended: BIOL 3023 and BIOL 3321L and BIOL 3861L. Prerequisite: BIOL 3323 and BIOL 3863.

BIO5463 Physiological Ecology of Animals (SP, Odd years) An introduction to physiological ecology and the role of animals in their environment. Emphasis on the definition, etiology, pathology, and treatment procedures of hearing loss. Prerequisite: BIOL 5420L and BIOL 4230L.

BIO549V Research in Vertebrate Morphology (1-6) (FA, SP, SU) Coursework required. Prerequisite: BIOL 5420L. Prerequisite: graduate standing. BIOL700V Doctoral Dissertation (1-12) (FA, SP, SU) Prerequisite: graduate standing.

BIO5763 Ornithology (SP, Even years) (Formerly ZOOL 5763) Taxonomy, morphology, physiology, behavior, and ecology of birds. Lecture, laboratory, and field work. Prerequisite: BIOL 5760L. Prerequisite: 10 hours of biological sciences.

BIO5760L Ornithology Laboratory (SP, Even years) (Formerly ZOOL 5760L) Corequisite: BIOL 5760. Lecture 2 hours per week. Corequisite: BIOL 5760L.

BIO5783 Mammmalogy (IR) (Formerly ZOOL 5483) Lectures and laboratory dealing with classification, morphological, distribution, ecology, behavior, and physiology of mammal. Corequisite: BIOL 5780L. Prerequisite: 10 hours of biological sciences.

BIO5780L Mammalogy Laboratory (IR) (Formerly ZOOL 5780L) Corequisite: BIOL 5783. Lecture 2 hours per week. Corequisite: BIOL 5780L.

BIO579V Research in Vertebrate Zoology 1-6 (FA, SP, SU) Prerequisite: BIOL 5790L. Prerequisite: 10 hours of biological sciences.

BIO580V Research in Botany 1-6 (FA, SP, SU) Prerequisite: BIOL 5800L. Prerequisite: 10 hours of biological sciences.

BIO5814 Limnology (FA, Odd years) (Formerly ZOOL 5814) Physical, chemical, and biological conditions of inland waters. Lecture 3 hours per week. Laboratory arranged. Corequisite: BIOL 5807L. Prerequisite: (CHEM 1123 and CHEM 1121L) or equivalent and 12 hours of biological sciences.

BIO5810L Limnology Laboratory (FA, Odd years) (Formerly ZOOL 5810L) Corequisite: BIOL 5814. Lecture 2 hours per week. Prerequisite: 12 hours of biological sciences.

BIO5822 Animal Distribution (FA, Even years) (Formerly ZOOL 5822) Physical, chronological, and biological factors affecting animal distribution, emphasizing terrestrial and freshwater vertebrates. Corequisite: BIOL 5783.

BIO5833 Animal Behavior (FA, Odd years) (Formerly ZOOL 5833) Organization, regulation, and physiological behavior, emphasizing vertebrates. Lecture, laboratory, and field work. Corequisite: BIOL 5800L.

BIO5830L Animal Behavior Laboratory (FA, Odd years) (Formerly ZOOL 5830L) Corequisite: BIOL 5833.

BIO5844 Community Ecology (SP, Even years) Survey of the theoretical and applied aspects of community processes stressing structure, trophic dynamics, community interactions, and major community types. Corequisite: BIOL 5840L. Prerequisite: BIOL 5840L.

BIO5840L Community Ecology Laboratory (SP, Even years) Corequisite: BIOL 5844.

BIO585V Field Ecology 1-3 (SP, SU) Project-oriented approach employing current field and laboratory techniques, experimental design and data analysis. Field trip is required. May be repeated.

BIO589V Research in Field Zoology 1-6 (FA, SP, SU) Prerequisite: BIOL 5890L. Prerequisite: 12 hours of biological sciences.

BIO5890V Special Topics in Botany 1-6 (FA, SP) Consideration of new areas of botanical science not yet treated adequately in textbooks or in other courses. May be repeated for 6 hours. Prerequisite: 8 hours of biological sciences.

BIO5914 Stream Ecology (FA, Even years) (Formerly ZOOL 5914) Current concepts and research in fluvio-ecological dynamics. Lecture, laboratory, field work and individual research projects arranged. Corequisite: BIOL 5910L. Prerequisite: some previous course work in ecology is essential.

BIO5910L Stream Ecology Laboratory (FA, Even years) (Formerly ZOOL 5910L) Corequisite: BIOL 5914.

BIO591V Special Topics in Microbiology 1-6 (FA, SP) Consideration of areas of molecular microbiology in which research is currently being conducted. Corequisite: BIOL 5910L.

BIO5922 Conservation of Endangered Species (SP, Odd years) Biological, bureaucratic, and political reasons for protection of the nation's plants and animals. Conservation biology, ecology, population genetics, and legal implications of protecting selected species in ecosystems are discussed. Lecture 2 hours per week. Prerequisite: 12 hours of biological sciences.

BIO5933 Global Biogeochemistry (SP, Odd years) This course covers the chemical, biological, and geological processes occurring with ecosystems. An understanding of these processes are used to investigate how they form the global biogeochemical cycles that provide energy and nutrients for life. Class discussions focus on the global changes and the effects of more recent anthropogenic influences. Prerequisite: college level chemistry or biochemistry.

BIO6060V Master's Thesis 1-6 (FA, SP, SU) Prerequisite: graduate standing.

BIO6800V Doctoral Dissertation 1-12 (FA, SP, SU) Prerequisite: graduate standing.

BLAW2013 Legal Environment of Business (FA, SP, SU) Introduction to the legal environment in which businesses operate. Topics covered in this survey course include: foundations of American legal system, forms of doing business, employment and labor law, business production and sales, antitrust, and ethics.

BLAW3033 Commercial Law (FA, SP) A study of the laws applicable to commercial transactions. Topics covered include the common law of contracts, Articles Two (Sales) and Three (Commercial Paper) of the Uniform Commercial Code, secured transactions, suretyship, and bankruptcy. Prerequisite: BLAW 2013 or WCOB 1012.

BLAW3043 Law of Business Organization (FA, SP) A study of the laws applicable to business organizations. Topics covered include partnerships, corporations, limited liability companies, including antitrust and employment discrimination. Prerequisite: BLAW 2013.

CDIS2253 Introduction to Communicative Disorders (FA, SP) An introductory course which surveys the professional interests of speech-language pathology and audiology with specific attention to the general recognition and classification of disorders of speech, language, and hearing, and general trends in rehabilitation. Consideration given to the classroom teacher's involvement in communicative disorders.

CDIS3103 Introduction to Audiology (FA) introduction to the basic concepts for administering and interpreting hearing tests, including the anatomy and physiology of the auditory system, disorders of the ear, and techniques for administering and interpreting basic pure tone threshold tests.

CDIS3124 Normal Phonology and Articulatory Process (FA) Analysis of the English speech sounds as a basis for speech improvement; physiological positions and movements; acoustic qualities and transcription in the international phonetic alphabet. Corequisite: CDIS 3120L.

CDIS3120L Phonetic Transcription Laboratory (FA) Transcription of the international phonetic alphabet. Corequisite: CDIS 3124.

CDIS3263 Articulation Disorders (SP) A study of the definition, etiology, pathology, and treatment procedures of problems of articulation. Prerequisite: CDIS 3124 and CDIS 3123.

CDIS3213 Anatomy of Physiology of the Speech and Hearing Mechanisms (FA) Structure and function of the organic mechanisms responsible for speech, language, and hearing.

CDIS3244 Language Development in Children (FA) (Formerly CDIS 3233) Study of the nature of language behavior and of the typical development of speech and language functions for communicative purposes, with primary emphasis on the preschool and early school-age child. Corequisite: CDIS 3220L.

CDIS3233 Introduction to Clinical Practice (FA, SP) (Formerly CDIS 3234) An introduction to the various aspects of clinical operations involving technical and interpersonal relationship skills necessary for case management and a survey of professional standards.

CDIS3923H Honors Colloquium (IR) Treats a special topic or issue, offered as part of the honors program. May be repeated. Prerequisite: honors candidacy (not restricted to candidacy in speech or dramatic art).

CDIS399VH Honors Course 1-6 (IR) May be repeated for 12 hours. Prerequisite: junior standing.

CDIS4001 Clinical Practicum Junior (FA, SP) Entry-level training in speech-language clinical practicum activities. This course is taken for satisfactory or unsatisfactory credit. Prerequisite: CDIS 2224 and CDIS 2220L and CDIS 3203 and CDIS 3223 and CDIS 3234 and CDIS 3230L plus 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
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Deaf Community that uses it. This class will study expressive and sign language, ASL vocabulary, structure and grammar. The Deaf Community will be studied through videos and readings. Issues in Deaf Education will also be introduced.

CDIS4133 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 amplification, auditory training, and speech perception in rehabilitation. Prerequisite: CDIS 3103.

CDIS4183 Clinical Assessment of Speech and Language Disorders (SP) Study of the basic diagnostic procedures used in speech-language pathology. Emphasis is placed on the clinical processes of assessment, including criteria for test selection, techniques in test administration, and interpretation of test results. Prerequisite: prior coursework in CDIS.

CDIS4193 Introduction to Speech and Hearing Science (SP) Study of the acoustic structure of oral speech and the auditory skills underlying speech perception. Prerequisite: CDIS 3203, CDIS 3213, CDIS 3214, and CDIS 3120L.

CDIS4223 Language Disorders in Children (SP) Study of disorders of language acquisition and usage in children and adolescents, with emphasis upon the nature, assessment, and treatment of such disorders. Prerequisite: CDIS 3223.

CDIS4231 Clinical Practicum Senior (FA, SP) Practicum activities in speech-language pathology. This course is taken for either satisfactory or unsatisfactory credit. Prerequisite: CDIS 4001.

CDIS4241 Clinical Practicum: Public Schools (FA, SP) Practicum activities in speech-language disorders in a public school setting.

CDIS4253 Neurological Bases of Communication (FA) A study of the structures and functions of the central and peripheral nervous systems as they relate to human speech, language, and cognition. Prerequisite: CDIS 3213.

CDIS4263 Advanced Audiology (FA) Study of the basic techniques used in audiological assessment of children and adults, including pure tone audiometry, speech audiometry, and special tests of hearing function. Prerequisite: CDIS 3103.

CDIS4273 Communication Behavior and Aging (FA) Study of the effects upon communication of normal aspects of the aging process, from early adulthood through out the the lifespan. Changes in speech, language, and hearing functioning are identified; common alterations in communicative disorders correlated with advanced age are discussed.

CDIS428V Clinical Practicum: Hearing Disorders (1-3) (FA, SP, SU) Practicum activities in speech-language pathology assessment, service delivery in a family context, coordination with other disciplines, and legislation mandating services.

CDIS429V Special Problems (1-3) (FA, SP, SU) Prerequisite: advanced standing.

CDISS102 Research Methodology in Communication Disorders (SU) An examination of methods of research in speech-language pathology and audiology with an emphasis on practical and theoretical aspects. Topics include research designs, research questions, study populations and sample sizes, data collection and statistical analysis. Prerequisite: CDIS 3203 or equivalent.

CDISS112 Seminar in Early Intervention (FA) Study of a family-centered, transdisciplinary approach to early intervention with infants and toddlers at risk for communicative disorders. Topics include early communication development, service delivery in a family context, coordination with other disciplines, and legislation mandating services. Prerequisite: CDIS 3223 or equivalent, and graduate standing.

CDISS122 Feeding and Swallowing Disorders (FA) Study of the etiology, assessment, and remediation of feeding and swallowing disorders in children and adults. Prerequisite: CDIS 3213 or equivalent, and graduate standing.

CDISS121 Feeding and Swallowing Disorders Lab (FA) Observation and interpretation of techniques used for assessment and remediation of feeding and swallowing disorders in children and adults. Corequisite: CDISS 5122.

CDISS133 Discourse Analysis and Treatment (FA, SU) Prerequisite: CDIS 5120. Course continues where discourse analysis and treatment were begun in CDISS 5122. Focus on the development of written discourse structures and the processes involved in their development. Prerequisite: satisfaction of the prerequisite, completion of at least 2 semesters of CDIS 528V.

CDISS78V Internship: Public School Site (3-6) (FA, SP, SU) Field placement in approved public school setting for clock hour training in speech-language pathology assessment and treatment. Students in the Master’s program must enroll in a minimum of 3 credit hours of CDIS 558V or CDIS 558V during their last semester of graduate studies. Prerequisite: graduate standing; completion of all required practicum courses.

CDISS90V Special Problems (1-6) (FA, SP, SU) Prerequisite: graduate standing.

CDISS99V Seminar in Professional Issues (1-3) (SP, SU) Selected topics in professional issues in speech-language pathology and audiology.

CDESM00V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

CDISS99V Seminar in Communication Sciences and Disorders (1-6) (IR) Discussion of pertinent topics and issues in the discipline of communication sciences and disorders. May be repeated for 18 hours. Prerequisite: advanced graduate standing.

CDISB500V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

CDESS700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: graduate standing.

(CEMB) CELL AND MOLECULAR BIOLOGY

CEMB590V Special Topics in Cell and Molecular Biology (1-6) (FA, SP, SU) Consideration of new areas in Cell and Molecular Biology not yet treated adequately in textbooks or in other courses. This course may be repeated, provided subject matter is different for a maximum of 6 hours of credit. May be repeated for 6 hours.

CEMB5911 Seminar in Cell and Molecular Biology (FA, SP) Discussion of current topics in Cell and Molecular Biology. All graduate students in the Cell and Molecular Biology degree program must enroll every fall and spring semester in this course or an approved alternate seminar course. Prerequisite: graduate standing.

CEMB600V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

CDESS700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: graduate standing.

(CENG) COMPUTER ENGINEERING

CENG1111 Introduction to Computers (FA, SP, SU) Introductory course for students majoring in computer science or computer engineering. Topics include Von Neumann architecture, data representation, high-level languages, loops, functions, and pointers. Corequisite: CEGN 1111L.

CENG1111H Honors Introduction to Computers (FA, SP, SU) Introductory course for students majoring in computer science or computer engineering. Topics include Von Neumann architecture, data representation, high-level languages, loops, functions, and pointers. Corequisite: CEGN 1111L.

CENG1111L Introduction to Computers Laboratory (FA, SP, SU) Laboratory experiences to accompany CENG 1111, (FA, SP, SU) Laboratory experiences to accompany CENG 1111. Corequisite: CENG 1111L.

CENG1123 Introduction to Programming (FA, SP, SU) Introductory course to programming. Topics include problem analysis and specification, design and testing of programming solutions, tokens, decomposition, abstraction, iteration and recursion, program I/O and files. Credit will be allowed for only one of CSCE 1123 and CENG 1123. Corequisite: CENG 1123L. Prerequisite: CENG 1111L.

CENG1121 Introduction to Programming Laboratory (FA, SP, SU) Laboratory experiences to accompany CENG 1121L. Corequisite (FA, SP, SU) Corequisites: CENG 1121L. Prerequisite: (CSCE 1123 or CENG 1123) and MATH 2122.

CENG2113 Digital Techniques I (FA) Introduction to the hardware aspects of digital computers, logic gates, flip-flops, registers, memory devices, and sequential state machines. Corequisite: CENG 2120L. Prerequisite: CENG 2113L.
CHEG1113 Introduction to Chemical Engineering
(FA, SU) Introduction to the field of chemical engineering. Industrial chemistry, unit operations, applications of computers and computer controls are discussed.

CHEG1123 Introduction to Chemical Engineering II
(SP, SU) Multiple-reaction, multi-unit mass balances; vapor-liquid equilibrium, enthalpy balances; rate concepts; thermodynamics, chemical reaction stage concepts; economic, professional, ethics; computer applications; introduction to process simulation. Prerequisite: CHEG 1113 and CHEM 1103 or (CHEM 1123).

CHEG1135 Fundamentals of Chemical Engineering
(SP, SU) This course is a combination of CHEG 4623 and CHEG 1123. Basic chemical engineering terms, principles and concepts are presented.

CHEG4163 Honors Stage Mass Transfer
(FA, SP) Applications of chemical engineering principles to design and operation of continuous and discontinuous systems involving chemical reactions, solid-liquid, liquid-liquid, and gas-liquid systems. Prerequisite: CHEG 3323.

CHEG4263 Environmental Experimental Methodology
(FA) Introduction to experimental design, environmental analytical method quality assurance of analytical measurements, sample collection and preservation. Laboratory work necessary to support a field scale tracer experiment will be required. Prerequisite: senior or graduate standing.

CHEG4273 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.

CHEG4332L Chemical Engineering Laboratory III
(FA, SP, SU) Experimental investigations of heat and mass transfer. Special attention is paid to a high degree 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. Corequisite: CHEG 3323.

CHEG4333D Lab III Drill
(FA, SP) Corequisite: CHEG 4332L.

CHEG4413 Chemical Engineering Design I
(FA, SP) Principles of cost estimation, profitability, economic analysis, and economic balances as practiced in the chemical process industries. Special emphasis on the solution of problems involving the combination of engineering principles. Pre- or Corequisite: CHEG 4330D. Prerequisite: CHEG 3323.

CHEG4420 Automatic Process Control
(SP) Application of mathematical modeling methods to the description of transient phenomena of interest to process engineers. Modes of control and principles of feedback control are introduced with applications to process engineering problems. Prerequisite: CHEG 3340 and CHEG 3134.

CHEG4420H Honors Automatic Process Control
(Sp) Application of mathematical modeling methods to the description of transient phenomena of interest to process engineers. Modes of control and principles of feedback control are introduced with applications to process engineering problems. Prerequisite: CHEG 3340 and CHEG 3134.

CHEG4433H Chemical Engineering Honors Thesis
(FA, SP) Prerequisite: CHEG 4443D.

CHEG4443D Honors Chemical Engineering Design II
(FA, SP) Responsibility for decision making is placed on the students in the solution of a comprehensive, open ended problem based on an industrial process. Both formal oral and formal written presentation of results are required. Corequisite: CHEG 4440D. Prerequisite: CHEG 4443D and CHEG 4163.

CHEG4443H Honors Chemical Engineering Design II
(FA, SP) Responsibility for decision making is placed on the students in the solution of a comprehensive, open ended problem based on an industrial process. Both formal oral and formal written presentation of results are required. Corequisite: CHEG 4440D. Prerequisite: CHEG 4443D and CHEG 4163.

CHEG4443H Honors Chemical Engineering Design II
(FA, SP) Responsibility for decision making is placed on the students in the solution of a comprehensive, open ended problem based on an industrial process. Both formal oral and formal written presentation of results are required. Corequisite: CHEG 4440D. Prerequisite: CHEG 4443D and CHEG 4163.
CHEM3514 Physical Chemistry I (SP) Chemical thermodynamics, phase equilibria, chemical equilibrium; introduction to the structure and properties of solution, liquid state and solid state; chemical kinetics. Lecture and recitation 4 hours per week. Pre- or Corequisite: MATH 2546. Prerequisite: CHEM 1123 and CHEM 1121L and PHYS 2074.

CHEM3512L Physical Chemistry Laboratory (SP) Experimental studies of molecular structure, thermochemistry, and chemical kinetics, and the determination of other physicochemical properties of matter. Laboratory 8 hours per week.

CHEM3603 Organic Chemistry (FA, SU) Lecture 3 hours per week. Primarily for non-majors and B.A. chemistry majors who do not take the CHEM 3703/3702L and 3713/3712L sequence. Pre- or Corequisite: CHEM 3601L. Corequisite: CHEM 3600D. Prerequisite: CHEM 1123 and CHEM 1121L and PHYS 2074.

CHEM3603H Honors Organic Chemistry I (FA, SU) Lecture-discussion and laboratory exercises in organic chemistry. Meets 3 hours per week. Prerequisite: CHEM 3603.


CHEM3600E Honors Organic Chemistry I Drill (FA, SU) Corequisite: CHEM 3603 H.

CHEM3613 Organic Chemistry II (SP, SU) Lecture 3 hours per week. Primarily for non-majors and B.A. chemistry majors who do not take the CHEM 3703/3702L and 3713/3712L sequence. Pre- or Corequisite: CHEM 3611L. Corequisite: CHEM 3610D. Prerequisite: CHEM 1123 and CHEM 1121L and CHEM 3603 and CHEM 3601L. Prerequisite: CHEM 1123 and CHEM 1121L and CHEM 3603 and CHEM 3601L. Pre- or Corequisite: CHEM 3610E. Prerequisite: CHEM 1123 and CHEM 1121L and CHEM 3603 and CHEM 3601L.

CHEM3613H Honors Organic Chemistry II (SP, SU) Pre- or Corequisite: CHEM 3611M. Corequisite: CHEM 3610E. Prerequisite: CHEM 1123 and CHEM 1121L and CHEM 3603 and CHEM 3601L.

CHEM3612M Honors Organic Chemistry II Laboratory (SP, SU) Pre- or Corequisite: CHEM 3613H. Laboratory exercises in organic chemistry. Meets 3 hours per week. Prerequisite: CHEM 3613.

CHEM3610D Organic Chemistry II Drill (SP, SU) Corequisite: CHEM 3613.

CHEM3610E Honors Organic Chemistry II Drill (SP, SU) Corequisite: CHEM 3613H.

CHEM3703 Organic Chemistry (FA) Basic chemistry of the compounds of carbon. Primarily for B.S. and B.A. chemistry majors. Corequisite: CHEM 3700D and CHEM 3702L. Prerequisite: CHEM 1123 and CHEM 1121L.

CHEM3703L Organic Chemistry Laboratory I (FA) Introduction to basic techniques of synthesis, isolation, and determination of structure and reactivity of organic compounds. Lecture-discussion 1 hour, laboratory 3 hours per week. Corequisite: CHEM 3702.


CHEM3713 Organic Chemistry II (FA, SU) Basic chemistry of the compounds of carbon. Primarily for B.S. and B.A. chemistry majors. Laboratory 3 hours per week. Pre- or Corequisite: CHEM 3701L. Corequisite: CHEM 3702L. Prerequisite: CHEM 1123 and CHEM 1121L.

CHEM3713L Organic Chemistry II Laboratory (SP) Continuation of CHEM 3702L and introduction to basic techniques of synthesis, isolation, and determination of structure and reactivity of organic compounds. Lecture-discussion and laboratory 8 hours per week. Corequisite: CHEM 3713. Prerequisite: CHEM 3702L.


CHEM3710 Organic Reaction to Biochemistry, (FA, SU) Primarily for students in the agricultural, biological, and related sciences. Survey of the fundamentals of biochemistry. Credit may not be applied to the minimum 90-hour requirement for a B.S. lecture 3 hours per week. Prerequisite: CHEM 3613 and CHEM 3611L (or CHEM 3713 and CHEM 3712L or CHEM 2613 and CHEM 2611L).

CHEM3923H Honors Colloquium (IR) Covers a special topic in organic chemistry. Honors only. May be repeated. Prerequisite: Honors candidacy (may not be restricted to candidacy in chemistry).

CHEM4011H Honors Seminar (SP) Research seminar for chemistry seniors enrolled in the program. Enrollment is required each spring semester for honors students. Senior honors students must make one research presentation to graduate with honors. Prerequisite: junior standing.

CHEM4043 Organic Chemistry (SP, Even years) Application of chemical principles and techniques to specific environmental problems, and the chemical interrelations among these problems. Topics include the chemistry of fossil fuels, new energy sources, energy storage concepts, air pollution, mineral resources, solid wastes, water, and waste water treatment, pesticides, and toxic materials. Does not carry graduate credit for chemistry majors. Prerequisite: CHEM 1123 and CHEM 1121L and CHEM 3613 and CHEM 3611L (or CHEM 3713 and CHEM 3712L and CHEM 3611L or CHEM 3453).

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 3713.

CHEM4213 Instrumental Analysis (SP) Provides laboratory experience in parallel with the lecture material in CHEM 4213. Laboratory 3 hours per week. Pre- or Corequisite: CHEM 4213.

CHEM4273 Experimental Methods in Organic and Inorganic Chemistry (SP) Reactions and properties of inorganic and organic compounds. Emphasis on the application of synthetic and spectroscopic methods in organic and inorganic chemistry, including mass 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 students may not receive graduate credit for this course and CHEM 5753. Pre- or Corequisite: CHEM 4720D. Corequisite: CHEM 4722D. Prerequisite: CHEM 3613 and CHEM 3611L (or CHEM 3713 and CHEM 3712L) and CHEM 3504 and CHEM 3514.


CHEM4720L Experimental Methods in Organic and Inorganic Chemistry Laboratory (SP) Corequisite: CHEM 4723.

CHEM4853 Biochemical Techniques (SP) Techniques for handling, purifying and analyzing enzymes, structural proteins, and nucleic acids. Laboratory 6 hours per week. Pre- or Corequisite: CHEM 5813 or CHEM 3813.

CHEM5401 Senior Thesis (1-6) (FA, SP, SU) Research project in chemistry. May be repeated. Prerequisite: senior chemistry major.

CHEM5405 Chemistry Research (1-4) (FA, SP, SU) Research project in chemistry. May be repeated. Prerequisite: senior chemistry major.

CHEM5101 Introduction to Research (FA, SP, SU) Introduces new graduate students to research opportunities and skills in chemistry and biochemistry. Meets 1 hour per week during which new students receive information from faculty regarding research programs in the department and training in the use of research support facilities available in the department.

CHEM5391 Advanced Inorganic Chemistry II (IR) Chemistry of metallic and non-metallic elements emphasizing molecular structure, bonding and the classification of reactions. Emphasis on recent developments. Prerequisite: CHEM 3613 or CHEM 3813.

CHEM5153 Structural Chemistry (IR) Determination of molecular structure by spectroscopic, diffraction, and other methods. Illustrative examples will be chosen mainly from a biochemistry viewpoint. Pre- or Corequisite: CHEM 3504 and CHEM 4123.

CHEM520V Science Teachers Workshop (1-3) (IR) A course emphasizing hands-on demonstrations and laboratory exercises for K-12th grade chemistry teachers. Emphasis on current topics from the areas of biochemistry, chemistry, and physical science are discussed in a lecture format; grade appropriate exercises and demonstrations illustrating these topics are presented in a laboratory setting. Course cannot be counted toward the requirements for the B.S., B.A. or any graduate degree in chemistry and biochemistry. May be repeated for 6 hours.

CHEM5223 Chemical Instrumentation (SP, Odd years) Use and application of operational amplifiers to chemical instrumentation; digital electronic microprocessor interfacing; software development and real-time data acquisition. Prerequisite: CHEM 4213 and PHYS 2074.

CHEM5233 Chemical Separations (FA, Even years) Modern separation methods including liquid chromatography (adsorption, liquid-liquid partition, ion exchange, exclusion) and gas chromatography. Theory and instrumentation is discussed with emphasis on practical aspects of separation science. Prerequisite: CHEM 4213.

CHEM5243 Electrochemical Methods of Analysis (SP) Topics will include: surface analysis techniques, ion transfer kinetics, reversible and irreversible electrode processes, followed by a discussion of chronoamperometry, chronocoulometry, polarography, voltammetry and chronoamperometry. Prerequisite: CHEM 3504 and CHEM 3524.

CHEM5253 Spectrochemical Methods of Analysis (FA, Odd years) Principles and methods of modern spectroscopic analysis. Optics and instrumentation necessary for spectroscopy is also discussed. Topics include atomic and molecular absorption and emission techniques in the ultraviolet, visible, and infrared spectral regions. Prerequisite: CHEM 4213.

CHEM5263 Nuclear Chemistry (FA, Odd years) Nuclear structure and properties, natural and artificial radioactivity, radioactive decay processes, nuclear reaction, interactions of radiation with matter. Prerequisite: CHEM 3514.

CHEM5273 Cosmochemistry (SP, Odd years) Laws of distribution of the chemical elements in nature, cosmic and terrestrial abundance of elements; origin and age of the earth, solar system, and the universe. Prerequisite: CHEM 3514.

CHEM5453 Quantum Chemistry I (SP, Odd years) Fundamental quantum theory: Hamiltonian formalism in classical and quantum mechanics, Schrödinger equation, operators, angular momentum, harmonic oscillator, barrier problems, rigid rotor, hydrogen atom, interaction of matter with radiation. Prerequisite: CHEM 3504. Recommended: MATH 3404.

CHEM5454 Quantum Chemistry II (SP, Even years) Continuation of Quantum Chemistry I. Matrix formalism, spin, atomic structure, the chemical bond, valence-bond, valence-bond method, molecular-orbital theory, symmetry, diatomic molecules, hybridization, conjugated systems; intro-
duction to molecular spectroscopy, magnetic resonance, lig- and-field effects, and computational techniques for molecular cal-
culation. Prerequisite: CHEM 3514.

CHEM5473 Chemical Kinetics (SP) Theory and applications of the principles of kinetics to reactions between substances in the gaseous state and in solution. Prerequisite: CHEM 3511.

CHEM5513 Biochemical Evolution (SP, Even years) Abiolic synthesis of biomolecules on Earth, the ori-
gin of complex life, molecular biology, and evolution. Prerequisite: CHEM 5513.

CHEM5653 Theoretical Organic Chemistry (FA) Introduction to the theoretical interpretation of reactivity, reac-
tion mechanisms, and molecular structure of organic com-
ounds. Applications of electronic structure emphasis on recent developments. Prerequisites: CHEM 3514 and CHEM 3713 and CHEM 3712L.

CHEM5633 Organic Reactions (FA) The more impor-
tant types of organic reactions and their applications to vari-
cious classes of compounds. Prerequisites: CHEM 3514 and
CHEM 3713 and CHEM 3712L.

CHEM5753 Physical Methods in Organic Chemistry (FA) Study of physical measurements of organic compounds in terms of molecular structure. Emphasis on spectroscopic methods (infrared, ultraviolet, magnet resonance, and mass spectra). Prerequisite: CHEM 3712L and CHEM 3514 and CHEM 3513.

CHEM5813 Biochemistry I (FA) The first of a two-
course series covering biochemistry for graduate students in biology, agriculture, and chemical. Topics covered include protein chemistry, enzyme kinetics, energy metabolism, and carbohydrate metabolism. Prerequisites: CHEM 3712L and CHEM 3713 (or CHEM 3613 and CHEM 3611L) and CHEM 3514 (or CHEM 3453 and CHEM 3451L).

CHEM5843 Biochemistry II (SP) A continuation of CHEM 5813 covering topics including biological membranes and bioenergetics, photosynthesis, lipids and lipid metabo-
lism, nucleic acid structure and synthesis, and molecular genetics. Prerequisite: CHEM 5813.

CHEM600V Master's Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

CHEM601I Chemistry Seminar (FA, SP) Members of the faculty, graduate and advanced students meet weekly for discussion of current chemical research. Weekly seminar sections are offered for the Departmental seminar and for divisional seminars in biochemistry and in analytical, inorgan-
ic, nuclear, organic, and physical chemistry. Chemistry gradu-
ate 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 96 semester-hour requirement for any chemistry graduate degree. Prerequisite: CHEM 3514 and CHEM 3712L and CHEM 3713 and senior or graduate standing.

CHEM619V Special Topics in Inorganic Chemistry (FA) Topics which have been covered in the past include: hydrogen catalysis, isotope effect studies of organic reaction mechanisms, organometallic chemistry, stereochemistry, photochemistry, and carbanion chemistry. May be repeated.

CHEM6283 Physical Biochemistry (FA, Even years) Physical chemistry of proteins, nucleic acids, and biological membranes. Ultracentrifugation, absorption and flu-
orescent spectrophotometry, nuclear magnetic resonance spectroscopy, x-ray diffraction, and other techniques. Prerequisite: CHEM 3513 and CHEM 3514 or graduate standing.

CHEM6683 Enzymes (FA, Odd years) Isolation, characterization, and general chemical and biochemical properties of enzymes. Kinetics, mechanisms, and control of enzyme reactions. Prerequisite: graduate standing (or CHEM 3514 and CHEM 5813).

CHEM6693 Bioenergetics and Biomembranes (SP, Even years) Cellular energy metabolism, photosyn-
thesis, membrane transport, properties of membrane pro-
teins, and energy transfer to biological systems. Prerequisite: CHEM 5813 and CHEM 5843.

CHEM700V Doctoral Dissertation (1-6) (FA, SP, SU) Prerequisite: graduate standing.

(CHIN) CHINESE

CHIN1003 Elementary Chinese I (FA) CHIN1013 Elementary Chinese 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: CHIN 1003 or equivalent.

CHIN2003 Intermediate Chinese I (FA) Intermediate courses lead to greater facility in spoken language and to more advanced reading skills. Prerequisite: CHIN 1013 or equivalent. UNIVERSE COURSE

CHIN2003 Intermediate Chinese II (SP) Continued development of basic speaking comprehension and writing skills and intensive development of reading skills. Prerequisite: CHIN 2003 or equivalent.

CHIN3003 Advanced Chinese (FA) Continues to develop speaking, listening, reading and writing skills and presents more complex forms and structures of the language as well as additional cultural content. Prerequisite: CHIN 2013.

CHIN3033 Conversation (IR) Guided conversation practice for the post-intermediate student. Prerequisite: CHIN 2013 or equivalent.

CHIN3103 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 eth-
nic, modern history, contemporary society, education, lan-
guage, customs, and visual arts. This course is taught in English. May be repeated for 6 hours.

CHIN3983 Special Studies (IR) May be offered in subject not specifically covered by courses otherwise listed. May be repeated for 6 hours.

(CIED) CURRICULUM AND INSTRUCTION

CIED6003 Developmental Reading (FA, SP, SU) A structured individualized laboratory course in the improve-
ment of reading skills. For students not meeting U of A admissions reading placement standards. University credit given; does not count towards graduation.

CIED1002 Introduction to Education (FA, SP, SU) Integrates psychological, sociological, and philosophical foun-
dations of education, involvement in field experiences. Encourages prospective teachers to become reflective practitioners by emphasizing organization of school systems, planning and implementation of effective classroom environment, development of teaching strategies, and new directions in education. Corequisite: CIED 1011.

CIED1011 Introduction to Education: Practicum (FA, SP, SU) A 30-hour early field experience designed to give prospective teachers opportunities to observe and part-
ticipate in a variety of school activities and field experiences. Focus on 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.

CIED3003 Early Childhood Education Practicum (SP, SU) The study of kindergarten and preschool programs: social context of early childhood education, purposes, research basis, curriculum development, methods, and materials. Corequisite: CIED 3001. Prerequisite: CIED 1002 and CIED 1011.

CIED3001 Early Childhood Education Practicum (FA, SP, SU) This practicum course provides opportunities for students to observe and practice providing instruction and guidance in preschool settings. Corequisite: CIED 3003. Prerequisite: admission to Teacher Education.

CIED3023 Survey of Exceptionalities (FA, SP, SU) A survey of the characteristics of students with exceptional needs. Reviews the definitions of exceptionalities, learning and behavior characteristics of exceptionali-
ties, the legal basis for the education of persons with excep-
tionalities in both elementary and secondary schools. Prerequisite: CIED 1002 and CIED 1011; or MUED 2012. CIED3033 Classroom Leadership (FA, SP, SU) 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 2012; and PSYC 3093.

CIED3043 Introduction to Middle Level Principles and Methods (FA, SP) A comprehensive overview of the key components, principles, methodologies, and research foun-
dations to middle level education. Focus on the relationship between middle level learners and site-based field experience are integrated with course con-	ent to provide continuity between theory and practice. Portfolio expectations will be a primary means of course eval-
uation. Corequisite: CIED 3043.

CIED3053 The Emerging Adolescent (SP) This course is a study of the developmental characteristics (social, emotional, physical, moral, and intellectual) of early adoles-
cents (ages 10-15 years). The implications of these changes for motivation, instruction, learning, and classroom manage-
ment in the classroom are emphasized. Course has field component. Corequisite: CIED 3033. Prerequisite: CIED 1011 and CIED 1002 and PSYC 2003 and CIED 3031.

CIED3063 Literacy Strategies for Middle Level Learners (SP) This course is designed to examine theore-
ties and practices regarding literacy development and assess-
ment. Emphasized in the knowledge gained about the nature of the middle learner. A ten-hour field experience is required. Corequisite: CIED 3073. Prerequisite: CIED 3043. CIED3073 Early Adolescent Literature (SP) A study of literature and strategies related to the middle ad-
olescent literature across the middle level curriculum. Includes an examination of genres and selected texts from each. Corequisite: CIED 3063. Prerequisite: CIED 3043.

CIED3013 Children’s Literature (SP) A survey of children’s literary works, authors, and illustrators with empha-
sis on the preschool and primary grade literature. Corequisite: CIED 3113. Prerequisite: PSYC 3093.

CIED3113 Emergent and Developmental Literacy (FA) This course focuses on theories of children’s emergent literacy and on the continuing development of literacy abilities in pre-kindergarten and early elementary years. Corequisite: CIED 3101. Prerequisite: PSYC 3033 or PSYC 3093.

CIED3123 Mathematics Methods (SP, SU) An examination of the content of elementary mathematics cours-
es. Special emphasis given to methods of teaching the con-
tent as well as enrichment activities. Prerequisite: admission to Teacher Education.

CIED3133 Integrated Social Studies (FA, SU) Focuses on the methodology of facilitating pre-K and ele-
termediate children’s development of thinking, feeling, and social studies. Integrates the curriculum and teaching strategies in language arts and social studies. Prerequisite: admission to Teacher Education.

CIED3143 Teaching Science (FA, SP) Study of the methods and materials in teaching science. Classroom appli-
cations of teaching strategies with analysis of teacher effec-
tiveness in seminar settings are emphasized. Prerequisite: admission to Teacher Education.
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CIED3263 Language Development for the Educator (FA, SP) Nature of speech-language development in young children, including cognitive prerequisites, social contexts, and relationships between language acquisition and literacy. Language differences (dialectal, bilingual) and speech-language disorders are explored. This is the first course in the discipline of language acquisition is emphasized.

CIED4003 Elementary Seminar (FA, SP) This course is designed to synthesize the foundational content presented in the Bachelor of Science in Education, Elementary Education program. It focuses on refinement of generalized knowledge to accommodate specialized content relevant to children. Prerequisite: admission to Teacher Education.

CIED4023 Teaching in Inclusive Secondary Settings (SU) This course is designed to prepare preservice teachers to teach in inclusive classroom settings at the secondary level. Course work focuses on the ways in which exceptionally, specifically focused on high-incidence disabilities and culture, specifically focused on English language learners mediate the learning experiences of secondary level students.

CIED4101 Practicum (SP) Practicum. Corequisites: CIED 4113 and CIED 4128.

CIED4102 Language and 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 listening, speaking, and understanding, of the curriculum. Corequisites: CIED 4128 and CIED 4110. Prerequisite: PSYC 3093, CIED 3103, and CIED 3113.

CIED4128 Content Integration (SP) Integrates the curricular components of mathematics, science, and social studies in childhood education. Students are required to develop a professional portfolio and participate in specified field experiences. Corequisites: PSYC 3093, CIED 3103, and CIED 3113.

CIED4133 Measurement, Research, and Readings (FA, SP, SU) This course is designed to provide an introduction to educational assessment, research methods, and other research-based topics in education. Students are required to develop a professional portfolio and participate in specified field experiences. Corequisites: PSYC 3093, CIED 3103, and CIED 3113.

CIED4134 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. Prerequisite: admission to Teacher Education.

CIED4153 Classroom Management (FA, SP) This course is designed to introduce students to the research and to say about trends and topics in elementary education. Prerequisite: admission to Teacher Education.

CIED4163 Senior Project (FA, SP) This course is designed to provide students with the research abilities necessary to complete their senior project. Prerequisite: admission to Teacher Education.

CIED4173 Student Teaching (FA, SP) This course is a field-based practicum experience. Prerequisite: admission to Teacher Education.

CIED4201 Seminar: Introduction to Professionalism (SP) Examines the legal, ethical, and moral responsibilities of student teachers and professional organizations. Students participate in field experiences, simulations, and discussions. Corequisites: CIED 4210 and CIED 4211 and CIED 4221.

CIED4211 Seminar: Critical and Creative Thinking Skills (FA, SP, SU) Provides a basic understanding of how to incorporate creative thinking skills across the curriculum. Students are introduced to a variety of strategies and materials involving critical thinking and solving problems. Prerequisites: admission to the program.

CIED4211 Seminar: Critical and Creative Thinking Skills (SP) This seminar is designed to provide students with the research skills necessary to teach in inclusive classroom settings at the secondary level. Course work focuses on the ways in which exceptionally, specifically focused on high-incidence disabilities and culture, specifically focused on English language learners mediate the learning experiences of secondary level students. Prerequisite: admission to Teacher Education.

CIED4211 Seminar: Critical and Creative Thinking Skills (SP) This seminar is designed to provide students with the research skills necessary to teach in inclusive classroom settings at the secondary level. Course work focuses on the ways in which exceptionally, specifically focused on high-incidence disabilities and culture, specifically focused on English language learners mediate the learning experiences of secondary level students. Prerequisite: admission to Teacher Education.

CIED4221 Seminar: Critical and Creative Thinking Skills (FA, SP, SU) An analysis of the cognitive properties and organizational possibilities for subject disciplines. Includes the role of the teacher in facilitating language acquisition is emphasized.

CIED4231 Seminar: Critical and Creative Thinking Skills (FA, SP, SU) An analysis of the cognitive properties and organizational possibilities for subject disciplines. Includes the role of the teacher in facilitating language acquisition is emphasized.

CIED4233 Instructional Design for Teachers (FA, SP, SU) Study of the design of instruction for teachers with exceptionalities. Focuses on the design of instruction for students in regular, being in schools with children in grades 7 through 12. Prerequisites: CIED 4201 and CIED 4210 and CIED 4211.

CIED4323 Instructional Design for Teachers (FA, SP, SU) Study of the design of instruction for teachers with exceptionalities. Focuses on the design of instruction for students in regular, being in schools with children in grades 7 through 12. Prerequisites: CIED 4201 and CIED 4210 and CIED 4211.

CIED4343 Teaching Reading (SP) Focuses on 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 emphasized. Reflective activities and site-based field experiences 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 research, especially qualitative inquiry. Practicum in educational research and evaluation is done as part of the class. Prerequisite: admission to the M.A.T. program. Prerequisite: admission to the MAT program.

CIED5149 Internship: Middle Level (1-6) (FA, SP, SU) Internship is the last course in which a preservice teacher integrates all of the knowledge and skills developed in teacher education practice field experience 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 primary means of course evaluation. Prerequisite: enrollment is associated with middle level education courses.

CIED5162 Applied Practicum (FA) Provides laboratory experiences for RDNG 5123 (Literacy Assessment) and RDNG 113 (Reading in Early Childhood Education). Corequisites: CIED 5163 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, discourse analysis, and development assessment. Prerequisite: admission to the CHED M.A.T.

CIED5183 Readings in Early Childhood Education (FA) Continues to develop understandings of early childhood education through the study of the history of early childhood education and the development of current issues. Prerequisite: admission to the M.A.T. program.

CIED5195 Methods of Instruction for Middle School (FA) Second special methods course for teaching at the middle level. Emphasis is on analysis of cutting edge issues germane to the discipline of education. Prerequisite: admission to the M.A.T. program.

CIED5232 Interdisciplinary Studies (FA, SP, SU) Introduction to the nature of interdisciplinary study: curricular content, course planning (topics and themes), instructional materials, and evaluation and assessment. Prerequisite: admission to the M.A.T. program.

CIED5234 Special Methods of Instruction I (SU) Study of the method and materials in the special content areas. Includes philosophical, cognitive, and psychological dimensions of teaching the content area. The planning of instruction, microteaching, and the development of instructional materials are included. Prerequisite: admission to the M.A.T. program.

CIED5234 Special Methods of Instruction I (SU) Study of the method and materials in the special content areas. Includes philosophical, cognitive, and psychological dimensions of teaching the content area. The planning of instruction, microteaching, and the development of instructional materials are included. Prerequisite: admission to the M.A.T. program.

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CIED5253 Special Methods of Instruction II (FA)
Study of the methods and materials in the special content areas. Course applies techniques in teaching strategies with analysis of teacher effectiveness in seminar settings. Prerequisite: admission to the M.A.T. program.

CIED5263 Measurement and Evaluation (FA, SP, SU)
A critical approach to the methods and rationale of educational measurement and evaluation procedures including types of tests, abuses of tests, test construction, scoring, analysis and interpretation, statistical methods, and alternative evaluation and assessment techniques. Prerequisite: admission to the M.A.T. program.

CIED5262 Special Methods of Instruction III (SP)
Study of the methods and materials in the special content areas. The focus is on student-centered and interdisciplinary teaching strategies. Extended content units are developed and implemented in the partnership school setting. Prerequisite: admission to the M.A.T. Program.

CIED5273 Remedial Curriculum and Instruction (FA, SP, SU)
An introduction to inquiry and research in curriculum and instruction. It examines the principles, strategies, and techniques of research, especially qualitative inquiry. Qualitative methods in assessment and evaluation are considered. Practicum in educational research and evaluation is done as part of the class. Prerequisite: admission to the M.A.T. program.

CIED5303 Supervised Field Experiences in Special Education (1-6) (FA, SP, SU)
May be repeated for 6 hours.

CIED5293 Special Methods, Interdisciplinary Section (SP)
The third and final part of the middle level special education internship with the knowledge, dispositions, and skills for developing interdisciplinary course of study in conjunction with the members of their interdisciplinary team. Prerequisite: CIED 5092 and CIED 5913 and admission into the M.A.T. program.

CIED5323 Transition Planning for Persons with Disabilities (SP)
Prepares students to plan, evaluate, and implement transition programs within both regular and special education classrooms at the elementary, middle and secondary school levels.

CIED532V Practicum in Special Education (1-6) (IR)
Supervised field experiences in special education programs, schools, institutions, and other facilities for exceptional children.

CIED5343 Applied Classroom Management (FA)
An advanced course in managing behaviors in students with exceptionalities. Students will have experiences in applying theoretical bases of classroom management through identifying, assessing graphing, and analyzing behavioral data and implementing management plans. Ethical issues in classroom management are addressed.

CIED5373 Advanced Methods for Teaching Students with Exceptionalities (FA)
An advanced course in designing and implementing individualized programs for exceptional students. Students are provided with practical experience in applying learning theories and instructional methodologies developed and observed in previous coursework. Prerequisite: acceptance into the SPED M.A.T. Program.

CIED5403 Early Childhood Education: Rationale and Curriculum (IR)
Rationale and curriculum of an early childhood education program, with special attention given curricular frameworks and professional organization policies.

CIED5413 Early Childhood Education: Methods and Materials (IR)
An interdisciplinary approach to methods and materials used in early childhood education with emphasis on developmental literacy. Prerequisite: PSYC 3093 and CIED 5403.

CIED5423 Curriculum Reconstruction (FA, SP, SU)
Curriculum development and design as related to changing social/economic/political arenas. Theories of curriculum development, implementation and evaluation are researched.

CIED5433 Children's Literature (FA, SP, SU)
Issues and trends in children's literature. Contemporary works are evaluated and reviewed based on changing social political conditions. Multicultural approach to children's literature is emphasized. Prerequisite: undergraduate course in children's literature.

CIED5453 Evaluation Techniques (IR)
Evaluation of learning using traditional means of assessment as well as alternative and authentic assessment techniques.

CIED5463 Child Behavior and Development (FA, SP, SU)
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 (IR)
Compared and contrast contemporary award winning books with children's classics, analyzing elements of style. Focuses on illustrations and devices. Prerequisite: CIED 3103 and CIED 5433.

CIED5483 Teaching Mathematical Concepts (IR)
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: Undergraduate coursework in teaching elementary or early childhood mathematics.

CIED5493 Teaching Social Studies (IR)
Purpose, content, context, 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. Prerequisite: Undergraduate coursework in teaching elementary or early childhood social studies.

CIED5503 Teaching Science (FA, SP, SU)
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 (FA, SP, SU)
The place of the language arts curriculum. Exploration of materials, context, practices, and methods, used in reading, speaking, listening, and writing experiences.

CIED5553 Problems in Elementary Education (FA, SP, SU)
An examination of the problems, trends, and issues related to the elementary school.

CIED5573 Teaching Reading (FA, SP, SU)
Teaching of reading to children; techniques, research, and modern practices.

CIED5583 Correlates of Reading Process (FA, SP, SU)
The developmental program is emphasized through a student of the reading process. Learning theory and research are related to the 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 (FA, SP, SU)
Emphasizes the diagnosis and remediation of reading difficulties in the classroom setting. Students are expected to become familiar with cause of reading failure, diagnostic instruments and procedures, principles of report writing, and corrective instructional methods and materials. The course is open to graduate students with instructor's consent. Enrollment limited to 20. Prerequisite: CIED 5573.

CIED5603 Innovations in School Education (FA, SP, SU)
An examination of the change process in education with emphasis on those elements which support or hinder change in the schools, and the detailed study of school innovations in action.

CIED5613 Contemporary Issues in Education (FA, SP, SU)
A study of issues pertaining to the goals, objectives, organization, and curriculum of the schools with an analysis of the teacher's role in dealing with current concerns in these areas.

CIED5623 The School Curriculum (FA, SP, SU)
General principles and techniques of selecting and organizing curricular materials.

CIED5633 Analysis of Instruction (FA, SP, SU)
A survey of the research and literature related to the systematic study of the field of teaching. An examination of the definitions of teaching and the knowledge base on which teaching is predicated. A study of the implications of the research of effective teaching and the key curricular and instructional issues.

CIED5653 Methods of Middle School Instruction (FA, SP, SU)
Philosophy, rationale, and instructional practices of middle school instruction. Prerequisite: graduate standing.

CIED5663 Evaluation of Instruction (FA, SP, SU)
Examination of methods and philosophies of evaluation. Consideration will be given to grading, techniques of grading, and construction of behavioral objectives and test items.

CIED567V Techniques in Social Studies Curricula (1-6) (FA, SP, SU)
Extensive examination of foreign cultures (West Europe, USSR, China, Latin America) and methods of teaching about them in secondary school social studies.

CIED5683 Adolescent Literature (FA, SP, SU)
Content course in adolescent literature including selection, reading, evaluation, and psychological basis of classic and contemporary works. Prerequisite: PSYC 3093 or equivalent.

CIED5696 Interdisciplinary Instruction K-4 (FA, SP, SU)
Stresses the learning of science, mathematics, and reading in grades K-4 as a means of content processes involving experimentation, investigation, communication, reasoning, and problem solving. Builds foundations in content to show connections and relevant applications of the disciplines.

CIED5723 Nature and Needs of Persons with Mild Disabilities (IR)
Educational, psychological, and social characteristics of individuals who are mildly handicapped with emphasis on educational modifications. Prerequisite: CIED 3023.

CIED5753 Nature and Needs of Persons with Serious Emotional Disorders (IR)
A survey of the personality disorders, pervasive developmental disorders, and learning behavior disorders are reviewed in relationship to identification, assessment, and program intervention within the public school setting. Prerequisite: CIED 3023.

CIED5813 Teaching Severely Handicapped Children (1-6) (IR)
Methods and materials for teaching students with severe handicaps, including severe mental retardation, serious emotional disturbance, and severe physical handicap.

CIED5793 Corrective Reading Practicum (FA, SP, SU)
Laboratory experience in which students diagnose reading difficulties and practice remedial measures under the direction of the instructor. Emphasis is given to continuous diagnosis and to the use of commercially produced materials and trade books in remediation. Enrollment limited to 15. Prerequisite: CIED 5593.

CIED5803 Nature and Needs of the Gifted and Talented (FA)
Educational, psychological, and social characteristics of gifted and talented children. Prerequisite: graduate standing.

CIED5813 Curriculum Development in Gifted & Talented (SP)
Examines the various models for developing curriculum and providing services for students identified for gifted programs. Prerequisite: CIED 5803.

CIED5823 Gifted and Talented (Structured) Practicum (FA, SP, SU)
Supervised field experience in gifted education programs, schools, institutions, and other facilities for gifted/talented children. Prerequisite: CIED 5813.

CIED5833 Gifted and Talented (Flex) Practicum (FA)
Students design and implement an individualized practicum experience (Type III Renzulli) that provides the opportunity to refine and enhance personal attitudes, beliefs, and skills in gifted education. Prerequisite: CIED 5823.

CIED5873 Assessment of Exceptional Students (FA)
Methods and techniques of assessment of children in all areas of exceptionality with emphasis on diagnosis and classification.

CIED5883 Research in Special Education (IR)
Review of research in special education including all areas of exceptionality with emphasis on diagnosis and classification.

CIED5903 Organization, Administration and Supervision of Special Education (IR)
Prerequisites: responsibility and problems of organization, administration, and supervision of special education programs.

CIED5933 Adaptive Instruction (SU)
An examination of the general principles and techniques for adapting instruction to meet the needs of various learning styles and learning modalities, especially those with exceptional strengths.

CIED5939 Professionalization of Teaching (FA, SP, SU)
Explores the need for reconceptualizing the role and responsibility of career professional teachers and concomitant implications for school improvement and educational change. Reflection and inquiry are integral to this course with course content to increase congruence between theoretical bases and professional barriers. Prerequisite: experience as a practicing educator.

CIED5923 Second Language Acquisition (SP)
This is one of four courses leading to Arkansas approved endorsement for teaching English as a Second Language (ESL). The course gives an introduction to the basics in researching and learning theories related to the acquisition of second languages and cultures, particularly ESL.

CIED5933 Second Language Methodologies (FA)
This is one of a series of four courses leading to Arkansas approved endorsement for teaching English as a Second Language (ESL). The course introduces the basics in approaches, methodologies, techniques, and strategies for teaching second languages, especially ESL.

CIED5943 Teaching People of Other Cultures (FA)
This is one in a series of four courses leading to Arkansas approved endorsement for teaching English as a Second Language (ESL). The course focuses on cultural awareness, understanding cultural differences, and instruction methods for integrating second cultures, especially the culture of the United States into the curriculum.

CIED5953 Second Language Assessment (SP)
This is one in a series of four courses leading to Arkansas approved endorsement for teaching English as a Second Language (ESL). The course introduces basic methods for testing, assessing and evaluating second language, especially ESL, learners for placement purposes and academic performance.

CIED6033 Reading in Secondary Schools (FA, SP, SU)
Methods and materials of teaching reading in secondary schools with emphasis on remedial and development reading problems of students.

CIED6036 Special Topics (1-18)

CIED6013 Curriculum Development (FA, SP, SU) Principles and concepts of curriculum and development, with an analysis of the factors basic to planning, the aims of the educational program, the organization of the curriculum, curriculum models, and elements desirable in the curriculum of schools.

CIED6023 Instructional Theory (IR) Study of psychological, anthropological, sociological, and educational theories of teaching. Emphasis is placed on synthesizing a broad range of existing and emerging perspectives in understanding individual, interactional and contextual phenomena of instruction and learning. Prerequisite: EDFD 5373.

CIED6033 Content Specific Pedagogy (IR) This course explores the relationship between the content of courses taught in schools and the pedagogical principles that the teaching of those courses. Students will discuss and synthesize findings from the research literature and from personal investigation. Prerequisite: CIED 6203.

CIED6043 Analysis of Teacher Education (IR) This course examines issues, problems, trends, and research associated with teacher education programs in early childhood, elementary, special education, and secondary education. Prerequisite: CIED 6203.

CIED6036 Seminar in Developing Creativity (IR) A study of the facets of creativity, how they can be applied to be used in one’s everyday life, how they can be applied in all classrooms, and how to encourage the development of these in students.

CIED6083 Piaget’s Theory and Instruction (FA, SP, SU) Prerequisite: CIED 6023.

CIED6013 Curriculum Development (FA, SP, SU) Advanced course in curriculum design and evaluation for early childhood education programs. Prerequisite: CIED 5443.

CIED6203 Individual Diagnosis and Remediation in Reading (FA, SP, SU) Specialized techniques and materials for diagnosis and remediation of reading disability. Rationale of the clinical setting is developed through emphasis on an interdisciplinary approach to diagnosis, program planning, and remediation. Enrollment limited to 20. Advanced graduate students only. Prerequisite: CIED 5583 and CIED 5593.

CIED6223 Investigations in Reading (FA, SP, SU) Research techniques and findings in reading are extensively reviewed by the student. Student is expected to culminate activity in this course by identifying a research problem in the field of reading for possible further study. Prerequisite: reading terminal.

CIED6233 Organization of Reading Programs (FA, SP, SU) 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.

CIED6323 Science Seminar (FA, SP, SU) Broaden the perspective of science educators who have the necessary background knowledge, and skills to become effective professionals in higher education. Emphasis is on current trends in secondary science, issues developing in secondary science, research in science education, philosophy, and history of science education.

CIED6403 Emerging Issues in Special Education (IR) A study in the complex issues with which professionals in the field of special education must be familiar and prepared to address.

CIED641V Special Topics in Special Education (1-6) (IR) Discussion and advanced studies on selected topics in special education. Specific focus on recent developments.

CIED6423 Philosophical and Sociological Bases of Special Education (IR) A study of the basic philosophical and sociological bases for current practices in special education. education.

CIED6433 Legal Aspects of Special Education (IR) A study of legislation and litigation in special education, federal and state laws and court cases, and due process hearings.

CIED6443 Advanced Research in Special Education (IR) A study in the planning, implementation, and evaluation of research in special education.

CIED6503 Effective Teaching: Concepts and Processes (FA, SP, SU) This course is designed to assist students in examining a variety of effective teaching practices and conditions found in classrooms and in acquiring knowledge, concepts, and ideas about ways to effectively influence the interests, learning and development of students.

CIED6603 multicultural education (FA, SP, SU) 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 school experiences of culturally diverse students, language issues, gender issues, and evaluation issues. Prerequisite: admission to the Ph.D. program.

CIED660V Workshop (1-18) (FA, SP, SU)

CIED6714V Internship (1-6) (FA, SP, SU)

CIED694V Special Topics (1-6) (FA, SP, SU) Discussion and advanced studies on selected topics in curriculum and instruction. Specific focus on recent developments.

CIED695V Independent Study (1-6) (FA, SP, SU)

CIED699V Special Topics (1-6) (FA, SP, SU) May be repeated for 9 hours. Prerequisite: admission to the Ph.D. program.

CIED700V Dissertation (1-18) (FA, SP, SU) Prerequisite: candidacy.

(CLST) CLASSICAL STUDIES

CLST1003 Introduction to Classical Studies: Greece (FA, Odd years) An introduction to the world of Ancient Greece, from the Trojan War to Alexander the Great. Progresses chronologically, focusing on the literary, artistic, political, and philosophical ideals of the Greeks. Who were they and how are we like them? This course fulfills the second semester world literature requirement. UNIVERSITY CORE COURSE

CLST1003H Honors Introduction to Classical Studies: Greece (FA, SP, SU) UNIVERSITY CORE COURSE

CLST1013 Introduction to Classical Studies: Rome (SP, Even years) A multi-faceted introduction to Roman culture, focusing on the literature, philosophy, architecture, history, and archeology. Source material to be read in English. Lectures literally illustrated with slides. This course fulfills the second semester world literature requirement. UNIVERSITY CORE COURSE

CLST1013H Honors Introduction to Classical Studies: Rome (FA, SP, SU) UNIVERSITY CORE COURSE

CLST399VH Honors Course (1-6) (IR) May be repeated for 12 hours.

(CNED) COUNSELOR EDUCATION

CNED1002 Life Skills Development (FA, SP, SU) Study and practice of problem solving, decision making, goals and values clarification and other developmental skills affecting personal issues and academic success.

CNED1011 Seminar (FA, SP, SU) Single topic seminar focusing on further knowledge acquisition, and training in specific developmental skills. Topics offered as needed. May be repeated for 3 hours.

CNED2013 Paraprofessional Counseling and Leadership Development (FA, SP) Study and application of interpersonal and leadership skills. Conceptualization, observation and analysis of communications. Practice in developing direct and effective communications, particularly in peer counseling and leadership situations.

CNED3053 The Helping Relationship (FA, SP, SU) An examination of school and community resources available to help students in distress. Development of an understanding of helping relationships, including developing problems and crisis intervention and referral to appropriate resources. Particularly appropriate for students working as paraprofessional helpers, such as Residence Hall Staff, Orientation Counselors, or Study Skills Leaders. Prerequisite: CNED 2003.

CNED4003 Classroom Human Relations Skills (FA, SP, SU) A study of interpersonal skills important to improving teacher-student relationships and achievement in classrooms. Human communication systems related to motivation, achievement, and educator-student relationships are studied. The attainment of effective human relations skills is emphasized.

CNED5203 Foundations of the Counseling Profession (FA, SP) A study of the counseling profession applicable to school and community agency settings. Emphasis on the basic educational, historical, philosophical foundations of counseling as well as specific traits and skills of counselors. The course is also designed to provide beginning level concepts and skills required for certification and licensure.

CNED5213 Lifestyle & Career Development (FA, SP, SU) Theories of career development and counseling, including the use of occupational information sources and assessment tools and techniques.

CNED5303 Individual Appraisal (FA, SP) Analysis of concepts, methods, and procedures utilized in individual appraisal.

CNED5313 Program Organization and Information Management (SU) Study of client information needs and strategies for effective management of counseling services.

CNED5323 Counseling Theory (FA, SP, SU)
related to production are also discussed.

COMM3883 Rhetoric of Social Movements (FA, SP) Study of the rhetoric it is applied in the context of social movements such as American indep- endence, women's equality, civil rights, populism, and new consensuses.

COMM3923H Honors Colloquium (FA, SP, SU) Treats a special topic or issue, offered as part of the honors program. May be repeated. Prerequisite: honors candidacy (not restricted to candidacy in communication).

COMM3983 Special Topics (FA, SP, SU) Communication topics which are not usually presented in depth in regular courses. May be repeated.

COMM399VH Honors Course (1-6) (FA, SP, SU) May be audited for 12 hours. Prerequisite: junior standing.

COMM4113 Legal Communication (FA) Examines communication processes in the legal environment and focuses on communication skills and behaviors among judges, attorneys, litigants, and jurors. Particular attention will be given to verbal strategies and nonverbal messages related to interviews, negotiation, mediation, and litigation and to the rhetorical functions of evidence and judicial opinions.

COMM4123 Communication, Gender, and Popular Culture (IR) Studies representations of feminin- ity and masculinity in popular culture such as maga- zines, videos, television, advertising, film, popular music, and sports. A critical examination of ways that media representa- tion affect gender identities.

COMM4143 American Film Survey (FA, SP, SU) A survey of the sources of film genres, major directors and films that have influenced the development of motion pic- ture. Prerequisite: 5 hours radio-television-film and junior standing.

COMM4283 Communication in Contemporary Society (IR) An introduction to research and theory on the process and effects of communication in modern society.

COMM4313 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 pur- poses, this course makes reference to studies in American language and culture. Proficiency in Japanese is not required. Prerequisite: intermediate Japanese.

COMM4323 Communication and Conflict (SP) Study of the processes, effects, and management of commu- nicate conflict, including a consideration of conflict styles, power, goals, tactics, assessment, self-intervention and third-party intervention. Prerequisite: COMM 1313 and junior standing.

COMM4333 Communication and Gender (SP) Study of the nature, construction, functions, and effects of gender and gender-role stereotypes related to verbal and nonverbal communication, small-group and organizational interaction, and mass mediated images in contemporary culture.

COMM4343 Intercultural Communication (FA) Study of intercultural communication skills, intercultural issues and their impact at home and abroad, and cross-cul- tural communication phenomena from a vari- ety of theoretical perspectives.

COMM4353 American Public Address (IR) Historical and critical study of the leading American speak- ers, their careers, the issues with which they were identi- fied. Lectures, discussion, reports, and critical papers. Prerequisite: junior standing.

COMM4373 Political Communication (SP) Study of the nature and function of the communication process as it operates in the political environment. (Same as PLSC 4373)

COMM4383 Rhetoric of the Modern American Presidency (FA, SP, SU) A study of the increasing reliance on contemporary mass media to public persuasion through rhetorical discourse.

COMM4393 Freedom of Speech: Cases & Issues (FA, SP) Study of philosophy, cases, and issues relevant to the first amendment right to the free expression, with focus on issues relevant to internal security, obscenity, pornogra- phy, slander, and the regulation of communication.

COMM4413 Communication, Negotiation, Mediation, and ADR (FA) Examines Alternative Dispute Resolution (ADR) research and techniques focusing primarily on negotiation and mediation. Supplements and extends material presented in COMM 4323 (Communication and Conflict). Focuses on the social and nonverbal messages occurring during negotiation and mediation situations in busi- ness, legal, and counseling environments. Prepares students for roles involving negotiation and mediation.

COMM4623 Relational Communication (SP) Review of the major theories and concepts in a relational approach to interpersonal communication. Provides exposure to a sampling of the research findings in relational communi- cation.

COMM4633 History and Development of International Film (SP) A critical survey of international film as a distinctive art form and as a medium for social analysis and communication with attention given to films and cinema from its origins to the present.

COMM4663 Documentary Film (FA) A study and analysis of the documentary film as a discrete film form and as an important contribution to the international cinematic scene. Prerequisite: advanced standing.

COMM4793 Directing Forensics (IR) Planning, directing, and evaluating the production of 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 commer- cials, documentaries and dramatic TV plays. Class projects. Prerequisite: 5 hours radio-television-film and junior standing.

COMM4843 Computer-Mediated Communication (SP) A study of the nature of the computer-mediated communication by examining its use and effects in interpersonal, work, educational, and societal con- texts and in an introduction to the technologies and skills required for navigating the Internet. The course focuses on the social aspects of computer-mediated communication, rather than specific software or hardware technologies.

COMM4853 Seminar in Communication Research (FA) Research and discussion of social, ethical, education, cultur- al, and technological aspects of telecommunications with attention given to changing programming patterns, world sys- tems of broadcasting, data transmission, emerging technolo- gy, international politics, and regulatory policies. Prerequisite: junior or senior or graduate standing.

COMM4863 Seminar in Television (SP) 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, future developments in telecommunications.

COMM4883 Television and American Culture (FA) 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 recep- tion of programming. Prerequisite: COMM 2333.

COMM490V Special Problems (1-6) (FA, SP) Credit arranged. May be repeated for 6 hours. Prerequisite: advanced standing.

COMM4913 Internship in Communication (FA, SP, SU) Internship in applied communication within public and private organizations. May be repeated for 6 hours.

COMM5113 Historical and Legal Methods in Communication (FA) Emphasizes the assumptions and procedures of historical and legal research methods in commu- nication.

COMM5111 Colloquium in Communication Research (FA, SP) Presentation, evaluation, and discussion of research proposals or on-going research projects. Graduate students are required to register for this course each semester of residence.

COMM5123 Quantitative Research Methods in Communication Research (FA, SP) Surveys and data collection methods in communication research.

COMM5133 Mass Communication Inquiry (SP) An introduction to scholarly research in mass communication, including processes and effects, law and policy, critical/cultur- al studies, and economic analysis. Emphasis will be placed on theories within each area of inquiry.

COMM5143 Seminars in Methods in Communication (FA) This class focuses upon the field- work procedures and narrative writing strategies that com- prise the methods of ethnographic research in communica- tion. Students observe and analyze the overt communication behavior of participants roles. (Same as SOCI 5363) Prerequisite: COMM 3300 or SOCI 4100.

COMM5373 Content Analysis (IR) Techniques for observing and analyzing the overt communication behavior of communicators. Prerequisite: graduate standing.

COMM5383 Seminar in Political Communication (IR) Research seminar focusing on selected topics such as candidate imagery, diffusion of political information, or politi- cal symbolism. (Same as PLSC 5383) Prerequisite: graduate standing.

COMM5393 Seminar in Contemporary Rhetoric (SP) Systematic study of contemporary perspectives on rhetoric including scholars such as Burke, Richards, Weaver, Grassi, MacIntyre, Derrida, and Rorty. Prerequisite: graduate standing.

COMM5403 Organizational Communication (FA, SP) A seminar on the development of theory and research into communication processes occurring within an organizational setting. Lecture, discussion, oral and Prerequisite: graduate standing.

COMM5413 Organization Communication Research (FA, SU) A seminar on conducting applied research within an organizational setting. Prerequisite: COMM 5403 and graduate standing.

COMM5423 Seminar in Mass Media Cognition (FA, SP, SU) Seminar exploring how people learn from written, aural and visual mass media messages. Topics to include attention, memory, comprehension, emotional response, arousal, unconscious processing, picture percep- tion and person perception. Seminar will be concerned with most popular media (e.g., television radio, newspaper, and film), and with several content genres (e.g., entertainment, news, sports).

COMM5433 Marital Communication (SP, Even years) An exploration of the major theories and lines of research that examine marital communication in contempo- rary American life.

COMM5443 Issues of Race and Gender in Interpersonal Communication (SP, Odd years) An exploration of the major theories and lines of research that examine racial and gender inequality in interper- sonal communication, organizational communication, and contemporary applications of rhetoric. Maximum credit is 9 semester hours. Prerequisite: graduate standing.

COMM5453 Myths and Communication Criticism (SP) Seminar in major theories of mythology, including the role of myths in the formation of public opinion. Emphasis on study of communi- cations to the criticism of public communicative events. Practice in written critical analysis. Prerequisite: graduate standing.

COMM5503 Communication and Cultural Studies (FA) Examinations of the role of communication in modern
Course Descriptions

(CSCE) COMPUTER SCIENCE AND COMPUTER ENGINEERING

CSCE1003 Survey of Computer Concepts (FA, SP, SU) Vocabulary of computers, covering terminology and concepts of large and small computers. Uses of computers in science, business, and government. Introduction to the use of computer to CSCE 1123. Corequisite: CSCE 1023. Credit will not be given for both this course and CSCE 1012.

CSCE1012 College Computing Skills (FA, SP, SU) Introduction to the 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, World Wide Web navigation and publication. No prior computing skill is necessary.

CSCE1023 Programming for Non-CSCE Majors (FA, SP) Teaches how to design, implement, and document computer programs using basic techniques of good programming style. This course cannot be taken by CSCE majors for credit. Corequisite: CSCE 1021L. Depth of the course varies in accordance with the level of students.

CSCE1023H Honors Programming I (FA) This course is taken instead of CSCE 1023 by honor students. Introduction to computer languages, information structures, and the solution of numerical and non-numerical problems using a computer. Pre- or Corequisite: CSCE 1021M.

CSCE1121 Programming Laboratory for Non-CSCE Majors (FA, SP) Laboratory exercises appropriate to Programming. Pre- or Corequisite: CSCE 1023.

CSCE1123 Introduction to Programming (FA, SP) Programming concepts. 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 awarded for only one of CSCE 1023 and CSCE 1123. Corequisite: CSCE 1121L. Prerequisite: CSCE 1112L.

CSCE1123H Honors Introduction to Programming (FA, SP) Introductory course 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 awarded for only one of CSCE 1023 and CSCE 1123. Corequisite: CSCE 1112M. Prerequisite: CENG 1113.

CSCE1121L Introduction to Programming Laboratory (FA, SP) Laboratory experiences appropriate to CSCE 1123. Corequisite: CSCE 1123.

CSCE1121M Honors Introduction to Programming Laboratory (FA, SP) Laboratory experiences appropriate to CSCE 1123H. Corequisite: CSCE 1123H.

CSCE2143 Data Structures (FA, SP) Applications of the data elements of data structures, arrays, linked lists, trees, stacks, and search techniques. (Same as CENG 2143) Prerequisite: MATH 2401 and one computer science course.

CSCE2143H Honors Data Structures (FA, SP) Applications of the elements of data structures, arrays, linked lists, stacks, and search techniques. Prerequisite: MATH 2401 and one computer science course.

CSCE2812 Introduction to Internet/World Wide Web (FA) Introduction to Internet and World Wide Web tools and resources, including Web browsers, robots and search engines, multimedia authoring systems, electronic publishing systems, virtual reality systems, network compatibility, computer networks, and local area networks. Topics include: object-oriented design patterns, general applications in software design, and their particular application in framework design. Reusable behavioral, creational, and structural design patterns. Prerequisite: CSCE 1123 or CENG 1123 and CSCE 3313.

CSCE4543 Software Architecture (IR) A study of software architecture through the use of case 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 3313 and CSCE 4513.

CSCE4561 CS Capstone I (FA, SP) 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, formal proposal, implementation, and presentation. The topics include and may require the integration of software and hardware, and may be developed to software engineering methodologies. Corequisite: CSCE 4413 and CSCE 4313.

CSCE4613 Artificial Intelligence Fundamentals (FA) Introduction to artificial intelligence, including first order logic, knowledge representation, ontologies, problem solving, natural language processing, machine vision, machine learning, and robotics. Prerequisite: CSCE 2143 or CENG 2143.

CSCE4623 Intelligent Robot Control (IR) Examines software issues surrounding the creation and control of autonomous robots. Techniques include: genetic programming, artificial neural networks, reinforcement learning, and symbolic methods. Programs are run in simulation and on actual robotic controllers. Topics discussed include visual processing, spatial mapping, and learning. Prerequisite: CSCE 4561.

CSCE490V Special Problems (1-6) (IR) 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. Prerequisite: honors standing.

CSCE4912H Honors Thesis (FA, SP) To provide honors students with experience in presenting their research accomplishments to their peers and faculty. May be repeated for 4 hours. Prerequisite: honors standing.

CSCE4963 CS Capstone II (FA, SP) 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, formal proposal, implementation, and presentation. The topics include and may require the integration of software and human factor, hardware elements and are developed to software engineering methodologies. Prerequisite: CSCE 4561 and CSCE 4513.

CSCE498V Honors Thesis (1-2) (FA, SP) To provide honors students with experience in presenting their research accomplishments to their peers and faculty. Prerequisite: honors standing.

CSCE5003 Advanced Programming Languages (SP) Abstraction, proof of correctness, functional languages, concurrent programming, exception handling, object-oriented programming, and database systems. Prerequisite: graduate standing.

CSCE5033 Design and Analysis of Algorithms (SP) Design of computer algorithms, with primary emphasis on the development of efficient implementation. Prerequisite: graduate standing.

CSCE5043 Artificial Intelligence (FA) in-depth introduction to AI. Topics include: philosophical foundations, cogition, 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: CSCE 4513 or CENG 2143.

CSCE5123 Databases Management Systems (IR) In-depth introduction to database management systems. Topics include: architecture, schemas, data sources, file structures, indexing, data models, file organization, network, entity relationship, object-oriented, query languages, views, relational algebra, SQL, optimization, user interfaces, ODBC, transaction management, concurrency control, recovery, integrity, security, and confidentiality. Prerequisite: CSCE 2143 or CENG 2143 and graduate standing.

CSCE5203 Architecture of Computer Systems (FA) An advanced study of both classical and recent computer hardware and software systems. Prerequisite: graduate standing.

CSCE5503 Advanced Database Systems (IR) Advanced study of database management systems. Topics include: database management systems, transaction management, concurrency control, recovery, integrity, security, and confidentiality. Prerequisite: CSCE 3313 and CSCE 4513.

CSCE5613 Introduction to Database Systems (IR) In-depth introduction to database management systems. Topics include: database management systems, transaction management, concurrency control, recovery, integrity, security, and confidentiality. Prerequisite: CSCE 3313 and CSCE 4513.

CSCE5813 Advanced Computer Architecture (IR) In-depth introduction to computer architecture. Topics include: computer architecture, software/hardware interface, instruction set architecture, virtual memory, pipelining, superscalar processors, and parallel architectures. Prerequisite: CSCE 3313.

CSCE598V Honors Thesis (1-2) (FA, SP) To provide honors students with experience in presenting their research accomplishments to their peers and faculty. Prerequisite: honors standing.

CSCE599V Topics in Computer Science (1-6) (IR) Topics not offered in depth in other computer science courses. May be repeated. Prerequisite: junior standing.

CSCE632H Honors Colloquium (IR) Covers a special topic or issue, offered as part of the Honors Program. May be repeated. Prerequisite: honors candidacy (not restricted to candidacy in computer science).

CSCE6423 Concurrent Computing (IR) 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.

CSCE6431 Introduction to Programming Languages (SP) Comparison of imperative, object-oriented, and functional styles of languages; language extensibility, design of language interpreters, lexical analysis, grammars/parsing, evaluation strategies, operators and operators, and language extensibility. Prerequisite: CSCE 2143 or CENG 2143.


CSCE6413 Operating Systems (SP) An introduction to operating systems including topics in system structures, process management, storage management, files, distributed systems, and case studies. (Same as CENG 4413) Prerequisite: CSCE 3213 and CSCE 2143 or CENG 2143.

CSCE6453 Software Engineering (FA, SP) A modern approach to the current techniques used in software design and development. This course emphasizes the use of modern software development methodologies, software engineering, and team design and engineering. (Same as CENG 4513) Prerequisite: CSCE 3313.

CSCE6452 Database Management Systems (IR) Introduction to database management systems, data schemas, storage structures, indexing, relational data model, E-R diagrams, query languages, SQL, ODBC, transaction management, integrity, and security. Prerequisite: CSCE 2413 or CENG 2413.

CSCE6453 Software Design Patterns (IR) A study of object-oriented design patterns, their general applications in software design, and their particular application in framework design. Reusable behavioral, creational, and structural design patterns. Prerequisite: CSCE 1123 or CENG 1123 and CSCE 3313.

CSCE6454 Architecture (IR) A study of software architecture through the use of case 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 3313 and CSCE 4513.
CSCE523 Principles of Compiler Construction (IR) A study of common compiler components, control flow analysis, symbol table construction, intermediate code generation, run-time simulation. Prerequisite: graduate standing.

CSCE5243 Formal Languages (IR) An advanced continuation of CSCE 4233. Prerequisite: CSCE 4233 and graduate standing.

CSCE5263 Computational Complexity (IR) Turing machines, recursion theory and computability, complexity measures, NP and co-NP, analysis on NP-complete problems, pseudo-polynomial and approximation. Prerequisite: graduate standing.

CSCE5283 Graph and Combinatorial Algorithms (IR) A study of graphs for combinatorics with special attention to computer implementation and runtime efficiency. Prerequisites: graduate standing.

CSCE5303 Parallel Programming (IR) An analysis of parallel computer systems with respect to software engineering. Practical programming experience on pipeline, array, and multi-processor computers. Prerequisite: CSCE 4413 and graduate standing.

CSCE5313 Advanced Operating Systems (IR) Concurrent processes and process communication; mutual exclusion and synchronization principles; kernel philosophy; resource allocation and deadlock; cases studies of specific operating systems. Prerequisite: CSCE 4413 and graduate standing.

CSCE5323 Computer Security (SP) A study of a broad range of issues in computer security. Topics include access control, security policies, authentication methods, secure system design, and information assurance. Prerequisite: CSCE 4413.

CSCE5351 Intelligent Robot Control (IR) This course is designed to address software issues surrounding the creation and control of autonomous robots. Techniques include: genetic programming, artificial neural networks, reinforcement learning, and symbolic methods. Programs are run in simulation and on actual robotic controllers. Topic discussed include visual programming, spatial mapping, and learning. Prerequisite: graduate standing.

CSCE5373 Multimedia Communication Networks (SP) 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 in CSCE.

CSCE5713 Multimedia Systems Design (IR) Overview of digital unified multimedia. Programming methodology involved in integration of all forms of digitized information (e.g., text, sound, graphics, animation, and process control) in a single computer-based interactive environment. Prerequisite: graduate standing.

CSCE5733 Client-Server Computing (IR) Advanced Object-Oriented methods for designing software systems for network applications. Topics include implementations of distributed object models, remote database connectivity. Server-side interprocess communication and protocol components. Prerequisite: CSCE 5743 and graduate standing.

CSCE5733 Information Agency (FA, SP, SU) Study of software agents and their deployment on the Internet: precursors to agents - viruses and worms, origins of software agents, delegate vs. representative agents, agency of the software agent and their deployment on the internet: preconception of the principles and practices of software agents and their deployment on the internet. Prerequisite: graduate standing.

CSCE5743 Object Programming for the Internet (IR) Object-oriented design and programming for Internet applications. Basics of the Internet protocol, including TCP/IP protocol stack. Introduction to Object-Oriented Programming and Object-Oriented Design with Unified Modeling Language. Sockets application programming interface. Graphical user interfaces. Prerequisite: graduate standing.

CSCE590V Advanced Topics in Computer Science (1-3) (IR) Topics not covered in depth in other courses. Prerequisite: consent of the instructor.

CSCE5953 Real-Time Systems (IR) 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 architecture considerations are among other topics to be covered. Prerequisite: graduate standing.

CSCE610V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

CSCE620V Research in Computer Science (1-18) (IR) Prerequisite: graduate standing.

CSCE690V Graduate Seminar (1-6) (IR) Concentrated study in selected areas of computer science research. May be repeated for 12 hours. Prerequisite: advanced graduate standing.

CSCE700 Doctoral Dissertation (1-18) (FA, SP, SU) May be repeated for 5 hours.

(CSCE) CROP, SOIL, AND ENVIRONMENTAL SCIENCES

CSCE1011 Introduction to Crop Science, Soil, and Environmental Sciences (FA) An introduction to concepts of the principles and practices of crop science, soil science, and environmental science with particular emphasis on the United States. Lecture 2 hours, laboratory 2 hours per week. Corequisite: CSCE 2000.

CSCE1030 Introduction to Weed Science (FA) Basic principles of weed control and weed biology; equipment and techniques used in modern weed control practices; and basic recommendations and systems for specific agricultural crops. Lecture 2 hours, laboratory 2 hours per week. Corequisite: CSCE 2000L. Prerequisite: AGRI 2103 or CSCE 2103 or HORT 2003.


CSCE2013 Pest Management (FA, SP) Introduction to basic principles of pest management as they relate to vertebrates, insects, plant disease and weeds. Selected pests are studied with emphasis on current management approaches and alternative pest control.

CSCE2031 Crop Science (SP) Principles of crop growth, development, and utilization and how these principles relate to production. Emphasis on major agronomic crop species. Lecture 3 hours per week. Prerequisite: CSCE 1203 or HORT 1203.

CSCE2011L Crop Science Laboratory (SP) A series of laboratory experiments designed to reinforce principles of plant growth and development, reproduction, classification, and the utilization of plant products. Emphasis is placed on major crop plant species. Experiments are conducted by individuals or by teams. Laboratory consists of a single, 2-hour period each week. Required for Crop Management majors. Corequisite: CSCE 2103.

CSCE2201 Soil Science Laboratory (FA) Field and laboratory exercises related to the study of the physical, chemical, and biological properties of soils. Laboratory mandatory for all crop and environmental science, soil and water science majors and optional for others. Laboratory 2 hours per week. Corequisite: CSCE 2200D.

CSCE2200D Soil Science Discussion Drill (FA) Corequisite: CSCE 2200D.

CSCE3023 Agronomy Colloquium (SP) A communication-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, professionalism, ethics, problem solving, and information retrieval. Student-oriented class with collaborative participation. Colloquium workshop: 3 hours per week.

CSCE3113 Forage Management (SP, Even years) Forage crops for pasture, hay, and silage with reference to growth and development, production, nutritional quality, and grazing systems. Lecture 3 hours per week. Corequisite: CSCE 1203.

CSCE3214 Soil Resources and Nutrient Cycles (SP) Integration of the fundamental concepts of the biophysical, chemical, and biological properties of soil and their roles in managing soil resources. Lecture 3 hours, laboratory 3 hours per week. Corequisite: CSCE 3210L.

CSCE3210 Soil Resources and Nutrient Cycles Laboratory (SP) Corequisite: CSCE 3210L.

CSCE3221 Soil Resource and Crop Nutrient Cycles Laboratory (SP) Corequisite: CSCE 3221L.

CSCE3232 Organic Soil Fertility (FA) Study of the soil’s chemical, biological, and physical properties, and human modification of these properties, as well as the utilization of the essential nutrients by plants. Lecture 3 hours, laboratory 2 hours per week. Corequisite: CSCE 4220L.

CSCE3222 Soil Fertility Laboratory (FA) Corequisite: CSCE 4224.

CSCE3243 Plant Anatomy (SP) Advanced training in plant anatomy. Studying the structure, terminology, techniques and function associated with vascular plant anatomy.
Corequisite: CSES 4230L. Prerequisite: BOTY 1631/1611 or BIOL 154/1541.

CSES4230L Plant Anatomy Lab (SP) Corequisite: CSES 4234.

CSES4233 Soil Classification and Genesis (SP) Lecture and laboratory. Concepts and their relation to soil genesis and soil classification with emphasis on soils of Arkansas. Lecture 2 hours, laboratory 2 hours per week. Corequisite: CSES 4250L. Prerequisite: CSES 2203.

CSES4235 Plant Physiology and Environmental Science Laboratory (SP) Corequisite: CSES 4253.

CSES4263 Environmental Soil Science (SP) Study of the behavior of pesticides, toxic organic compounds, metals, nutrients, and pathogenic microorganisms in the soil/plant/water continuum. Lecture 3 hours per week. (Same as ENIC 4263) Prerequisite: CSES 3214.

CSES462V Internship (1-6) (FA, SP, SU) Supervised practice in Soil Classification and Environmental Science to develop and demonstrate professional competence. Faculty approval of project proposal prior to enrollment and written and oral reports after the project is complete are required. May be repeated for 6 hours. Prerequisite: junior standing.

CSES4803 Precision Agriculture (FA, Odd years) Introduction to precision agriculture, benefits, spatial variability within a field, zone concept, site-specific management. Spatial data collection: sensors, GPS, yield monitoring, remote sensing. Knowledge discovery from data: processing, neural networks, genetic algorithms, use of GIS. Decision support: variable-rate technology: real-time and map-based systems, variable-rate machinery, smart controls. Evaluation: yield mapping, economic analysis. (Same as BENG 4803). (Same as BENG 4803) Prerequisite: Math 1213 and junior standing.

CSES4800L Precision Agriculture Laboratory (FA, Odd years) Prerequisite: grad standing.

CSES5001 Weed Science Practicum (SU) Training for membership on weed team, through participation. Prerequisite: grad standing.

CSES5013 Crop Physiology (FA, Odd years) Understanding and quantitative measurement of physiological processes, growth, and environmental parameters in relation to the production of crops. Prerequisite: BOTY 4304.

CSES5202 Weed Physiology and Herbicide Resistance in Plants (FA, Odd years) The reproduction, growth, and development of weeds and the ecological factors affecting these processes; development and mechanisms of herbicide resistance, flow of herbicide-resistance genes; and development of herbicide-resistant crops. Corequisite: CSES 5200L. Prerequisite: CSES 4143 and (BOTY 4304 or CHEM 5813).

CSES5200L Weed Physiology and Herbicide Resistance in a Plant Lab (FA, Odd years) Corequisite: CSES 5203.

CSES5202V Special Problems Research (1-6) (FA, SP, SU) Original investigations on assigned problems in agronomic biochemistry. Prerequisite: grad standing.

CSES5003 Plant Nutrition (FA, Even years) Study of water uptake, ion absorption, translocation and metabolism in higher plants. Lecture 3 hours per week. Prerequisite: BOTY 4304 and CHEM 2613 and CHEM 2611L.

CSES504V Special Topics (1-4) (IR) Topics not covered in other courses or a more intensive study of specific topics in agronomy. May be repeated. Prerequisite: grad standing.

CSES5053 Scientific Writing (FA) Open to graduate students, especially those in agricultural and life sciences. The course will cover searching the scientific literature, writing research proposals, journal articles, and other scientific documents. Emphasis on style and techniques used in scientific publication. Lecture and workshop 3 hours per week. Prerequisite: grad standing.

CSES5103 Scientific Presentations (FA, SP) Experience in procedures required for professional presentations of scientific papers, seminars, posters; and research findings at meetings in conferences, and with discussion groups. Students prepare, deliver oral & written presentations, use of visuals, Q/A, and good speaking habits. Lecture 3 hours per week. Prerequisite: grad standing.

CSES5012 Crop Morphology and Physiological Genetics (SP, Even years) Study of genome organization and expression in agronomic and horticultural plants, with emphasis on genes regulating physiological processes. Lecture 3 hours, discussion 1 hour per week. (CSES 5013 and CHEM 5813 and CHEM 5843 are recommended but not required). (Same as HORT 5124) Corequisite: CSES 5120D. Prerequisites: BOTY 4304 and ANSC 3132 (or BIOL 3221L and BIOL 3223).

CSES5120D Crop Molecular and Physiological Genetics Discussion Drill (SP, Even years) Corequisite: CSES 5120D. Prerequisite: grad standing.

CSES5204 Applied Methods in Life Sciences (FA, Odd years) Methods of data presentation and mathematical descriptions of research data in the life sciences. Includes graphical (representation), linear, regression, growth equations, kinetics, transport equations, and compartmentalization. Analytical, numerical, and statistical approaches to the solution of research problems in life sciences will be emphasized. Lecture 3 hours, laboratory 2 hours per week. (Same as AGST 5204) Corequisite: CSES 5200L. Prerequisite: MATH 2564 and AGST 4023.

CSES5200L Applied Methods in the Life Sciences Laboratory (FA, Even years) Laboratory computer experience designed to reinforce material taught in CSES 5204. Laboratory consists of a single 2-hour period each week. (Same as AGST 5200L) Corequisite: CSES 5204.

CSES5214 Analytical Research Techniques in Agronomy (FA, Even years) Preparation and analysis of plant and soil samples utilizing spectrophotometry, isotopes, and chromatographic separation methods. Additionally, measurements are made of photosyntheses, respiration, water relationships, light, and temperatures in whole plants. Lecture 2 hours, laboratory 4 hours per week. Corequisite: CSES 5210L. Prerequisite: BOTY 4304 and CHEM 2613 and CHEM 2611L.

CSES5210L Analytical Research Techniques in Agronomy Laboratory (FA, Even years) Laboratory experiments designed based on research techniques taught in CSES 5214. Experiments are conducted by individuals or by teams. Laboratory consists of a single 4-hour period each week. Corequisite: CSES 5214.

CSES5224 Soil Physics (SP) Physical properties of soils and their relation to other soil properties, growth of plants and transport of water, oxygen, heat, and solutes such as pesticides and plant nutrients. Lecture 3 hours, laboratory 3 hours per week. Corequisite: CSES 5220L. Prerequisite: BOTY 4304 and CHEM 2613 and CHEM 2611L.

CSES5220L Soil Physics Laboratory (SP) Corequisite: grad standing.

CSES5233 Plant Genetic Engineering (SP, Even years) Topics will be covered in the field of in vitro biotechnology, transgenic crops 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 3 hours.

CSES5243 Advanced Soil Fertility (SP, Even years) An advanced consideration of the chemical, physical, and biological phenomena which influence the nutrient-supplying power of soil. Lecture 3 hours per week. Prerequisite: CSES 4224.

CSES5264 Soil Micronutrients (FA, Odd years) A study of the microorganisms in soil and the biochemical processes for which they are responsible. Laboratory 3 hours per week. Prerequisite: Boty 5264.

CSES5264 Soil Micronutrients Laboratory (FA, Odd years) A study of the microorganisms in soil and the biochemical processes for which they are responsible. Laboratory 3 hours per week. Prerequisite: Boty 5264.

CSES5260L Soil Microbiology Laboratory (FA, Odd years) Laboratory exercises related to the study of microorganisms in the soil and the biochemical processes for which they are responsible. Laboratory 3 hours per week. (Same as MIBIO 5260L) Corequisite: CSES 5260L.

CSES5353 Advanced Hay and Silage Production (FA) Advanced study of the chemical, physical, and biological characteristics of forage plants, the dynamics of grazing, intake and digestion, and techniques of measuring forage utilization and systems analysis at the plant-animal interface. Lecture 3 hours per week. (Same as ANSC 5623) Prerequisite: ANSC 3143 and CSES 3113.

CSES5700V Doctoral Dissertation (1-18) (FA, SP) Prerequisite: grad standing.

(CVEG) CIVIL ENGINEERING

CVEG1012 Civil Engineering Fundamentals (FA, SP, SU) Introduces the concepts of engineering design and establishes the foundations of a professional career. Format and procedures for engineering calculations. Introduction to computer applications. Lecture 2 hours, drill 1 hour per week. Corequisite: CVEG 1010D.

CVEG1010D Civil Engineering Fundamentals Drill (FA, SP, SU) Corequisite: CVEG 1012.

CVEG1113 Civil Engineering Computer Applications (FA, SP, SU) Introduction to hardware and software principles of microcomputers and number systems. Use of software of mathematical modeling and presenting engineering results and concepts. Construction of programs for solving civil engineering problems. Internet and communications and authoring. Introduction to the application of relational database management systems and the engineering domain. Corequisite: CVEG 1012.

CVEG2053 Surveying Systems (FA, SP, SU) Coordinate, measuring, and total integrated surveying systems; total stations, electronic data collection, and reduction; error analysis; applications to civil engineering and surveying practice. Corequisite: CVEG 2051L. Prerequisite: MATH 2554.

CVEG2051L Surveying Systems Laboratory (FA, SP, SU) Laboratory exercises demonstrating the principles and applications of surveying systems. Corequisite: CVEG 2050S.

CVEG2113 Structural Materials (FA, SP, SU) Production, properties, behavior, and structural applications of concrete, steel, timber, masonry, and plastic. Statistical analysis methods for quality control are also covered. Lecture 2 hours, laboratory 3 hours per week. Prerequisite: MEEG 3013. Corequisite: CVEG 2113L. Corequisite: CVEG 2110L. Corequisite: CVEG 21110L. Corequisite: CVEG 21210L Structural Materials Laboratory (FA, SP, SU) Corequisite: CVEG 2113.

CVEG3022 Public Works Economics (FA, SP, SU) Introduction to the principles of design and the engineering approach to the solution problems. The principles and applications of engineering economy are introduced. Creative thinking is emphasized. Recitation 2 hours per week. Prerequisite: Junior standing.


CVEG3130L Soil Mechanics Laboratory (FA, SP, SU) Corequisite: CVEG 3130L.

CVEG3213 Hydraulics (FA, SP, SU) Study of incompressible fluids. Topics include fluid properties, fluid statics, continuity, energy and hydraulic gradients, fundamentals of flow in pipes and open channels. Hardy Cross analyses.
Recitation 3 hours per week. Prerequisite: CVEG 3243.

CVEG494VH Honors Studies in Environmental Engineering (1-6) (FA, SP, SU) 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 for up to 6 hours total credit with approval of the CVEG honors advisor. Prerequisite: CVEG 3243.

CVEG494VH Honors Studies in Transportation Engineering (1-6) (FA, SP, SU) The study of advanced topics in the structural engineering field. May include participation in structural engineering courses normally available only to graduate students. Course may be repeated for up to 6 hours total credit with approval of the CVEG honors advisor. Prerequisite: CVEG 3243.

CVEG5120L Measurement of Soil Properties Laboratory (FA, SP, SU) Study of consolidation, shear strength, clays, bearing capacity, and other soil mechanics topics. Emphasis on understanding the basis of soil mechanics topics.

Prerequisite: CVEG 4143.

CVEG5120L Measurement of Soil Properties Laboratory (FA, SP, SU) Study of consolidation, shear strength, clays, bearing capacity, and other soil mechanics topics. Emphasis on understanding the basis of soil mechanics topics.

Prerequisite: CVEG 4143.

CVEG5123 Advanced Soil Mechanics (FA, SP, SU) Study of consolidation, shear strength, clays, bearing capacity, and other soil mechanics topics. Emphasis on understanding the basis of soil mechanics topics.

Prerequisite: CVEG 4143.

CVEG5123 Advanced Soil Mechanics (FA, SP, SU) Study of consolidation, shear strength, clays, bearing capacity, and other soil mechanics topics. Emphasis on understanding the basis of soil mechanics topics.

Prerequisite: CVEG 4143.

CVEG5123 Advanced Soil Mechanics (FA, SP, SU) Study of consolidation, shear strength, clays, bearing capacity, and other soil mechanics topics. Emphasis on understanding the basis of soil mechanics topics.

Prerequisite: CVEG 4143.
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Flow includes advanced open channel hydraulics, flow measures, water quality review, culvert and storm drainage facility design, natural channel classification (fluvial geomorphology) and rehabilitation, computer methods and environmental issues. Prerequisite: CVEG 3213 and CVEG 3232.

CVEG2528 Solid Waste Management (FA, SP, SU) Collection, processing and disposal of solid waste with emphasis on incineration, and sanitary landfilling systems. Supplementary stresses on municipal solid waste management systems are included. Hazardous waste disposal design and regulatory considerations are discussed. Prerequisite: CVEG 3243.

CVEG2593 Water Treatment & Distribution System Design (FA, SP, SU) Design of industrial and municipal water treatment plants. Discussion of raw and treated water requirements for the several uses. Distribution system analysis and design including distribution storage and pumping systems. Prerequisite: CVEG 3243.

CVEG5313 Matrix Analysis of Structures (FA, SP, SU) Energy and digital computer techniques of structural analysis as applied to conventional forms, space trusses, and frames. Prerequisite: CVEG 3304.

CVEG5323 Structural Dynamics (FA, SP, SU) Dynamics response of single and multidegreof freedom systems. Modal analysis. Response spectra. Computer programs for design considerations of structures subjected to time-varying forces including earthquake, wind, and blast loads. Prerequisite: CVEG 3304.

CVEG5343 Highway Bridges (FA, SP, SU) Economics of design and construction specifications, comparative designs. Possible refinements in design techniques and improved utilization of materials. Prerequisite: CVEG 4313 and CVEG 4303.

CVEG5345 Advanced Geometric Methods in Civil Engineering (FA, SP, SU) An understanding of the fundamentals of the element method and its application to structural configurations too complicated to be analyzed without computer applications. Application to other areas of civil engineering analysis and design such as soil mechanics, foundations, fluid flow, and flow through porous media. Prerequisite: graduate standing.

CVEG5350 Advanced Reinforced Concrete I (FA, SP, SU) Design of 2-way slabs, flat slabs, and other floor systems; circular fluid and dry storage tanks; and rectangular tanks, walls, footings, and detailing. Prerequisite: CVEG 4303.

CVEG5413 Transportation and Land Development (FA, SP, SU) 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 layout. Prerequisite: graduate standing.

CVEG5433 Structural Design of Pavement Systems (FA, SP, SU) An introduction to the structural design of pavement systems including: survey of current design procedures; study of rigid pavement jointing and reinforcement; examination of the behavioral characteristics of pavement materials and of rigid and flexible pavement systems; introduction to structural analysis theories and to pavement management concepts. Prerequisite: CVEG 4433.

CVEG5439 Traffic Engineering (FA, SP, SU) A study of both the underlying theory and the use of traffic control devices (signs, traffic signals, pavement markings), and relationships to improved traffic flow and safety, and driver vehicle characteristics, geometric design, and societal concerns. Also include methods to collect, analyze, and use traffic data. Prerequisite: CVEG 5439 or graduate standing.

CVEG5444 Transportation Planning Methods (FA, SP, SU) Procedures and methodologies for developing multi-modal transportation plans in urbanized areas. The development and utilization of transportation studies used in urban transport behavior and modeling. Prerequisite: graduate standing.

CVEG5453 Asphalt Mix Design and Construction (FA, SP, SU) Theory and practice of asphalt concrete mix design for road applications including specification and construction methods for hot-mixes and surface treatments. Lecture 2 hours, laboratory 3 hours per week. Prerequisite: CVEG 4313 and CVEG 4343.

CVEG5450L Asphalt Mix Design and Construction Laboratory (FA, SP, SU) An analytical approach to the use of mathematical techniques and computer models to represent urban trans-
Course Descriptions

DRAM2313 Introduction to Theatrical Design (FA, SP) Fundamentals of design for the theatre including costume, lighting, scenic design and the design process, 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 1323.

DRAM2683 Acting II (SP) (Formerly DRAM 4603) Advanced theories and techniques of acting. Prerequisite: DRAM 2663. (IR) Entry level class for beginning actors.

DRAM272V Theatrical Production (1-3) (FA, SP, SU) Participation in one or more major productions during the semester in the areas of scenery, lighting, or costume construction. Prerequisite: DRAM 1323. (SU) A series of theatre productions.

DRAM3001 Theatre Practicum (FA, SP, SU) Credit for participation in mainstage or faculty-directed productions. Performance and/or technical assignments, one (1) credit per production. Assignments shall be determined by the faculty. Credit will be awarded only after completion of assignments and only with faculty approval. May be repeated for 4 hours.

DRAM3213 Costume Design I (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 1323.

DRAM3243 Costume Technology I (FA, SP, SU) Methods of costume construction techniques; exploration and practice in pattern drafting millinery, mask making, fabric painting, and research. Students will gain experience through drawings and work in departmental productions. Prerequisite: DRAM 1333.

DRAM3433 Stage Speech (FA, SP, SU) An introduction to the basic skills of speech, voice production and communication for the beginning actor/broadcaster. Speech stress on general American speech and the characteristics of speech regionalisms. The course will explore breath control, resonance, articulation, pitch, volume, voice quality and stress management. Prerequisite: DRAM 2653.

DRAM3653 Directing I (FA, SP, SU) A practical survey of the methods and techniques of play directing with an emphasis on the text. May be repeated for 6 hours.

DRAM4223 Costume Design II (FA, SP, SU) An intensive study and practical application of costume history to costume design for the theatre. Exploration of silhouettes, construction details, fabrics and accessories. Costume design and rendering emphasized. Prerequisite: DRAM 3213.

DRAM4233 History of the Theatre I (FA) A survey of dramatic literature, theatre practices and cultural contexts for dramatic production from ancient Greece through the Restoration. Prerequisite: DRAM 3803.

DRAM4333 History of the Theatre II (SP) A survey of dramatic literature, theatre practices and cultural contexts for dramatic production from the 18th century to the mid-20th century. Emphasis is given to Western theatre practices. Prerequisite: DRAM 3803.

DRAM4453 History of the Theatre III (SP) An examination of the major theories of modern theatrical styles. Prerequisite: DRAM 4333.

DRAM4463 African American Theatre History — 1950 to Present (SP) A chronological examination of African-American theatre history from 1950 to the present through the study of selected 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 499).

DRAM4653 Scene Design I (SP, Odd years) Theory and practice in the art of scenic design, including historical and contemporary theories and procedures. Practical experience gained through work on departmental productions. Prerequisite: DRAM 1333.

DRAM472V Advanced Theatrical Production (1-3) (FA, SP, SU) Participation in one or more major productions during the semester in the areas of scenery, lighting, sound, costumes, or special effects. May be repeated for 5 hours.

DRAM4733 Dramatic Criticism (FA, SP, SU) The critical analysis of程式化 of costuming and theatrical interrelationships of theatre disciplines as well as the influence of the church, state, and press on dramatic criticism. Prerequisite: DRAM 3803.

DRAM4773 Shakespeare (FA, Even years) Work on the special techniques required for performance of the plays of Shakespeare and his contemporaries. The cultural and theatrical context required for understanding the scripts. Special attention to the speaking of blank verse. Prerequisite: DRAM 4603.

DRAM478V Theatre Workshop (1-6) (SP) Production of individual class studies for members of the workshop. Mornings are spent in instruction and laboratory work preparing sets, lighting, costumes, and properties. Afternoons are spent in instruction in acting and directing, rehearsal of plays in production. Special problems for graduate credit. Prerequisite: junior standing.

DRAM490V Independent Study (1-3) (FA, SP, SU) Individually designed and conducted programs of reading and reporting under the guidance of a faculty member. Prerequisite: junior standing.

DRAM491V Special Topics (1-3) (FA, SP, SU) Classes not listed in the regular curriculum, offered on demand on the basis of student needs and changes within the profession. Prerequisite: junior standing.

DRAM492V Internship (1-12) (IR) Supervised practice in the various arts and crafts of the theatre (e.g., full design responsibility for a box office management; actor apprenticeship with a moving theatre company or with only those who have exhausted the regular curricular possibilities in the area of specialization. May be repeated for 12 hours.

DRAM4953 Theatre Study in Britain (FA, SP, SU) Study of the components of stage production through attending and reporting on the activities of major theatre artists.

DRAM5113 Scene Design II (SP) Major styles and trends in scene design in relation to periods of dramatic literature. Problems in period and contemporary scene design. Prerequisite: DRAM 4953.

DRAM5123 Theatrical Design Rendering Techniques (FA, SP, SU) Investigation of drawing and painting methods and materials useful to theatrical designers. Integration of graphic communication with overall problem conceptualization will be explored through examination of various theatre styles and periods. Prerequisite: DRAM 5113.

DRAM5133 Scene Design II (FA, SP, SU) Work in line, color, composition and design in the conventional as the basis for contemporary theatrical scenic statements. Prerequisite: graduate standing.

DRAM5143 History of Decor for the Stage (FA, SP, SU) An introduction to the history of set decoration and its application to theatrical design from the Predynastic Period (4400-3200 B.C.) through the Art Deco period with references to contemporary decor. Prerequisite: graduate standing.

DRAM5153 Scene Painting (SP, 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. Prerequisite: graduate level project required.

DRAM5163 Theatre Graphics and Technology (IR) Advanced study of theatre drafting, drawing and rendering techniques and model making. Graduate level project required.

DRAM5213 Costume Design II (FA, SP, SU) Advanced study of the art and practice of stage costume design. Emphasis on the expression of character through costume. Development of rendering and research skills.

DRAM5223 Costume Design II (FA, SP, SU) A practical study of historical costumes and the application of costume history to costume design for the theatre. Exploration of silhouettes, construction details, fabrics and accessories. Costume design and rendering emphasized. Prerequisite: DRAM 5213.

DRAM5233 Costume Design III (FA, SP, SU) Advanced study of costume design including the areas of film, dance, and opera. Advanced rendering techniques and stylization. Development of portfolio and resume. Prerequisite: DRAM 5723.

DRAM5243 Costume Technology II (FA, SP, SU) A survey of effects focusing on costume construction, pattern drafting techniques, millinery, mask making and fabric modification. Other topics may be included as determined by student needs.

DRAM5253 Costume Technology III (FA, SP, SU) Advanced study in methods of costume construction and pattern making techniques with emphasis on tailoring, draping, corsetry and costumes crafts as determined by student needs.

DRAM5263 Costume Shop Management (FA, SP, SU) Comprehensive study of costume shop management including physical space, equipment, personnel, budget and time management techniques. Practical application through actual production experience in the University Theatre.

DRAM5323 Stage Lighting II (IR) Entry level class for graduate study in lighting. Emphasis on lighting design and lighting for dance and musical theatre. Introduction and practice as it relates to the designer. Graduate level project required.

DRAM5333 Lighting III (FA, SP, SU) 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, musical theatre, legitimate drama and related lighting situations will be explored through class projects and laboratory exercises. Prerequisite: graduate standing.

DRAM5353 Stage Lighting Technology (FA, SP, SU) The thorough examination of the technology of equipment that supports the art of stage lighting design: theory, design, application, and research into lighting design as it relates to the designer. Graduate level project required.

DRAM5373 Theatre Planning (IR) A study of significant theatre buildings, modern and historical, and their relationship to contemporary theatre planning. Practical application of theory through design problems and evaluation.

Graduate level research project/paper required. Prerequisite: graduate standing.

DRAM5373 Theatre Management (IR) Comprehensive study of arts 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 Theories (FA, SP, SU) Examination of the major systems 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 (FA, SP, SU) An intensive study and practical application of acting techniques. Emphasizes the integration of the physical, emotional, and intellectual life of the actor through the study of monologues, scenes and exercises. Prerequisite: graduate standing.

DRAM5423 Graduate Stage Speech (FA, SP, SU) Techniques in skills of stage speech including voice production, resonance, articulation, facial structure, physical and vocal energy states and characterization. Standard American and selected European dialects. May be repeated for 4 hours. Prerequisite: graduate standing.

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EASL0024 Reading and Writing I (FA, SP, SU) Work on improving skills necessary to read and write well-organized, thought-provoking essays incorporating paraphrased, summarized, and quoted ideas from various sources. Introduction to several rhetorical patterns. Critical reading skills practice; understanding inferences, and improving reading skills comprehension. Not for degree credit. Prerequisite: ESL placement test.

EASL0021 Advanced English Grammar (FA, SP, SU) Presentation of a general overview of the verb, modal, and article in English. Review and practice on compound and complex sentences. Practice of grammatical structure orally and in writing. Not for degree credit. Prerequisite: ESL placement test.

EASL0034 Reading and Writing II (FA, SP, SU) Advanced writing of formal documented, organized, and thought-provoking essays. Students will be expected to read passages/articles in English proficiently and maintain discussion with near-native abilities and confidence. Not for degree credit. Prerequisite: ESL placement test.

EASL0041 Pronunciation (FA, SP, SU) Students learn to generate native-sounding speech and increase their intelligibility by working specifically on accent reduction, pronunciation, intonation patterns, and fluency. Credit earned in this course may not be applied to the total required for a degree. Prerequisite: ESL placement test.

EASL0053 ESL Listening and Speaking (FA, SP, SU) For improvement of aural/oral skills by international students. Includes the basic practice in fluency, clarity, intonation, 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.

ECN2013 Principles of Macroeconomics (FA, SP, SU) Macroeconomic analysis, including aggregate employment, income, fiscal and monetary policy, growth and business cycles. Prerequisites: (MATH 1203 or MATH SAT of 580 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH ACT of 25 or higher) or (MATH ACT of 25 or higher). UNIVERSITY CORE COURSE ECON2013H Honors Principles of Macroeconomics (FA, SP, SU) Macroeconomic analysis, including aggregate employment, income, fiscal and monetary policy, growth and business cycles. Prerequisites: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH ACT of 25 or higher). UNIVERSITY CORE COURSE ECON2023 Principle of Microeconomics (FA, SP, SU) Microeconomic analysis, including market structures, supply and demand, production costs, price and output, international economics. Prerequisites: (MATH 1203 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH ACT of 25 or higher) or (MATH SAT of 580 or higher) or (MATH ACT of 25 or higher). UNIVERSITY CORE COURSE ECON2143 Basic Economics-Theory and Practice (SP, SU) Microeconomics, macro principles and analytical tools needed to study contemporary economic problems such as inflation, unemployment, poverty, pollution. Not open to students majoring in Economics or Business Administration. Prerequisite: ECON2013/2023. ECON3003 Microeconomic Theory (FA, SP, SU) Nature, scope, purpose of economic analysis; theories of demand, production, cost, firm behavior, allocation of resources, etc., in the market and world systems. Prerequisite: ECON2013/ECON2023 or ECON2143 or MATH 2043 or MATH 2554. ECON3053 Economics for Elementary Teachers (FA, SP, SU) For students who plan to become teachers in elementary schools. Acquaints students with basic concepts, functioning of the American economic system. Not open to students majoring in Economics or Business Administration. ECON3133 Macroeconomic Theory (SP, SU) Theoretical determinations of national aggregate employment, income, consumption, investment, price level, etc. Prerequisite: ECON 2013 and ECON 2023 or ECON 2143. ECON3153 Economics of Business and Commerce (IR) A combination of concepts from microeconomics, industrial organization, 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 (SP, SU) Governmental functions, revenues; tax shifting, incidence; public expenditures, their effects; fiscal policy. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143. ECON3353 Law and Economics (FA, SP, SU) The use of economic tools to analyze public policy issues and explore the intersections between the law and economics. The course will provide students with an understanding of legal institutions, incentives they generate and issues current in the current legal reforms. Prerequisite: ECON 2023 or ECON 2143.

ECON3433 Economics of Transportation (FA, SP, SU) Financial institutions theory, practice and income; monetary policy in theory and practice. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON3533 Labor Economics (FA, SP, SU) Economic analysis of labor markets. Focus on analysis of labor demand and supply; human capital investment; wage differentials; discrimination; economic effects of labor unions and collective bargaining; public sector labor unions; unemployment; and labor market effects on inflation. Prerequisite: ECON 2023 or ECON 2143.

ECON3633 Advertising Economics (IR) 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 2023 or ECON 2143.

ECON3853 Emerging Markets (IR) An analysis of the business and economic environment in emerging countries; focusing in Latin America, South East Asia and Transition Economies. The topics and issues covered include market structure and market failures, financial and legal background, current institutions and political economy issues, and current business opportunities. Prerequisite: ECON 2143; or ECON 2013 and ECON 2023.

ECON3933 The Japanese Economic System (IR) This class presents essential facts about the Japanese economy and then subjects them to 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 contemporaneous economic conditions and US - Japanese trade relations are also examined. Pr- or Corequisite: ECON 2023. Prerequisite: ECON 2013 or ECON 2143.

ECON399VH Honors Course (1-3) (IR) Primarily for students participating in Honors program. May be repeated for 6 hours.

ECON4003H Economics Honors Colloquium (IR) Explores events, concepts and/or new developments in the field of Economics. Prerequisite: ECON 3999H or ECON 3999VH.

ECON4033 History of Economic Thought (SP) Historical, critical analysis of economic theories relative to their instructional background. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143 or ECON 2053.

ECON410V Special Topics in Economics (1-6) (IR) Covers special topics in economics not available in other courses. May be repeated for 6 hours. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON4143 Information Economics (IR) A combina-
ECON4333 Economics of Organizations (FA, SP, SU) 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 2023 or ECON 2143.

ECON4433 Experimental Economics (FA, SP, SU) The course offers an introduction to the field of experimental economics. Included are the methodological issues associated with the design of experiments and analyzing controlled 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.

ECON450V Independent Study (1-6) (IR) Permits students on individual basis to explore selected topics in economics.

ECON4633 International Trade (FA, SP, SU) Problems of the international economy from a microeconomic perspective. Topics include analysis of the pattern and content of trade; trade in factors of production; and the applications of trade theory to the study of trade barriers such as tariffs and quotas. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON4643 International Macroeconomics and Finance (FA, SP, SU) Theoretical development of the international economy from a macroeconomic perspective. Topics include national income accounting and the balance of payments; exchange rates and the foreign exchange markets; exchange rate policy; macroeconomic policy coordination; developing countries and the problem of 3rd world debt; and the global capital market. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON4653 Global Competition and Strategy (FA, SP, SU) Applies concepts from microeconomics and industry organization 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 globalizing industries and global firms. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON468V International Economics and Business Seminar (1-6) (FA, SP, SU) Offered primarily in conjunction with international study abroad programs with an emphasis on international economics and business. May be repeated for 6 hours. Prerequisite: (ECON 2013 and ECON 2023) or ECON 2143.

ECON4743 Introduction to Econometrics (SP) Introduction to the theory and application of statistical methods to problems in economics. Prerequisite: ECON 2013/ECO 2143 or ECON 2143 and MATH 2043 or MATH 2054 and MATH 2053 or MATH 2053 C and WCOB 1033 or STAT 2303.

ECON4753 Forecasting (IR) 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 and ECON 2023) or ECON 2143 and (MATH 2043 or MATH 2054) and (MATH 2053 or MATH 2053 C) and WCOB 1033 or STAT 2303.

ECON512V Workshop in Economic Education (1-3) (IR) Overview of basic economic facts and principles with emphasis on means of employing them in the curriculum of elementary and secondary schools. Not open to majors in business and economics. Offered for degree credit in Education only. May be repeated for 3 hours.

ECON5333 Economics of Organizations (IR) An economic perspective of 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.

ECON5433 Macroeconomic Theory I (FA, SU) Theoretical development of macroeconomic models that include and explain the natural rate of unemployment, inflation, and rational expectations, consumer behavior, demand for money, market clearing models, investment, and fiscal policy.

ECON5533 Microeconomic Theory I (FA, SU) Introductory microeconomic theory at the graduate level. Mathematical formulation of the consumer choice, production, and market equilibrium problems at the level of introductory calculus. Discussion of monopoly, oligopoly, public goods, and externalities.

ECON5513 Econometrics (FA) Use of economic theory and statistical methods to estimate economic models. The single equation model is examined emphasizing multi-linearity, autocorrelation, heteroskedasticity, binary variables, and distributed lags. An introduction to the simultaneous systems model is presented. Two 80 min. lecture periods weekly. (Same as AGEC 5613) Prerequisite: MATH 2043 and knowledge of matrix methods, which may be acquired as a corequisite and (AGEC 1103 or ECON 2023) or an introductory statistics course.

ECON5623 Econometrics II (SP) Use of economic theory and statistical methods to develop and estimate simultaneous equation models of an economy. Emphasis given to the problem of identification and the methods of estimating systems models. Frontier topics are introduced. (Same as AGEC 5623) Prerequisite: ECON 5433 and ECON 5533 and ECON 5613 or AGEC 5613.

ECON5653 International Economics Policy (SP) An intensive analysis of the operation of the international economy with emphasis on issues of current policy interest. Prerequisite: ECON 5433 or ECON 5533.

ECON600V Master’s Thesis (1-6) (FA, SP, SU) ECON6233 Microeconomic Theory II (SP) Advanced treatment of the central microeconomic issues using real world data. Formal discussions of utility, basic economic welfare, microeconomic theories, microeconomic policy, and price theory. Application of microeconomic models to explain real world situations.

ECON6243 Macroeconomic Theory II (FA) Further development of macroeconomic models. Focus on uncertainty and asset pricing theory. Application of macroeconomic models to explain real world situations.

ECON636V Special Problems in Economics (1-6) (FA, SP, SU) Independent reading and investigation in economics.

ECON643V Seminar in Economic Theory and Research I (1-3) (FA, SP, SU) Independent reading and discussion of research.

ECON700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: candidacy.

(EADAD) EDUCATIONAL ADMINISTRATION

EDAD5013 School Organization and Administration (IR) Analysis of structure and organization of American public education; fundamental principles of school management and administration. Prerequisite: EDAD 5023 The School Principalship (SP, SU) Duties and responsibilities of the public school building administrator; examination and analysis of problems, issues, and current trends in the theory and practice of the principalship.

EDAD5053 School Law (IR) Legal aspects of public and private schooling: federal and state legislative statutes and judicial decisions, with emphasis upon Arkansas public education. Prerequisite: graduate standing.

EDAD5063 School Personnel Administration and Supervision (IR) Principles, processes, and procedures of school personnel management, supervision, and staff development.

EDAD5093 Effective Leadership in School Settings (SP, SU) Strategic planning, group facilitation and decision making, organizational behavior and development, professional ethics and standards, principles of effective educational leadership.

EDAD5163 Current Educational Issues (IR) Current problems and trends facing school administrators in Arkansas and the nation.

EDAD574V Internship (1-6) (FA, SP, SU) 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.

EDAD589V Seminar (1-6) (IR) Prerequisite: EADAD 5013 or EADAD 5053 or EADAD 5063.

EDAD6023 School Facilities Planning and Management (IR) School facilities planning, management, cost analysis, operations, and maintenance of the school plant.

EDAD6053 School-Community Relations (IR) Community analysis, politics and education; power groups and political issues; school issues and public responses; local policy development and implementation; effective communication and public relations strategies.

EDAD605V Independent Study (1-3) (FA, SP, SU) Prerequisite: EADAD 5013 or EADAD 5053 or EADAD 5063.

EDAD6093 School District Governance: The Superintendency (IR) Analysis of the organizational and governance structures of American public education at the local, state, and federal level.

EDAD6103 School Finance (IR) Principles, issues and problems of school funding formulae and fiscal allocations to school districts.

EDAD6173 School Business Management (IR) Fiscal and resource management in public schools: budgeting, insurance, purchasing, and accounting.

EDAD6333 Advanced Fiscal and Legal Issues in Education (IR) The examination and discussion of advanced legal and fiscal issues affecting public school education. Prerequisite: advanced graduate standing.

EDAD6503 Topics in Educational Research for School Administrators (IR) Independent reading and investigation in the research in the school setting by educational administrators. Emphasis placed on the use of state and local school or district data, data analysis, interpretation and reporting, hands-on use of software such as SPSS, and the writing of a research report. Prerequisite: advanced graduate standing.

EDAD6523 Advanced Application of Educational Leadership (IR) 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 (IR) Examination of structure and theory related to the functions of local, state, and federal governance and educational policy. Emphasis given to the consideration of procedures involving policy formulation, implementation, and analysis.

EDAD6563 Educational Leadership and Human Behavior (IR) Examination of research and theory related to the utilization of human resources with educational organizations.

EDAD660V Workshop (1-6) (FA, SP, SU) May be repeated for 6 hours.

EDAD680V Educational Specialist Project (1-6) (FA, SP, SU) An original project, research project, or report required of all Ed.D. Degree candidates. Prerequisite: admission to the E.d.S. program.

EDAD699V Seminar (1-6) (IR) Prerequisite: advanced graduate standing.

EDAD700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: candidacy.

(EDEDF) EDUCATIONAL FOUNDATIONS

EDDF2403 Statistics in Nursing (SP) Introduction to descriptive and inferential statistics used in nursing research.

EDDF2404D Statistics in Nursing Drift (SP) 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.

EDDF3503 Historical Foundations of Modern Education (FA, SP, SU) Critical analysis and interpretation of the historical antecedents of contemporary education, focusing upon the American experience from the colonial period to the present.

EDDF3523 Global Education (IR) Comparative and global analysis of international education with emphasis on cultural, historical, and political issues affecting the future of international education.

EDDF3533 Philosophy of Education (IR) 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.

EDDF5373 Psychological Foundations of
and load tests of induction machines and synchronous machines.

Prerequisite: Corequisite: ELEG 3303.
ELEG3703 Electromagnetics I (FA, SP) Analysis of transmission lines with sinusoidal and transient excitation. Development of the vector basis and methods of impedance matching. Vector analysis, static form of Maxwell’s equations, electrostatics, magnetostatics. Pre- or Corequisite: PHYS 2074 and MATH 2574.
ELEG3903 Electric Circuits and Machines (FA, SP, SU) One to 3 hours of credit. Individual study and research on a topics mutually agreeable to the student and a faculty member. Prerequisite: junior standing.
ELEG3930 Engineering Electronics I (1-18) (FA, SP, SU) One to 3 hours of credit. Individual study and research on a topics mutually agreeable to the student and a faculty member. Prerequisite: junior standing.
ELEG3933 Circuits & Electronics (SP, SU) Basic principles of electric and electronic devices and circuits. Prerequisite: MATH 3404 and PHYS 2074.
ELEG400V Senior Thesis (1-3) (FA, SP, SU) Senior standing.
ELEG400VH Honors Senior Thesis (1-3) (FA, SP, SU) Honors senior standing.
ELEG4062L Electrical Engineering Design Laboratory (FA, SP, SU) Design and application in electrical engineering. Lecture 1 hour, laboratory 3 hours per week. Prerequisite: ELEG 3223 and ELEG 3933.
ELEG4061 Electrical Engineering Design I (FA, SP, SU) Design and application in electrical engineering. Prerequisite: ELEG 3223 and ELEG 3933.
ELEG4061H Honors Electrical Engineering Design I (FA, SP, SU) Design and application in electrical engineering. Prerequisite: ELEG 3223 and ELEG 3933.
ELEG4071 Electrical Engineering Design II (FA, SP, SU) Design and application in electrical engineering. Prerequisite: ELEG 3223 and ELEG 3933.
ELEG4203 Semiconductor Devices (FA, SP, SU) Crystal properties and growth of semiconductors, energy bands and charge carriers in semiconductors, excess carriers in semiconductors, analysis and design of p-n junctions, analysis and design of bipolar junction transistors, analysis and design of field-effect transistors. Prerequisite: MATH 3404.
ELEG4223 Design and Fabrication of Solar Cells (FA, SP, SU) Solar isolation and its spectral distribution; p-n junction solar cells in dark and under illumination; solar cell parameters efficiency limits and losses; standard cell technology; design of silicon solar cells using fabrication of designed devices in the lab and their measurements.
ELEG4223 Introduction to Integrated Circuit Design (FA, SP, SU) Design and layout of large scale digital integrated circuits using NMOS and CMOS technology. Topics include MOS devices and basic circuits, integrated circuit layout and fabrication, digital logic, circuit design, and layout of large scale NMOS and CMOS circuits. Prerequisite: ELEG 3213.
ELEG4243 Analog Integrated Circuits (FA, SP, SU) Theory and design techniques for linear and analog integrated circuits. Design and layout of integrated circuits, voltage to base emitter matching, active loads, compensation, level shifting, amplifier design techniques, circuit simulation using computer-aided design programs. Prerequisite: ELEG 3223 and ELEG 4203.
ELEG4273 Electronics Manufacturing Processes Techniques Laboratory (FA, SP, SU) Introduction to the basic concepts of image processing: theory and applications. Covers digital methods of image restoration, reformation, extraction and analysis. Prerequisite: CSEG 4683 Corequisite: CSEG 4686.
ELEG4860D Introduction to Image Processing Drill (FA, SP, SU) Corequisite: CSEG 4683.
ELEG4713 Electromagnetic Transmission (FA, SP, SU) Steady state and transient analysis of transmission lines. Wave guides and resonators. Prerequisite: ELEG 3703.
ELEG4723 Introduction to RF and Microwave Design (FA, SP, SU) Analysis and design of microwave 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.
ELEG487V Special Topics in Electrical Engineering (1-3) Consideration of current electrical engineering topics not covered in other courses. May be repeated for 6 hours. Prerequisite: senior standing.
ELEG488V Special Problems (1-3) (FA, SP, SU) Individual study and research on a topic mutually agreeable to the student and a faculty member. Prerequisite: senior standing.
ELEG4933 Minicomputer Applications (FA, SP, SU) Design and 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: CSEG 4960.
ELEG4934 Digital Field Programmable Gate Array Laboratory (FA, SP, SU) Application of digital logic and state machine designs with field programmable gate arrays. Prerequisite: ELEG 3213. Corequisite: ELEG 4683.
ELEG4943 Digital Systems Design Laboratory (FA, SP, SU) Design and 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: CSEG 4960.
ELEG5153L DSP Digital Communications Laboratory Lab (FA, SP, SU) Corequisite: CSEG 4963.
ELEG5163 Advanced Microcontroller Design Project (FA, SP, SU) Development of systems as an aid to microcontroller design, the student is expected to design, build, and test a microcontroller-based system to perform a specific task. Prerequisite: ELEG 5160L. Corequisite: ELEG 3933.
ELEG5183L DSP Digital Communications Laboratory (FA, SP, SU) Corequisite: CSEG 4963. Prerequisite: ELEG 3933. Corequisite: ELEG 3933.
ELEG5193L Advanced DSP Processors Laboratory (SP) Familiarization with, and use of, advanced DSP processors. Parallel processor configurations, timing consideration, specialized programming techniques, complex pipelines. Prerequisite: ELEG 5173L.

ELEG5213 Integrated Circuit Fabrication Technology (SP, FA, SU) Theory and techniques of integrated circuit fabrication technology; crystal growth, chemical vapor deposition, impurity diffusion, oxidation, ion implantation, photolithography and metallization. Design and analysis of transistor, bipolar, and MOS models. Prerequisite: ELEG 4203 and PHYS 3614 and PHYS 3611L.

ELEG5253L Integrated Circuit Design Laboratory I (FA, SP, SU) Design out of large digital integrated circuits. Students design, check, and simulate digital integrated circuits which will be fabricated and tested in I.C. Design Laboratory II. Topics include computer-aided design, more in-depth 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 (FA, SP, SU) Emphasis on the techniques and principles designed in I.C. Design Laboratory I and propose design corrections where needed. Topics include gate arrays, bipolar design, 2L memory design, and microprocessor design. Prerequisite: ELEG 4233 and ELEG 4203.

ELEG5273 Electronic Packaging (FA, SP, SU) An introductory treatment of electronic packaging from single chip to multichip including materials, electrical design, thermal design, mechanical design, package modeling and simulation, processing considerations, reliability, and testing. Credit can not be earned for both MEEG 5273 and ELEG 5273. (Same as MEEG 5273) Prerequisite: (ELEG 3213 or ELEG 5213) and graduate status in Engineering, Math or Science.

ELEG5283 Signal Test Engineering II (SP, Odd years) Focus calibrations, DAC testing, ADC testing, DIB design, Design for Test, Data Analysis, Test Economics. Prerequisite: ELEG 4283.

ELEG5293L Integrated Circuits Fabrication Laboratory (FA, SP, SU) Experimental studies of silicon oxidation, solid-state diffusion, photolithographical materials and techniques, bonding and encapsulation. Fabrication and testing of PN diodes, NPN transistors, and MOS transistors. Prerequisite: ELEG 5213.

ELEG5313 Power Semiconductor Devices (FA, SP, SU) The basic principles of semiconductor device operation; semiconductor device breakdown phenomena; fundamentals of semiconductor device theory. Prerequisite: ELEG 4133 or ELEG 5213.

ELEG5423 Optimal Control Systems (FA, SP, SU) Fundamental concepts, conditions for optimality, the minimum principle, the Hamilton Jacobi equation, structure and properties of optimal systems. Prerequisite: ELEG 5403.

ELEG5423 Digital Control Systems (FA, SP, SU) Signal processing in continuous-discrete systems. System modeling using the z-transform and state-variable techniques. Sampling and quantization effects; inverse systems; feedback control systems. Digital redesign for continuous control. Prerequisite: ELEG 4403.

ELEG5443 Nonlinear Systems Analysis and Control (FA, SP, SU) Second-order nonlinear systems. Nonlinear systems and feedback. Approximate analysis methods. Lyapunov and input-output stability. Design of controllers, observers, and estimators for nonlinear systems. (Same as MATH 5443) Prerequisite: ELEG 4403 or MATH 5303.


ELEG5463 Chaotic Dynamical Systems (SU) Computer analysis of chaotic systems. Theory and bifurcations. Symbolic dynamics approach to chaotic systems with applications to convergence analysis of numerical algorithms and secure communications. Fractals with applications to image compression and other topics. Prerequisite: senior or graduate standing in Engineering, Math or Science.

ELEG5473 Intelligent Transportation Systems (SU) Engineering challenges in current 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.

ELEG5513 Electric Power Quality (FA, SP, SU) The theory and analysis of electric power quality for industrial and commercial power systems. Specific topics include: grounding, shielding, wiring considerations, instrumentation, site surveys and analysis, case studies, specification and selection of power quality monitoring equipment and design and installation practice. Prerequisite: ELEG 3303 and MATH 3404.

ELEG5533 Power Electronics and Motor Drives (SP, Odd years) Focus on the principles and design of power electronics, power electronic devices, IGBTs and MOS-controlled Thyristors (MCTs), design of driver and snubber circuits, induction-, permanent magnet-, and brushless dc-motor drives; and resonant inverters. Prerequisite: graduate standing or (ELEG 3223 and ELEG 3300).

ELEG5543 Communication Networks for Motion/Indoor Control (IR) An introduction to topics of control and communication in motion control systems. Examples: Open Control Automation, RS 485 Communication and RS 232 Communication as related to motion control systems, Serial Real Time Communication Systems, Control Area Network, Ethernet and Control Applications. Prerequisite: ELEG 3303 or graduate standing.

ELEG55603 Wireless Data Communications (SP, Odd years) Comprehensive course in the emerging field of wireless data communications. Topics include wireless cellular system infrastructures, wireless circuit data, wireless packet data, mobile IP, and various existing and soon-to-be available wireless data systems and technologies. Prerequisite: graduate standing.

ELEG55613 Introduction to Telecommunications (FA) Overview of Public and Private Telecommunication Systems; Traffic; Telecommunication Systems; Communications; Information Technology; Electromagnetics, Data Transmission (Same as CSCE 5613) Prerequisite: ELEG Graduate Standing or ELEG 3133.

ELEG5623 Digital Image Processing (FA, SP, SU) Continuous and discrete source and channel models, measure of information, channel capacity, noisy-channel coding theorem, coding and decoding techniques. Prerequisite: ELEG 4133 or ELEG 4623.

ELEG5633 Detection and Estimation (FA, SP, SU) Binary and multiple decisions for single and multiple observations; sequential, composite, and non-parametric decision theory; estimation theory; sequential, non-linear, and state estimation; optimum receiver principles. Prerequisite: graduate standing.

ELEG5643 Computer Communications Networks (FA, SP, SU) A study of various current data communication techniques used in the computer world. Concepts of digital communications theory as well as packet and protocols are studied. (Same as ELEG 5083) Prerequisite: CSEG 2503.

ELEG5653 Artificial Neural Networks (SU) Fundamentals of artificial neural networks, both theory and practice. Teach basic concepts of both supervised and unsupervised, and how they are implemented in neural network systems. Prerequisite: ELEG 5434.

ELEG5673 Pattern Recognition (FA, SP, SU) Introduction to the basic concepts of pattern recognition, its theory and application. Subjects will include: trainable pattern classifiers, discriminant functions, parametric training meth-ods, nonparametric training methods, feature selection, feature ordering, cluster analysis. Prerequisite: ELEG 4403.

ELEG5683 Image Processing (FA, SP, SU) Concepts involved in the processing of digital images. Emphasis on image analysis, enhancement, and restoration. Both spatial and frequency-domain techniques are presented. (Same as CSEG 5203) Prerequisite: working knowledge of statistics and a programming language.

ELEG5693 Wireless Communications (FA) Comprehensive course in fast developing field of wireless mobile/cellular personal telecommunications. Topics include cellular system structures, mobile radio propagation channels, etc. Prerequisite: graduate standing.

ELEG5713 Antennas and Radiations (FA, SP, SU) Radio frequency antennas, control of radiation patterns, antenna impedance and antenna feeding systems. Prerequisite: ELEG 3713.

ELEG5723 Advanced Microwave Design (SP) This course is an advanced course in microwave design building on the introduction to microwave design course. A detailed discussion of active devices, biasing networks, mixers, detectors, Microwave Monolithic Integrated Circuits (MMIC), and wideband matching networks will be provided. In addition, a number of advanced circuits will be analyzed. Prerequisite: ELEG 3703 and ELEG 4723.

ELEG5733 Remote Sensing Systems (FA, SP, SU) Analysis of remote sensors operating in 3 widely used EM spectral regions: Visible and near IR, thermal IR, and microwave. Emphasis on understanding generic types of remotes sensors serving various remote sensing applications, products, and applications. Prerequisite: ELEG 3703 and ELEG 3123.


ELEG5753 Satellite Communications & Navigation Systems (FA) Introduces satellite communications and navigation systems design including microwave transmission, satellite transponders, earthstation hardware, microwave and orbital aspects, spread spectrum techniques, space products, and applications. Prerequisite: ELEG 3133 and ELEG 3703.

ELEG5763 Advanced Electromagnetic Scattering & Transmission (IR) Reflection and transmission of electromagnetic waves from a flat interface, the Poynting theorem, the complex and average power, the rectangular wave guide, TE and TM modes, radiation from antennas in free space and introduction to computational electromagnetics. Prerequisite: ELEG 3703.

ELEG5801 Graduate Seminar (FA, SP, SU) Papers presented by candidates for the Master of Science degree in electrical engineering on design projects, or new developments in the field of electrical engineering, among others. Prerequisite: graduate standing.

ELEG5801V Special Problems in Electrical Engineering (1-3) (FA, SP, SU) Consideration of current electrical engineering topics not covered in other courses. Prerequisite: graduate standing.

ELEG5801V Special Problems (1-6) (FA, SP, SU) Opportunity for individual study of advanced subjects related to a graduate electrical engineering program to suit individual requirements.

ELEG5913 Parallel Programming (FA, SP, SU) An analysis of parallel computer systems with respect to software engineering. Practical programming experience on pipelined, array, and multiprocessor computers. Credit can be earned in only one of these three courses. CSEG 5303 or CSEG 5503 or ELEG 5913. (Same as CSCI 5303, CSEG 5303) Prerequisite: working knowledge of ‘C’ language and CSCI 4513 or equivalent.

ELEG5933 CAD Methods for VLSI (FA, SP, SU) Introduction to computational methods for the design and implementation of computer aided design (CAD) tools for digital systems engineering. The underlying theory of the tools is emphasized in addition to their application. Prerequisite: proficiency using a modern high-level programming language such as C/C++.

ELEG5943 Computer Arithmetic Circuits (FA, SP, SU) Examination of fundamental principles of algorithms 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. Pre-corequisite: CSEG 4983 or equivalent and graduate standing.

ELEG5963 Computer Systems Optimization (FA, SP, SU) Design and implementation of computer systems.
ENGL4003 Basic Writing (FA, SP) 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 be exempted from this course and transferred to ENGL 1013 as early as the third week of classes. Credit earned in this course may not be applied to the total required for a degree.

ENGL1013H Honors Composition I (FA, SP, SU) A course for freshmen with high placement scores: UNIVERSITY CORE COURSE.

ENGL1013 Continuation of ENGL 1013. UNIVERSITY CORE COURSE.

ENGL1023H Honors Composition II (SP) Continuation of ENGL 1013H. UNIVERSITY CORE COURSE.

ENGL1153 Vocabulary Building (IR) Designed to increase the student’s vocabulary and thereby improve reading comprehension, writing, and knowledge of the operations of language. Also includes study of how words have been added to the English Language in the past, study of patterns of word formation, and study of lexicography. Some attention given to pronunciation and spelling. Nonremedial course. ENGL 1213 Introduction to Literature (FA) Approaches to reading and writing about fiction, drama, and poetry at the college level.

ENGL2003 English Composition (FA, SP, SU) Review course in English composition. Required of all candidates for bachelor’s degree unless exempted by examination or by credit in ENGL 1013 or by a grade of at least a “B” in ENGL 1013 and a grade of “A” in ENGL 1023 at the University of Arkansas. Exemption may 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.

ENGL2013 Essay Writing (SP, SU) Prerequisite: ENGL 1013 and ENGL 1023.

ENGL2023 Creative Writing I (FA, SP) Beginning level workshop course in which students write original poems and stories. Reading and detailed discussion of poems and stories in anthologies is required. Designed to teach the student the fundamental techniques of fiction and poetry.
ENGL4073 Film Writing Workshop (SP) A workshop in writing the screenplay with close attention given to student manuscripts and adaptations. Prerequisite: advanced stand-
Theory (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL953 Studies in Literary History (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL973 Studies in Rhetoric and Composition (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6113 Seminar in Medieval Literature and Culture (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6103 The Development of English (FA) Intensive course in the fundamentals of linguistic study and their application to the history of English from prehistoric times to the present.

ENGL6203 Seminar in Renaissance Literature and Culture (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6243 Seminar in Special Topics (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6243 Seminar in Restoration and Eighteenth-Century British Literature and Culture (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6723 Seminar in American Literature and Culture Before 1900 (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6803 Seminar in Twentieth-Century American Literature and Culture (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6933 Seminar in Popular Culture and Popular Genres (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6943 Seminar in Literary Theory (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL6973 Seminar in Rhetoric and Composition (IR) Subject matter changes depending on student interest and faculty expertise. May be repeated. May be repeated for 12 hours.

ENGL698V Master's Thesis (1-6) (FA, SP, SU)

ENGL699V Master of Fine Arts Thesis (1-6) (FA, SP, SU)

ENGL700V Doctoral Dissertation (1-18) (FA, SP, SU)

ENS1003 Environmental Science (SP) 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 ENV 1003.

ENS1012 Orientation to Crop, Soil, and Environmental Science (FA) An introduction to majors in Crop Management and Environmental, Soil and Water Sciences with emphasis on original disciplines or on developing academic abilities and communication skills. Required of all departmental majors with less than 24 semester credit hours. Recitation 2 hours per week.

ENS2203 Soil Science (FA, SP) Origin, classification and physical, chemical, and biological properties of soils. Lecture 3 hours, discussion 1 hour per week. (Same as ENS 2203) Corequisite: CSES 2201L and CSES 2200D. Prerequisite: CHEM 1003.

ENS3003 Introduction to Water Science (FA, SP) 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 ENS 1003 or CHEM 1053 or GEOG 1113 or BIOL 1543. Corequisite: CHEM 1023.

ENS3023 Agricultural Water Management (FA) The types, natural influences of agricultural wastes and the effect of these wastes on the environment. The control, management, and reuse of wastes to include final disposal. Lecture 3 hours per week. (Same as BAST 3023) Prerequisite: junior standing and MATH 1103.

ENS3103 Plants and Environmental Restoration (FA, Odd years) Selection, establishment, and use of plants to promote soil stabilization, water quality, and wildlife habitats in areas having planting plans for soil remediation, nutrient and sediment trapping, and restoration of plant communities. Prerequisite: CSES 1203 or HORT 2003.

ENS3223 Ecosystems Assessment (FA, Even years) Application of ecological principles for EWS majors and college students interested in environmental science. Applications of the basic ecological principles of organisms, populations, communities and ecosystems to problem approach for how large scale patterns in terrestrial and aquatic ecosystems are influenced by small scale interactions among individuals (microorganisms to vertebrate macrofauna) and between individuals and their local environment. Lecture 3 hours per week. Prerequisite: BIOL 1543, CSES 2203, and ENS 3003.

ENS3221L Ecosystems Assessment Laboratory (FA, Even years) 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 college samples, analyze and interpret data obtained from soil and water samples. Labs meet once per week for 3 hours.

ENS3253 Septic Systems (SP, Odd years) 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 (same as CVEG 3253). Recitation 3 hours per week. Prerequisite: CVEG 1103 or CSES 2203.


ENS3260L Environmental Soil and Water Conservation Lab (SP) Corequisite: ENS 3263. ENS2413 Principles of Environmental Economics (FA) 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.

ENS3603 GIS for Environmental Science (SP, Even years) Provide instruction on the uses of GIS techniques in solving practical environmental and agricultural land use problems. Areas include: 1) an introduction to spatial variability in soils with emphasis on the application of GIS techniques to map and understand spatial parameters important to different land uses, and 2) development of individual techniques in GIS in solving environmental and agricultural problems using an oral and written term project. Prerequisite: Corequisite: CHEM 1003 or PHIL 2003 or PHIL 2103.

ENS3933 Environmental Ethics (SP, Even years) The course addresses ethical questions about nature and the natural environment. Topics of discussion include anthropocentric ethics, population control, obligations to future generations, animal rights, moral considerability, Leopold's land ethic, deep ecology, and ecofeminism. Lecture/discussion 3 hours per week. Prerequisite: ENSC 1003 or PHIL 2003 or PHIL 2103.

ENS400V Special Problems (1-3) (FA, SP, SU) Work on special problems in environmental science or related fields. May be repeated for 8 hours.

ENS4023 Water Quality (FA) Physical, chemical, and biological characteristics of natural waters (nals, 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 experiments in water sampling, measurement of water quality parameters, and instrumentation. Corequisite: ENSC 400L. Prerequisite: CHEM 1123 and CHEM 1121L.

ENS420L Water Quality Laboratory (FA) Corequisite: ENSC 400L.

ENS4034 Analysis of Environmental Contaminants (SP, Odd years) (Formerly ENSC 4033) 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. Prerequisite: CSES 3203.

ENS404V Special Topics (1-3) (IR) Studies of selected topics in environmental sciences not available in other courses. May be repeated for 12 hours.

ENS4263 Environmental Science in Practice (SP) Study of the behavior of pesticides, toxic organic compounds, metals, nutrients, and pathogenic microorganisms in the soil/plant/water continuum. Lecture 3 hours per week. (Same as ENSC 4263) Corequisite: CHEM 1003.

ENS4413 Economics of Environmental Management (SP, Odd years) An economic approach to problems of evaluating private and social benefits and costs of altering the environment. Analysis of the interaction of individuals, institutions, and technology in problems of establishing and maintaining an acceptable level of environmental quality. (Same as AGEC 4413) Prerequisite: AGEC 1103 and AGEC 3413.

ENTS0123 Insects and People (SP, SU) Appreciation of the insects and their roles in nature and in civilization for students not required to take ENT 3013. Biological, historical, social, economic, cultural, and medical aspects of insects are discussed. Emphasizes appreciation for entomology and employs many visual aids. Lecture 3 hours per week.

ENTS013L 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: ENT 3013. Even years) Provide instruction on the uses of GIS techniques in solving practical environmental and agricultural land use problems. Areas include: 1) an introduction to spatial variability in soils with emphasis on the application of GIS techniques to map and understand spatial parameters important to different land uses, and 2) development of individual techniques in GIS in solving environmental and agricultural problems using an oral and written term project. Prerequisite: Corequisite: BIOL 1543 and BIOL 1541L. Corequisite: ENS 3001L.

ENTS0301L Introduction to Entomology Laboratory (FA) Suggested prerequisite: BIOL 1541L and BIOL 1543L. Corequisite: ENS 3001L.

ENTS040V Special Problems (1-4) (FA, SP, SU) Prerequisite: BIOL 1541L and BIOL 1543L. Corequisite: ENS 3001L.

ENTS0413 Insect Behavior and Chemical Ecology (SP, Even years) 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 3 hours per week. Prerequisite: ENT 3001L. Corequisite: CHEM 1003.

ENTS0420L Insect Behavior and Chemical Ecology Laboratory (SP, Even years) Corequisite: ENT 4013.

ENTS0420 Insect Diversity and Taxonomy (FA) Prerequisites: identification of insect classification and identification with emphasis on adult insects. Corequisite: ENT 4009.

ENTS0420L Insect Diversity and Taxonomy Laboratory (FA) Corequisite: ENT 4024.

ENTS0433 Immature Insects (SP, Odd years) Identification of immature forms of insects and their phylogenetic relationships. Lecture 1 hour per week. Laboratory 2- hour sessions per week. Corequisite: ENT 4000L. Prerequisite: ENT 4024.

ENTS0430L Immature Insects Laboratory (SP,
General and comparative physiology of insects. Previous knowledge of basic entomology is helpful, but not required. Lecture 2 hours, laboratory 0 hour per week. Corequisites: ENTO 6110L.

ENTO6110L Insect Physiology Laboratory (SP, Even years) Corequisites: ENTO 6110.

ENTO6210 Insect Toxicology Laboratory (SP, Odd years) Corequisites: ENTO 6213.
ers important aspects of the distance learning, course design and teamwork theory to practice. The class will focus particularly on those countries in Europe, emphasizing the factors that tie Europe together as a region. The course will include theory to understand practice, examination and analysis of current practice, proposal of practice standards, and discussion of issues related to learners in distance education environments. May be repeated for 3 hours.

EUTC373 Introduction to Web Design (IR) This course covers the important aspects of the web design process, including content development and educational environments. The course will include theory to understand practice, examination and analysis of current practice, proposal of practice standards, and discussion of issues related to learners in this new medium. May be repeated for 3 hours.

EUTC383 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 focus on how educational environments are developed. This course will include theory to understand practice, examination and analysis of current practice, proposal of practice standards, and discussion of issues related to learners in non-profit settings. Prerequisite: graduate standing.

EUTC560 Workshop (1-3) (IR) This course is designed to enhance the established educational technology curriculum by providing students with special topic content and classroom experience. May be repeated under the guidance of a faculty member. May be repeated. Prerequisite: graduate standing.

EUTC574V Internship (1-6) (FA, SP, SU) A supervised field placement in educational technology that provides experience consistent with the student's professional goals and training emphasis. Internship experiences are planning and directed under the guidance of a faculty member. On-campus and on-site supervision is required. MAY BE REPEATED FOR 6 HOURS. Prerequisite: graduate standing.

EUTC599V Seminar (3-6) (IR) This course is designed to enhance the established educational technology curriculum by providing students with special topic content and classroom experience. May be repeated under the guidance of a faculty member. May be repeated for 6 hours. Prerequisite: graduate standing.

EUTC600V Master's Thesis (1-6) (FA, SP, SU) EUTC605V Special Problems in Educational Technology (FA, SP, SU, Even years) An individually designed and conducted studies of educational technology under the guidance of a faculty member. Negotiated learning contract with supervising faculty required before enrollment. On-campus supervision required. MAY BE REPEATED FOR 6 HOURS. Prerequisite: graduate standing.

EUTC6223 Strategic Planning and IDT Programs (FA, SP, SU) The course offers readings and experiences intended to develop strategic planning knowledge, values, attitudes, and skills in future instructional design and technology leadership. Topics covered include strategic planning and leadership.

EUTC633 Information Technologies in Education (IR) An intensive examination of the role of telecommunication and distance education technologies and their implications for educational practices. Emphasis is on the principles of development, utilization and evaluation of telecommunication and distance education technologies in classroom environments. Prerequisite: EUTC 5213.

EUTC6393 Issues and Trends in Instructional Design and Technology (IR) 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: EUTC 5213.

EUTC699V Seminar (1-3) (IR) The seminar is designed to provide advanced graduate students with an opportunity to develop research design in educational and training environments. Prerequisite: graduate standing.

FDS3001 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 scientific principles and popular belief.

FDS3003 Multidisciplinary Food Science Laboratory (FA) Open to graduate students. A supervised practical work experience in the food science discipline. Students will engage in individual sensory evaluation projects. Laboratory 2 hours per week.

FDS3103 Principles of Food Processing (FA) The course is designed to provide students with a general application and understanding of current issues associated with food products and food ingredients. Discussions will focus on the following topics: sensory evaluation of food products, food additives, food safety and preservation techniques based on scientific principles, and popular belief. Lecture/discussions/demonstrations, 3 hours per week. Prerequisite: EUTC 2511L, FDS 2800L, and CHEM 1121L. (FA, Even years)

FDS3103A Principles of Food Processing (FA, Even years) The course is designed as an overview of the unit, food processing operations common to all types of food processing plants. Includes: animal and plant growth, international food processing operations processing, fruits and vegetables, poultry and meats, and olive oil and cereals. Emphasis is on oral communication and critical thinking skills. Corequisite: FDS 3103L and CHEM 1121L.

FDS3100L Principles of Food Processing Laboratory (FA) Corequisite: FDS 3103. Laboratory 2 hours per week. Discussion of government laws and regulations affecting the manufacture of food. Emphasis is on federal and state laws related to food safety. Prerequisite: FDS 2511L. Discussion relates to practical aspects of food law. Lecture 2 hours per week.

FDS3400V Special Problems (1-4) (FA, SP, SU) Investigation of assigned problems in food science. Prerequisite: junior standing.

FDS4114 Undergraduate Seminar (SP) Open to all food science majors. Prerequisite: upperclass standing.

FDS4115 Food Analysis Laboratory (SP, Even years) Laboratory exercises provide experience in analysis of nutritional and functional effects of fats, proteins, and sugars in food analysis and instrumental analysis used in food analysis. Laboratory exercises in Food Analysis. Laboratory 3 hours per week. Corequisite: FDS 4114. 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 food control laboratories. Lecture 2 hours, laboratory 4 hours per week. Prerequisite: FDS 4120L. Prerequisite: MIBIO 2103 and MIBIO 2101L and CHEM 1123 and CHEM 1121L.

FDS4120L Food Microbiology Laboratory (SP) Corequisite: FDS 4124.

FDS4203 Quality Evaluation and Control (SP, Odd years) Definitions of grades and standards of quality by sensory, physical, and chemical means. Practical experience in 6 hours, laboratory 2 hours per week. Prerequisite: FDS 4200L. Prerequisite: CHEM 1123 and CHEM 1121L.

FDS4200L Quality Evaluation and Control Laboratory (SP, Odd years) Methods of quality assurance and analytical procedures for 3 hours, laboratory 2 hours per week. Prerequisite: FDS 4203 or (STAT 2303 or AGST 4023) and BENG 1022.

FDS4300 Food Chemistry (FA) Water, carbohydrates, lipids, proteins, vitamins, and minerals in foods; bio-chemical and functional properties, enzymes, food additives (emulsifiers, pigments, colors, flavors, preservatives, and sweeteners) and texture as related to properties in food systems and during processing. Lecture 3 hours, laboratory 3 hours per week. Corequisite: FDS 4300L. Prerequisite: CHEM 1123 and CHEM 1121L and CHEM 2613 and CHEM 2611L, or CHEM 3603 and CHEM 3601L.

FDS4300L Food Chemistry Laboratory (FA) Laboratory experiments have been designed to complement material covered in FDS 4304. Demonstrates principles of chemical changes in food during cooking and simulation opportunities for developing critical thinking and problem solving skills. Laboratory 3 hours per week. Corequisite: FDS 4304. FDS431V Internship in Food Science (1-4) (IR) A supervised practical work experience in the food science discipline. Students will engage in individual sensory evaluation projects. Lecture/discussions/demonstrations, 3 hours per week.

FDS4413 Sensory Evaluation of Food (FA, Odd years) Principles and procedures for sensory evaluation of food. Appropriate uses of specific tests are discussed, along with the psychophysical, psychological, and environmental factors affecting sensory verdicts. Lecture 2 hours, laboratory 2 hours per week. Corequisite: FDS 4410L. Prerequisite: STAT 2303 or IYSIS 4023 or AGST 4023 or STAT 2023 or PSYC 2013.

FDS4411 Sensory Evaluation of Food Laboratory (FA, Odd years) The laboratory is designed to develop critical thinking and problem solving skills through participation in individual sensory evaluation, analyzing, interpreting, and reporting data; designing and conducting individual sensory evaluation projects. Laboratory 2 hours per week. Corequisite: FDS 4411L.

FDS4713 Food Product and Process Development (SP, Odd years) 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
(FIR) FULLBRIGHT INSTITUTE OF INTERNATIONAL RELATIONS

FIIR2813 Introduction to International Relations (FA, SP) Introduction to the international system, theories of international behavior, political economy, international conflict and peacemaking, the third world, international law and organizations, and the nature of the post-Cold War world. Prerequisites: FIIR 2813 or FLSIC 2813.

FINN FINANCE

FINN3003 Personal Financial Management (FA, SP) Topics covered include budgeting, financial planning, managing credit, taxes, insurance, investments, and retirement planning.

FINN3013 Financial Analysis and Valuation (FA, SP, SU) Focuses on how information contained in financial statements can be used in financial decision-making; in particular, to assess a company's creditworthiness and determine if the market price of its stock is justified. Prerequisite: FINN 3003.

FINN3053 Financial Markets and Institutions (FA, SP, SU) Focus is on carrying out and managing financial transactions and transfers of value. Students learn about the functioning of financial markets and institutions and how they interact with each other. Prerequisites: FINN 3013 and FINN 3003.

FINN3063 Corporate Finance (FA, SP, SU) Corporate finance is the area of finance that deals with the capital requirements of business enterprises. The course covers the theory and practice of raising capital, the management of capital and the evaluation of investment opportunities. Prerequisites: FINN 3003 and FINN 3013.

FINN3083 Financial Reporting (FA, SP, SU) Emphasizes the preparation and analysis of financial statements, the role of accounting in decision-making, and the interaction of financial information with other business activities. Prerequisites: FINN 3003 and FINN 3013.

FINN3103 Financial Modeling (FA, SP) The course covers the use of financial models to analyze and predict financial outcomes. Students learn to construct and interpret financial models using spreadsheets and other analytical tools. Prerequisites: FINN 3003 and FINN 3013.

FINN3113 International Finance (FA, SP) This course covers the international aspects of finance, including the international flow of capital, foreign exchange markets, and multinational corporations. Prerequisites: FINN 3003 and FINN 3013.

FINN3123 Security Analysis (FA, SP) Students learn about the valuation of financial instruments and the management of risk in investment portfolios. Prerequisites: FINN 3003 and FINN 3013.

FINN3133 Capital Budgeting (FA, SP) Students learn about the process of making investment decisions, including the evaluation of projects and the selection of capital budgets. Prerequisites: FINN 3003 and FINN 3013.

FINN3173 Real Estate Finance (SP) This course covers the financial aspects of real estate investment and development. Students learn about the role of finance in the real estate market and the evaluation of real estate projects. Prerequisites: FINN 3003 and FINN 3013.

FINN3203 Financial Analysis and Valuation II (FA, SP) This course continues the study of financial analysis and valuation, with a focus on advanced topics such as advanced valuation techniques and the integration of financial analysis with other business functions. Prerequisites: FINN 3003 and FINN 3013.

FINN3213 Advanced Topics in Financial Accounting (FA, SP) This course covers advanced topics in financial accounting, including the valuation of financial instruments and the measurement of financial performance. Prerequisites: FINN 3003 and FINN 3013.

FINN3223 Advanced Financial Management (FA, SP) This course covers advanced topics in financial management, including the evaluation of investment opportunities and the management of financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3233 Risk Management and Insurance (FA, SP) This course covers the principles and practices of risk management and insurance, including the evaluation of insurance contracts and the management of financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3243 Real Estate Investment and Appraisal (FA, SP) This course covers the principles and practices of real estate investment and appraisal, including the evaluation of real estate properties and the management of real estate investments. Prerequisites: FINN 3003 and FINN 3013.

FINN3253 Real Estate Law (FA, SP) This course covers the legal aspects of real estate investment and development, including the evaluation of real estate contracts and the management of real estate legal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3263 Real Estate Economics (FA, SP) This course covers the economic principles and practices of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate economic risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3273 Real Estate Planning (FA, SP) This course covers the planning aspects of real estate investment and development, including the evaluation of real estate development projects and the management of real estate development risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3283 Real Estate Appraisal (FA, SP) This course covers the appraisal aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate appraisal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3293 Real Estate Finance (FA, SP) This course covers the financial aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3303 Real Estate Investments (FA, SP) This course covers the investment aspects of real estate investment and development, including the evaluation of real estate investment opportunities and the management of real estate investment risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3313 Real Estate Appraisal (FA, SP) This course covers the appraisal aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate appraisal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3323 Real Estate Economics (FA, SP) This course covers the economic aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate economic risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3333 Financial Management (FA, SP) This course covers the principles and practices of financial management, including the evaluation of financial policies and the management of financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3343 Real Estate Law (FA, SP) This course covers the legal aspects of real estate investment and development, including the evaluation of real estate contracts and the management of real estate legal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3353 Real Estate Economics (FA, SP) This course covers the economic aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate economic risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3363 Real Estate Finance (FA, SP) This course covers the financial aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3373 Real Estate Investments (FA, SP) This course covers the investment aspects of real estate investment and development, including the evaluation of real estate investment opportunities and the management of real estate investment risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3383 Real Estate Appraisal (FA, SP) This course covers the appraisal aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate appraisal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3393 Real Estate Planning (FA, SP) This course covers the planning aspects of real estate investment and development, including the evaluation of real estate development projects and the management of real estate development risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3403 Real Estate Finance (FA, SP) This course covers the financial aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3413 Real Estate Law (FA, SP) This course covers the legal aspects of real estate investment and development, including the evaluation of real estate contracts and the management of real estate legal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3423 Real Estate Economics (FA, SP) This course covers the economic aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate economic risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3433 Real Estate Investments (FA, SP) This course covers the investment aspects of real estate investment and development, including the evaluation of real estate investment opportunities and the management of real estate investment risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3443 Real Estate Appraisal (FA, SP) This course covers the appraisal aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate appraisal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3450V Independent Study (1-3) (FA, SP, SU) Permits students on an individual basis to explore selected topics in finance, with the consent of instructor.

FINN3473 Life and Health Insurance I (SP) This course covers the principles and practices of life and health insurance, including the evaluation of life and health insurance contracts and the management of life and health insurance risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3483 Property and Casualty Insurance I (SP) This course covers the principles and practices of property and casualty insurance, including the evaluation of property and casualty insurance contracts and the management of property and casualty insurance risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3493 Property and Casualty Insurance II (SP) This course covers the principles and practices of property and casualty insurance, including the evaluation of property and casualty insurance contracts and the management of property and casualty insurance risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3503 Real Estate Law (FA, SP) This course covers the legal aspects of real estate investment and development, including the evaluation of real estate contracts and the management of real estate legal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3513 Real Estate Economics (FA, SP) This course covers the economic aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate economic risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3523 Real Estate Finance (FA, SP) This course covers the financial aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3533 Financial Management (FA, SP) This course covers the principles and practices of financial management, including the evaluation of financial policies and the management of financial risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3543 Real Estate Law (FA, SP) This course covers the legal aspects of real estate investment and development, including the evaluation of real estate contracts and the management of real estate legal risks. Prerequisites: FINN 3003 and FINN 3013.

FINN3553 Real Estate Economics (FA, SP) This course covers the economic aspects of real estate investment and development, including the evaluation of real estate market conditions and the management of real estate economic risks. Prerequisites: FINN 3003 and FINN 3013.
(IR) A systematic introduction to the Greek and Latin com-
 restricted to candidacy in foreign languages).
May be repeated. Prerequisite: honors candidacy (not
(FA) Under the num-
 sues of translation of well-known works. Primary
 (1-6) (FA) A course (not
 (FA) Introduction and

FLAN5063 Teaching Foreign Languages on the
College Level (IR) Focus on basic methodological con-
cepts and their practical application to college foreign lan-
guage instruction.
FLAN5083 Developments in Second Language
Teaching (IR) A review of techniques, strategies, and
methodologies and a survey of recent developments in sec-
ond language teaching.
FLAN575V Special Investigations (1-6) (FA, SP)
May be repeated for 6 hours.

(FLAN) FOREIGN LANGUAGE

FLAN3002 Health and Life Sciences Terminology (IR)
A systematic introduction to the Greek and Latin com-
ponents 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 (1-3) (IR)
Introduction to translation as a literary form, dealing with
the problems involved in interpreting a text and recreating it in

FLAN3173 Introduction to Linguistics (IR)
Introduction to language study with stress upon modern lin-
guistic theory and analysis. Data drawn from various lan-
guages revealing 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.

FLAN392H Honors Colloquium (IR) Covers a spe-
topic or issue, offered as part of the honors program.
May be repeated. Prerequisite: honors candidacy (not
restricted to candidacy in foreign languages).
FLAN398V Special Studies (1-3) (IR) A course (not
independent study) which covers a topic or author not usually
presented in depth in regular courses. May be repeated.

FLAN4013 Special Languages II (SP) Continuation of Special Language I. Prerequisite: FLAN 4003 or equiva-

(FREN) FRENCH

FREN1003 Elementary French I (FA, SP)
FREN1016 Intensive Elementary French (FA, SP, SU)
Equivalent to FREN 1013 but different aural comprehen-
sion and practical speaking ability. Reading, writing,
and grammar in support of communication skills.
FREN1013 Elementary French I (FA, SP)
Elementary course stressing pronunciation, aural comprehen-
sion, and simple speaking ability, and to lead active
mastery of basic grammar and limited reading ability.
Prerequisite: FREN 1003 or equivalent.
FREN2003 Intermediate French I (FA, SP)
Intermediate courses lead to greater facility in spoken lan-
guage and to more advanced reading skills. Prerequisite:
FREN 1013 or equivalent. UNIVERSITY CORE COURSE
FREN2016 intensive Intermediate French (FA, SP, SU)
Equivalent to FREN 2003 and 2013. Stresses aural comprehen-
sion and practical speaking ability. Reading, writing,
and grammar in support of communication skills.
Prerequisite: FREN 1013 or equivalent.
FREN2013 Intermediate French II (FA, SP)
Continued development of basic speaking comprehension
and writing skills and intensive development of reading skills.
Prerequisite: FREN 2003 or equivalent.
FREN2013H Honors Intermediate French II (FA, SP)

FREN3003 Advanced French (FA, SP, SU)
Three hours per week of guided discussion practice for the post-inter-
mediate student. Prerequisite: FREN 2013.
FREN3063 Ph.D. Reading Requirement I (SP)
FREN3013 Cultural Readings (FA, SP, SU) A

FREN3113 Introduction to Literature (FA, SP, SU)
Further development of reading skills and introduction to liter-
ary analysis and criticism. Prerequisite: FREN 3003 or FREN 3103.
FREN399VH Honors French Course (1-6) (FA, SP)
May be repeated for 12 hours. Prerequisite: Junior standing.
FREN4003 French Grammar and Composition (FA, SP)
Prerequisite: FREN 3003 or FREN 3103.
FREN4003 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 and FREN 3103.
FREN4113 Special Themes in French Literature (IR)
Topics not normally covered in period courses. Sample
topics: “The Comic Tradition in French Literature,” “French
Cinema.” Topics announced one semester in advance.
FREN4203 Quebec Studies (IR) A study of Quebec's
culture, institutions, economy, literature and cinema.
Prerequisite: FREN 3113.
FREN4203H Honors Quebec Studies (IR) A study of Quebec's
culture, institutions, economy, literature and cine-
ma. Prerequisite: FREN 3113.
FREN4213 French Civilization (SP)
Prerequisite: FREN 3113.
FREN4223 A Survey of French Literature I (FA, SP, SU) A survey of French literature, its forms and themes from the medieval period through the 18th century.
Prerequisite: FREN 3113.
FREN4223 A Survey of French Literature II (FA, SP, SU) A survey of French literature, its forms and themes in the 19th and 20th centuries. Prerequisite: FREN 3113.
FREN4233 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. May be repeated for 6 hours. Prerequisite: FREN 3113.
FREN475V Special Investigations (1-6) (FA, SP)
May be repeated.
FREN5003 French Grammar and Phonetics (IR)
Systematic review of principles of French grammar and
syntax; Comprehensive presentation of French phonetics.
FREN5013 French Stylistics and Advanced
Composition (IR) Analysis of genres and stylistic choic-
effects in written French. Study of French stylistic compo-
composition especially as it relates to graduate-level courses.
FREN5033 Advanced French Conversation (IR)
This course will provide small discussion environment in
which graduate students will have command of spoken
French in an interactive setting. Discussion will concen-
trate on current cultural issues in the French speaking world.
FREN5213 French Culture & Civilization (IR) An
analysis of French cultural symbols and attitudes as
observed in their historical economic, political, social, edu-
cational, and linguistic aspects.
FREN5233 Advanced Business French (IR) The
purpose of this course is to provide insight into both the lan-
guage and the culture of the French-speaking business
world, primarily in metropolitan France. The course is primari-
ly an advanced language course focused on a specialized area (technical vocabulary and subject matter, drawn from the
world of business.
FREN5333 Old French Literature (IR) 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 (IR) A
survey of representative works of representative works of the sixteenth century.
FREN5533 French 17th Century Theatre (IR)
FREN5543 French 17th Century Literature (IR) A
survey of representative works written in the seventeenth century.
FREN5773 French 18th Century Literature (IR)
FREN5773 Special Topics (IR) May be repeated
in a subject not specifically covered by the courses otherwise list-
ed. May be repeated for 6 hours.
FREN5773 The Development of French
Romanticism (IR)
Emphasis is placed on American urban areas and their evolution and functional areas. Field work. Prerequisite: junior standing.

GEOG4093 Geography of Arkansas (FA) Natural resources of the state, its leading occupations, and its geographic regions. Prerequisite: junior standing.

GEOG410V Special Problems in Geography (1-6) (FA, SP, SU) Designed to meet the needs of students who wish to study one particular geographic topic in some detail. May be repeated for 6 hours. Prerequisite: junior standing.

GEOG4173 The Latin American City (IR) 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 case of city studies. (Same as ANTH 4173, HIST 4173, LAST 4173)

GEOG4243 Political Geography (FA, Odd years) 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 Southeast Asia. Prerequisite: junior standing.

GEOG430V Internship in Physical Geography (3-6) (FA, SP, SU) Supervised experience in municipal, county, state or private natural resource management agency, or any other such organization approved by instructor. May be repeated for 6 hours. Prerequisite: junior standing.

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 topical climatology followed by a study of regional climatology. Offered as physical science. Prerequisite: GEOG 1003 and/or GEOG 4303.

GEOG4384 Principles of Landscape Evolution (FA) Examines the role of waves, rivers, wind, and tectonics 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 3 hours, laboratory 2 hours per week.

GEOG4383 Hazard & Disaster Assessment, Mitigation, & Planning (IR) This course provides an introductory approach to hazardous natural and technological hazards. Prerequisite: junior standing. May be repeated for 3 hours. Prerequisite: junior standing or above.

GEOG440V Internship in GIS & Cartography (3-6) (FA, SP, SU) Supervised experience in GIS and/or cartographic applications with municipal, county, state, or private enterprises. May be repeated for 6 hours.

GEOG4523 Computer Mapping (SP) This course addresses advanced cartographic concepts (i.e. visual hierarchy, aesthetics, 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.

GEOG4543 Geographic Information Systems (FA) 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. (Same as ANTH 4543)

GEOG4553 Introduction to Raster GIS (FA) Theory, data structures, 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. (Same as ANTH 4553) Prerequisite: GEOG 4543 or ANTH 4543.

GEOG4563 Vector GIS (FA, SP, SU) Introduction to geographic information systems (GIS) applications in market analysis, transportation, real estate, demographics, urban and regional planning, and related areas. Lectures focus on development of principles, paralleled by workstation-based laboratory exercises using software and relational data bases. (Same as ANTH 4653) Prerequisite: GEOG 3023 or GEOG 4543.

GEOG4573 Introduction to GRASS Applications in GIS (IR) Gras/Grass support for geographic information systems (GIS) problem solving using the Geographic Resource Analysis Support System (GRASS) software. (Same as ANTH 4573)

GEOG4583 Introduction to Global Positioning Systems (FA, SP, SU) Introduction to navigation, georeferencing, and digital data collection using GPS receivers, data loggers, and laser technology. Elements of 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. (Same as ANTH 4593)

GEOG4653 Advanced Raster GIS (SP, Odd years) 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 models. Several GIS programs are examined with links to statistical analysis software. (Same as ANTH 4653) Prerequisite: GEOG 4553 or ANTH 4553.

GEOG4743 Australia and the Pacific Islands (IR) Natural setting, resources, and human use of these areas and the significance of their world position. Prerequisite: junior standing.

GEOG4753 Geography of the United States and Canada (IR) The geographic regions of Anglo-America. Prerequisite: junior standing.

GEOG4783 Geography of Europe (IR) Geographic regions of the area with emphasis on their present development and geographic, economic, and political relationships. Prerequisite: junior standing.

GEOG4793 Geographic Concepts for Global Studies (SU) Application of geographic concepts and perspectives for analyzing global relationships. Developing and developed nations as well as geographic themes of current importance will be examined. Prerequisite: junior standing.

GEOG4863 Quantitative Techniques in Geography (FA, SP, SU) An introduction to the application of standard quantitative and spatial analytic techniques to geographical analysis. Students will use both micro and large system computers in the course. (Same as ANTH 4863) Prerequisite: STAT 4003 and STAT 4001 or equivalent.

GEOG5003 Seminar in Geography (IR) Selected topics, the nature of which varies with the need. Prerequisite: graduate standing.

GEOG5011 Colloquium (SP) Weekly meetings of faculty, advanced students and guests to discuss research and trends in the field of geography. May be repeatable for 2 hours.

GEOG5053 Quantuary 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. (Same as ANTH 5053, GEOG 5053) Prerequisite: graduate standing.

GEOG5059 History of Geography (SP, Even years) Chronological development of the science; leaders in the field of geography; and the evolution of the major concepts and geographic ideas. Prerequisite: graduate standing.

GEOG510V Special Problems in Physical Geography (1-6) (FA, SP, SU) Prerequisite: graduate standing.

GEOG5113 Global Change (FA) Examines central issues of 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.

GEOG520V Special Problems in Human Geography (1-6) (FA, SP, SU) Prerequisite: graduate standing.

GEOG530V Special Problems in Regional Geography (1-6) (FA, SP, SU) Prerequisite: graduate standing.

GEOG5313 Planetary Atmospheres (IR) Origin of planetary atmospheres, structures of atmospheres, climate evolution, dynamics of atmospheres, levels in the atmospheres, the upper atmosphere, escape of atmospheres, comparative planetology of atmospheres.

GEOG5353 Research Methods and Materials in Geography (FA, Odd years) Geographical research and the preparation of research papers. Prerequisite: graduate standing.

GEOG560V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

(GEO) GEOLOGY

GEOG1123 Human Geography (FA, SP, SU) Basic course in human geography stressing the interrelationships between the natural factors of the environment and man's activities, especially the role of geography in the understanding of social problems and economic and political activities. UNIVERSITY CORE 4 credits.

GEOG2103 Emerging Nations (FA, SP) Survey of problems of development potential, and physical and human resources of the developing world. Areas covered include Latin America, Africa, Middle East, and Monsoon Asia. UNIVERSITY CORE 4 credits.

GEOG2106 Comprehensive Introduction to Emerging Nations (FA) Survey of problems, development potential, and physical and human resources of the developing world. Areas covered include Latin America, Africa, Middle East, and Monsoon Asia. UNIVERSITY CORE 4 credits.

GEOG2202 Developed Nations (FA, SP) Survey of the human and physical resources and the problems of the developed world. Areas covered included Europe, Anglo-America, USSR, Japan, and Australia. UNIVERSITY CORE 4 credits.

GEOG3003 Conservation of Natural Resources (FA, SP, SU) Theory and growth of conservation of the wise use of natural resources of the United States. This course meets the requirement in conservation for teachers. Prerequisite: junior standing.

GEOG3023 Introduction to Cartography (FA) Students learn basic principles of map design, cartographic theory and field surveying to produce a variety of computer-generated maps. An introductory course designed for students in a variety of different disciplines using AutoCad software and various new technologies. Field trips may be required.

GEOG3333 Oceanography (SP) The sea, its life-forms; its winds and currents as related to the atmosphere, world climate, and resources of the United States. May be repeated for 6 hours. Prerequisite: honors candidacy (not restricted to candidacy in geography).

GEOG392H Honors Colloquium (IR) Covers a special topic or issue offered as part of the honors program. May be repeated. Prerequisite: honors candidacy (not restricted to candidacy in geography).

GEOG399W Honors Course (1-6) (IR) May be repeated for 12 hours. Prerequisite: junior standing.

GEOG4013 Latin America (IR) Geography of South America, Mexico, Central America, and the Caribbean Islands.

GEOG4023 Geography of the Middle East (IR) 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 of Western Asia 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. University of Arkansas, Fayetteville

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Course Descriptions
landforms, natural resources, living environments and human
beings. Lecture 3 hours per week. GEOL 1111L is recommended as a corequisite. UNIVERSITY CORE COURSE
GEOL1113H Honors General Geology (IR) Survey
of geological processes and products and their relationships
to landforms, natural resources, living environments, and
human beings. Lecture 3 hours, laboratory 2 hours per week.
Corequisites: GEOL 1111 M. UNIVERSITY CORE COURSE

cial topic or issue, offered as part of the honors program.
May be repeated. Prerequisite: honors candidacy (not
restricted to candidacy in geology).
GEOL4033 Hydrogeology (SP) Occurrence, movement, and interaction of water with geologic and cultural features. Lecture 3 hours per week. Corequisite: GEOL 4030L.
Prerequisite: MATH 2564 and GEOL 3513 and GEOL 3511L.

GEOL1111L General Geology Laboratory (FA, SP,
SU) Laboratory exercises concerning the identification of

Exercises and field trips illustrating principles of water movement through porous media and the methods by which this
movement is monitored. Corequisite: GEOL 4033.
GEOL4043 Water Resource Issues (FA) Human
impact on 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 present.
GEOL4053 Geomorphology (SP) Mechanics of landform development. Lecture 2 hours, laboratory 3 hours per
week. Several local field trips are required during the semester. Corequisite: GEOL 4050L. Prerequisite: GEOL 1004 and
GEOL 1113 and GEOL 3002.

rocks and minerals, use of aerial photographs and topographic maps, and several field trips. Pre- or Corequisite:
GEOL 1113. UNIVERSITY CORE COURSE

GEOL1111M Honors General Geology
Laboratory (FA) Survey of geological processes and
products and their relationships to landforms, natural
resources, living environments, and human beings. Lecture 3
hours, laboratory 2 hours per week. Corequisite: GEOL 1113
H. UNIVERSITY CORE COURSE
GEOL1133 Environmental Geology (SP) The application geologic principles and knowledge of problems created by human occupancy and exploitation of the physical environment. Prerequisite: (GEOL 1113 and GEOL 1111L) or
(GEOG 1003 and GEOG 1001L). UNIVERSITY CORE
COURSE

GEOL1131L Environmental Geology Laboratory
(SP) Laboratory exercises concerning human interactions
with the physical environment including the study of earthquakes, volcanoes, flooding, erosion, mass wasting, water
supply and contamination, and waste disposal. Prerequisite:
(GEOL 1113 and GEOL 1111L) or (GEOG 1003 and GEOG
1001L). UNIVERSITY CORE COURSE

GEOL1131M Honors General Geology II
Laboratory (SP) Laboratory exercises concerning study
of organisms commonly found as fossils, sedimentary rocks,
correlations, and earth history. UNIVERSITY CORE
COURSE
GEOL2313 Mineralogy (FA) General principles and
hand sample study of common minerals. Prerequisite: GEOL
1113.

GEOL4030L Hydrogeology Laboratory (SP)

GEOL4050L Geomorphology Laboratory (SP)
Corequisite: GEOL 4053.

GEOL4153 Karst Hydrogeology (IR) Assessment of
ground water resources in carbonate rock terrains; relation of
ground water and surface water hydrology to karst; quantification of extreme variability in karst environments; data collection rationale. Field trips required. Prerequisite: GEOL
4033.
GEOL4223 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: GEOL 4220L. Prerequisite: GEOL 3413.

GEOL4922 Senior Honors Course (FA, SP, SU)
Special honors research in geology. Two hours of credit each
semester. Prerequisite: junior honors.

GEOL4932 Senior Honors Course (FA, SP, SU)
Special honors research in geology. Two hours of credit each
semester. Prerequisite: junior honors.
GEOL5001 Graduate Seminar (IR) Informal discussions of research as reported in geological literature. All
graduate students are expected to attend.
GEOL5053 Quarternary Environments (FA) An
interdisciplinary study of the Quarternary Period, including
dating methods, deposits, soils, climates, tectonics, and
human adaptation. Lecture 2 hours, laboratory 2 hours per
week. (Same as ANTH 5053, GEOG 5053) Prerequisite:
graduate standing.
GEOL5063 Geochemistry (FA) Chemistry of geologic
processes and the geochemical cycles of selected elements.
Prerequisite: CHEM 1103 and CHEM 1101L and CHEM
1123 and CHEM 1121L.

GEOL5076 Advanced Field Methods of Applied
Hydrogeology (SU) Applied field course emphasizing
collection and interpretation of ground water data. Three
hours may be applied toward an M.S. degree in geology.
Prerequisite: GEOL 4033.

GEOL5123 Stratigraphic Principles and Practice
(IR) Physical and biological characteristics of sedimentary
environments and their correlation in time with emphasis on
the local geologic section. Corequisite: GEOL 5120L.
Prerequisite: GEOL 4223.

GEOL5120L Stratigraphic Principles and
Practice Laboratory (IR) Corequisite: GEOL 5123.
GEOL5132 Ammonoid Biostratigraphy (IR)
Laboratory study of the biology, taxonomy and biostratigraphy
of Paleozoic ammonoid cephalopods. Pre- or Corequisite:
GEOL 5123.

GEOL4220L Stratigraphy and Sedimentation
Laboratory (SP) Corequisite: GEOL 4223.
GEOL4253 Petroleum Geology (FA) Distribution and

GEOL5142 Conodont Biostratigraphy (IR)

GEOL5153 Environmental Site Assessment (IR)

GEOL2310L Mineralogy Laboratory (FA)

origin of petroleum. Lecture 2 hours, laboratory 2 hours per
week. Corequisite: GEOL 4250L. Prerequisite: geology major
and senior standing.

Corequisite: GEOL 2313.

GEOL4250L Petroleum Geology Laboratory (FA)

GEOL3002 Geology for Engineers (FA) Geologic

Corequisite: GEOL 4253.

principles involved in construction, reservoir location, etc.
Lecture 2 hours, laboratory 2 hours per week. Corequisite:
GEOL 3000L.

GEOL436V Geology Field Trip (1-2) (SP) Camping
field trip to areas of geologic interest, usually conducted during Spring Break. May be repeated for 4 hours. Prerequisite:
GEOL 3313.

Laboratory study of the biology, taxonomy, and biostratigraphy of the conodonts. Pre- or Corequisite: GEOL 5123.

of the invertebrate phyla commonly preserved as fossils
emphasizing their physical and biological characteristics.
Lecture 3 hours, laboratory 2 hours per week. Corequisite:
GEOL 3110L. Prerequisite: GEOL 1133 or (BIOL 1543 and
BIOL 1541L) or equivalent.

Theoretical and practical consideration of radar imagery, aerial photography, and infrared imagery for understanding Earth
resource problems related to agriculture, archeology, engineering, forestry, geography, and geology. Lecture 2 hours,
laboratory 2 hours per week. Corequisite: GEOL 4410L.
Prerequisite: GEOL 1004 and GEOL 1113 or GEOL 3002.

Principles, problems, and methods related to conducting an
environmental site assessment. An applied course covering
field site assessment, regulatory documentation, and report
preparation. Prerequisite: GEOL 4033.
GEOL5163 Hydrogeologic Modeling (IR) Topics
include numerical simulation of ground water flow, solute
transport, aqueous geochemistry, theoretical development of
equations, hypothesis testing of conceptual models, limitations of specific methods, and error analysis. Emphasis on
practical applications and problem solving. Prerequisite:
GEOL 4033 and computer literacy.
GEOL5223 Sedimentary Petrology (FA) Sediments
and sedimentary rocks. Lecture 2 hours, laboratory 2 hours
per week. Corequisite: GEOL 5220L. Prerequisite: GEOL
4223.

GEOL3110L Invertebrate Paleontology
Laboratory (SP) Corequisite: GEOL 3114.
GEOL3313 Igneous and Metamorphic Rocks (SP)

GEOL4410L Principles of Remote Sensing
Laboratory (FA) Corequisite: GEOL 4413.
GEOL4433 Geophysics (IR) Derivation from physical

GEOL5220L Sedimentary Petrology Laboratory
(FA) Corequisite: GEOL 5223.
GEOL5263 Hydrochemical Methods (SP)

Megascopic study and classification of igneous and metamorphic rocks. Lecture 2 hours, laboratory 2 hours per week.
Corequisite: GEOL 3310L. Prerequisite: GEOL 2313.

principles, of the geophysical methods for mapping the Earth.
Computational methods of converting gravity, magnetic,
radiometric, electrical, and seismic data into geologic information. Lecture 3 hours, laboratory 2 hours per week.
Corequisite: GEOL 4430L. Prerequisite: MATH 2564 and
PHYS 2033 and PHYS 2031L and GEOL 3513 and GEOL
3511L.

Collection, analytical and interpretation techniques and methods for water, including quality control and quality assurance.
Prerequisite: CHEM 1123 and CHEM 1121L.
GEOL5413 Planetary Geology (IR) 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.

GEOL3000L Geology for Engineers Laboratory
(FA) Corequisite: GEOL 3002.
GEOL3114 Invertebrate Paleontology (SP) Survey

GEOL3310L Igneous and Metamorphic Rocks
Laboratory (SP) Corequisite: GEOL 3313.
GEOL3413 Sedimentary Rocks (FA) An introductory
study of sedimentary rocks from the standpoint of classification, field and laboratory description, and genesis. Lecture 2
hours, laboratory 2 hours per week. Corequisite: GEOL
3410L. Prerequisite: GEOL 2313.

GEOL3410L Sedimentary Rocks Laboratory (FA)
Corequisite: GEOL 3413.

GEOL3513 Structural Geology (FA) Survey of deformational features and their geological significance in the
crust of the earth. Lecture 3 hours per week. Corequisite:
GEOL 3511L. Prerequisite: GEOL 1004 or GEOL 1113 or
GEOL 3002.

GEOL3511L Structural Geology Laboratory (FA)
Corequisite: GEOL 3513.

GEOL360V Undergraduate Special Problems (13) (FA, SP, SU) Library, laboratory, or field research in different phases of geology.

GEOL3901 Junior Honors Course (FA, SP, SU)
Special honors research in geology. One hour credit each
semester. Prerequisite: junior standing.

GEOL4413 Principles of Remote Sensing (FA)

GEOL4430L Geophysics Laboratory (IR)
Corequisite: GEOL 4443.

GEOL4643 Historical Geology (FA) Physical and
biological events that form the history of the earth from its
formation to the beginning of the historical era. Graduate
enrollment only with departmental permission. Corequisite:
GEOL 4641L.

GEOL4641L Historical Geology Laboratory (SP)
Laboratory exercises concerning the study of physical and
biological features of earth history; includes two field trips.
Graduate enrollment only with departmental permission.
Corequisite: GEOL 4643.
GEOL4666 Geology Field Camp (SU) A professional
course taught off campus emphasizing occurrence, description, mapping, and interpretation of major rock types.
Prerequisite: GEOL 3413 and GEOL 3513 and GEOL 3511L.
(may not be taken for graduate credit).

GEOL3911 Junior Honors Course (FA, SP, SU)

GEOL481V Cooperative Education Program (1-6)
(FA, SP, SU) Credit for off-campus, compensated work

Special honors research in geology. One hour credit each
semester. Prerequisite: junior standing.
GEOL3923H Honors Colloquium (IR) Covers a spe-

experience related to geology arranged through the
Cooperative Education Office and Department of Geology.
May be repeated.

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GEOL5423 Remote Sensing of Natural
Resources (SP, Odd years) Advanced course in
remote sensing technology with special emphasis on interpretive techniques for resource management and research.
Prerequisite: GEOL 4413.

GEOL5444 Advanced Petroleum Geology (SP,
Even years) Advanced well logging techniques, quantitative analysis, and subsurface correlation. Lecture 3 hours,
laboratory 2 hours per week. Corequisite: GEOL 5440L.
Prerequisite: GEOL 4253.

GEOL5440L Advanced Petroleum Geology
Laboratory (SP, Even years) Corequisite: GEOL 5444.
GEOL5533 Marine Geology (FA) Geological principles as applied to the study of the world’s ocean basins.
Course includes basic theories of ocean basin evolution, continental margin evolution, coastal geologic processes, and
methods of study of deep sea records of global change and
paleoceanography. Corequisite: GEOL 5530L.

GEOL5530L Marine Geology Laboratory (FA)
Corequisite: GEOL 5533.

GEOL5543 Tectonics (FA) Development of ramifica-

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tions of the plate tectonics theory. Analysis of the evolution of mountain belts. Lecture 3 hours per week. Prerequisite: GEOL 3513 and GEOL 351L.

GEOL560V Graduate Special Problems (2-6) (FA, SP, SU) Library, laboratory, or field research in different phases of geology. Prerequisite: for 4 hours. Lecture 2 hours per week. Prerequisite: GEOL 1113.

GEOL600V Master's Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

(GEOS) GEOSCIENCES

GEOS1113 General Geology (FA, SP, SU) 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 recommended as a corequisite.

GEOS1111L General Geology Laboratory (FA, SP, SU) Laboratory exercises concerning the identification of rocks and minerals, use of aerial photographs and topographic maps, and several field trips. Pre- or Corequisite: GEOS 1111.

GEOS1133 Environmental Geology (SP) The application of geologic principles and knowledge of problems created by human occupancy and exploitation of the physical environment. Prerequisite: GEOL 1113 and GEOL 1111L or GEOL 1131L and GEOL 1003.

GEOS1131L Environmental Geology Lab (FA, SP, SU) Laboratory exercises concerning human interactions with the physical environment including the study of earth- quakes, volcanism, mass wasting, soil erosion, pollution, supply and contamination, and waste disposal. Prerequisite: GEOL 1113 and GEOL 111L or GEOL 1003 and GEOL 1001L.

GEOS4413 Principles of Remote Sensing (FA) Theoretical and practical consideration of radar imagery, aeronautical photography, and infrared imagery for understanding Earth resource problems related to agriculture, archeology, engineering, forestry, geography, and geology. Corequisite: GEOS 4410L. Prerequisite: GEOL 1004 and GEOL 1113 or GEOL 3002.


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 humans to evaluate the value of the parks, and to anticipate the problems they will face in the near and long-term. Prerequisite: GEOL 1113.

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 humans to evaluate the value of the parks, and to anticipate the problems they will face in the near and long-term. Prerequisite: GEOL 1113.

GEOS4560L Geology of Our National Parks Laboratory (FA) Laboratory exercises concerning the identification of rocks and minerals, use of aerial photographs and topographic maps, and several field trips. Pre- or Corequisite: GEOS 4563.

GEOS4633 Near Surface Prospection (SP) Geophysical remote sensing methods are investigated for detecting and mapping subsurface features up to 5m in depth. Magnetometry, resistivity, conductivity, ground-penetrating radar, and other methods are examined with a partic- ular focus on their use for understanding archeological deposits. Requires use of instruments, computer skills, and field trips. (Same as ANTH 4633) Prerequisite: ANTH 4553 or GEOL 4553 or ANTH 4573 or GEOL 4573 or GEOL 4543 and GEOL 1113 and ANTH 3023.

GEOS4693 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, deteriorating neighborhoods, communities, and niches of our society. The course integrates science with philosophy, politics, economics, policy, and law, drawing on award-winning films, current news, and case studies.

GEOS4693H 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, deteriorating neighborhoods, communities, and niches of our society. The course integrates science with philosophy, politics, economics, policy, and law, drawing on award-winning films, current news, and case studies.

GEOS4690L Environmental Justice Laboratory (SP)

GEOS4733 GPS Geodesy in Geoscience (SP) Even years) Applications of GPS geodesy in geosciences are presented with emphasis on case studies of ongoing 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 stu- dents. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: GEOL 1113.

GEOS4730L GPS Geodesy in Geoscience Laboratory (SP) Even years) Applications of GPS geodesy in geosciences are presented with emphasis on case studies of ongoing 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 stu- dents. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: GEOL 1113.

GEOS5053 Quaternary Environments (FA) An interdisciplinary study of the Quaternary Period, including dating methods, deposits, soils, climates, tectonics, and human adaptations. Lecture 2 hours, laboratory 2 hours per week. (Same as ANTH 5053, ENDY 5053, GEOL 5053). Prerequisite: graduate standing.

GEOS5853 Stable Isotope Geology (FA) Introduction to principles of isotopic fractionation and distribution in geologic environments, isotopic analytical methods, and extraction of isotopic samples; application of isotopes in characterization and dating of sediments, palaeoecologic reconstructions, and paleoclimatic reconstructions. Lecture 2 hours per week. Prerequisite: GEOL 5063 or GEOL 5263.

GERM1003 Elementary German I (FA, SP) GEOM1013H Honors Intermediate German I (FA, 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: GERM 1003 or equivalent.

GERM2000 Intermediate German I (FA, SP) Intermediate courses lead to greater facility in spoken lan- guage and to more advanced reading skills. Prerequisite: GERM 1013 or equivalent. UNIVERSITY CORE COURSE

GERM2013 Intermediate German II (FA, SP) Continued development of basic speaking comprehension and writing skills and intensive development of reading skills. Prerequisite: GERM 2003.

GERM2013H Honors Intermediate German II (FA, 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: GERM 1003 or equivalent.

GERM3000 Advanced German I (FA) Development of speaking, writing, listening, and speaking skills. Some gram- mar review and translation exercises. Emphasis on vocabu- lary acquisition and the correct use of idiomatic expressions. Prerequisite: GERM 2013.

GERM3013 Introduction to Literature (FA) Development of reading skills and introduction to literary analysis. Prerequisite: GERM 2013 or equivalent.

GERM3033 Conversation (SP) Three hours per week of guided conversations for the post-Intermediate stu- dent. Prerequisite: GERM 2013.

GERM3063 Ph.D. Reading Requirement (SU) GERM399VH German Honors Course (1-6) (FA, SP) May be repeated for 12 hours. Prerequisite: Pre- or Corequisite: GERM 5003 or equivalent.

GERM470V Special Topics (1-3) (IR) May be offered in a topic not specifically covered by courses otherwise listed. May be repeated for 6 hours. Prerequisite: GERM 2013.

GERM475V Special Investigations (1-6) (FA, SP) May be repeated.

GERM4770V German Lyric Poetry (IR) The rudiments of German lyric poetry from the middle ages to the present. Prerequisite: GERM 3013.

GNEG4123 The German Novelle (SP) Three hours per week of lecture and discussion. Prerequisite: GERM 2013.

GNEG470V Special Topics (1-3) (IR) May be offered in a topic not specifically covered by courses otherwise listed. May be repeated for 6 hours. Prerequisite: GERM 2013.

GNEG5703 Special Topics (1-6) (FA, SP, SU) May be repeated.

GNEG600V Master's Thesis (1-6) (FA, SP, SU)

(GNEG) GENERAL ENGINEERING

GNEG1013 Introduction to Engineering (FA) This introductory course for undergraduate students introduces them to the fields of engineering and many of the modeling and problem solving techniques used by engineers. It also introduces the students to the engineering profession and some of the computer tools necessary for pursuing a degree in engineering.

GNEG1122 Introduction CAD (FA, SP) General course in the use of engineering drawings for communications and design. Proper use of computer-aided drafting and design; 2-dimensional, 3-dimensional, and solid modeling; use of manual drafting equipment; geometrical exercises; orthographic projections; auxiliary view; sketching; dimensioning. Pre- or Corequisite: MATH 1213 or higher. Corequisites: GNEG 1120L.

GNEG1120L Intro to CAD Laboratory (FA, SP) Corequisite: GNEG 1122.

GNEG2801 Cooperative Education I (FA, SP, SU) A student in the work period of the Cooperative Education program must register for a Cooperative Education course. A written report is required. Department heads determine the level of the course of which a student registers.

GNEG2811 Cooperative Education II (FA, SP, SU) GNEG3801 Cooperative Education III (FA, SP, SU) GNEG3811 Cooperative Education IV (FA, SP, SU)

GNEG4801 Cooperative Education V (FA, SP, SU) GNEG4811 Cooperative Education VI (FA, SP, SU) GNEG5003 Topics in Engineering for Teachers (SU) An introduction to engineering and technology con- cepts, as well as methods to conduct engineering and tech- nology instruction. Intended for secondary school teachers during a summer workshop.

(GREK) GREEK

GREK1003 Elementary Greek I (FA) The rudiments of classical Greek, with concentration on grammar, vocabu- lary, and syntax. Short selections from ancient authors lead to basic reading ability.

GREK1013 Elementary Greek II (SP) A continuation of the rudiments of classical Greek, with concentration on grammar, vocabulary, and syntax. Short selection form

Course Descriptions
GREK1203 Beginning Modern Greek I (IR) Conversational language of Greece today. Stresses correct pronunciation, aural comprehension, and simple speaking ability. Leads to active mastery of basic grammar and limited reading ability.

GREK1213 Beginning Modern Greek II (IR) A continuation of GREK 1203. Stresses correct pronunciation, aural comprehension, and simple speaking ability. Leads to active mastery of basic grammar and limited reading ability.

GREK2003 Plato’s Apology of Socrates or Greek New Testament or Both (FA) UNIVERSITY CORE COURSE.

GREK2013 Homer (SP) Selections from the Iliad or the Odyssey: a survey of Greek epic poetry. Prerequisite: GREK 2013 or equivalent.

GREK2033 Herodotus or Thucydides (IR) Readings from Book VII, and Thucydides, Book VI; collateral readings on the Persian and Peloponnesian Wars.

Prerequisite: GREK 2013 or equivalent.

GREK4033 Greek Drama (IR) Readings of plays and one comedy; a study of the Greek theatre. Prerequisite: GREK 2013 or equivalent.

GREK475V Special Investigations (1-6) (FA, SP, SU) May be repeated.

HESC1013 Introduction to Clothing Concepts (FA, SP) Origin of dress, the evolution of fashion as an economic power, the sociological and psychological aspects of dressing in various cultures, aesthetics of dress, selection and consumption of clothing. Lecture 3 hours per week. Pre- or corequisite: HESC 1501 (for HESC majors only).

HESC1023 Introduction to Apparel Production (FA, SP) Business basics of apparel production and analysis of garment components of mass produced apparel. Students utilize computer generated designs in the production process. Laboratory 5 hours per week.

HESC1041 Design Studio I (FA) Introduction to the application of design elements and principles to 2-D and 3-D design. Studio 8 hours per week. Pre- or corequisite: HESC 1501 (applies to HESC majors only). Corequisite: HESC 1031.

HESC1031 Design I: Design Principles and Elements (FA) Introduction to design principles and elements as they relate to 2-D and 3-D design. Lecture meets one hour per week. Corequisite: HESC 1034.

HESC1044 Design II Studio: Drawing and Drafting (SP) Introduction to the application of drawing and drafting. Six 3-hour lab periods per week. Pre- or corequisite: HESC 1501 (applies to HESC majors only). Corequisite: HESC 1041. Corequisite: HESC 1031 and HESC 1034.

HESC1041 Design II Lecture (FA) Design drawing and drafting. Corequisite: HESC 1044. Prerequisite: HESC 1031 and HESC 1034.

HESC1053 Computer Based Methods for Apparel (FA) This course is designed to give students basic experience with CAD (computer aided design) software.

HESC1201 Introduction to Dietetics and Nutrition (FA) Introduction to profession of dietetics and nutrition including history, scope and types of professionals with emphasis on academic preparation, internships, acquisition of professional credentials, career laddering and career opportunities. Guest speakers will supplement lectures and assignments.

HESC1213 Nutrition in Health (FA, SP) The functions of food, body processes, optimum diets in relation to health and physical fitness.

HESC1221 Orientation to Human Environmental Sciences (FA, SP) Adjustment to study and personal problems in college. History of human environmental sciences and breadth of its professional opportunities.

HESC1603 Introduction to Hospitality Management (FA) Overview of the hospitality industry with an emphasis on the functions, economic, social, and legal aspects of the industry. May be repeated.

HESC1601 Work Experience Practicum (SP) This course is a practicum designed to assist students to reach 100 hours of satisfactory and verifiable work experience required for certification. Minimum of 200 hours of work experience is required for each credit hour. Students must maintain paycheck or written documentation of 10 hours worked. May be repeated up to 4 credit hours. Prerequisite: HESC1501 and club membership.

HESC200V Special Problems (1-3) (FA, SP, SU) Special problems are conducted under the guidance of a faculty member and include an inquiry initiated by the student into an aspect of study or program not dealt with in the regular curriculum. Students are required to submit to their instructor a detailed outline of the problem they will examine. May be repeated for hours.

HESC2013 Quality Assessment of Apparel (SP) Study of apparel from the perspective of structure, aesthetics, cost and expected performance of the finished product. Pre- or Corequisite: HESC 1041 and HESC 1044.

HESC2203 Visual Merchandising (FA) Fashion components, terminology and design features as applied to apparel. Principles and techniques of visual merchandising as a means of merchandising in the fashion industry. Window display and store floor planning. Web design for selling merchandise. Lecture 1 hour, laboratory 4 hours per week. Prerequisite: ARTS 1003.

HESC2053 Introduction to Textile Science (FA, SP) Textile fibers and fabrics, their structure, properties, manufacture, weaving qualities and methods of laundering, finishing, and dying. Artistic and economic selection of materials for clothing and household furnishings. Lecture 2 hours, laboratory 2 hours per week. Corequisite: HESC 2050L.

HESC2050L Introduction to Textile Science Laboratory (FA) Lectures and laboratory chapters on HESC 2053.

HESC2112 Foods 1 (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 1071L or CHEM 1103 and CHEM 1101L.

HESC2111L Foods I Laboratory (FA) Laboratory exercises and practice applicable of Foods 1 Lab 1 hour per week. Corequisite: HESC 2112L. Prerequisite: CHEM 1074 and CHEM 1071L or CHEM 1103 or CHEM 1101L.

HESC2123 Catering Management (SP) Course focuses on catering services 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, organizing, inter-personal skills, computer application, implementing, controlling and legal issues. Lecture 2 hours, lab 3 hours. Corequisite: HESC 2120L. Corequisite: HESC 2112L and HESC 2111L.

HESC2120L Catering Management Laboratory (FA) Corequisite: HESC 2112L and HESC 2111L. Corequisite: HESC 2120L.

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 2123.

HESC2402 Infant and Toddler Development (FA) Human development from conception through toddlerhood. Emphasis on physical, emotional, social, and cognitive development are covered. Lecture 2 hours per week. Corequisite: HESC 2401L.

HESC2401L Infant and Toddler Development Laboratory (FA) Corequisite: HESC 2402.

HESC2413 Family Relations (FA, SP) Courtship, marriage, and parenthood in the United States, with cultural and personal variables affecting the family relationship among family members. Lecture 3 hours per week. Pre- or corequisite: HESC 1501 (applies to HESC majors only). UNIVERSITY CORE COURSE.

HESC2433 Child Development (FA, SP) 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: 6 hours of human development and family studies or psychology.

HESC2443 The Hospitalized Child: Child Life Programming (IR) Introduces child life programming in health care settings. Topics include: roles and responsibilities of a Child Life Specialist, importance of play, coping techniques, family advocacy, administration and professionalism. Lecture 3 hours per week. Prerequisite: HESC 3013.

HESC255V Special Topics (1-3) (FA, SP, SU) Topics not covered in other courses or a more intensive study of specific topics in the specialization of humanized environments. May be repeated.

HESC2623 Legal Issues in the Hospitality Industry (SP) Introduction to the laws and regulations pertaining to the hospitality industry. The focus is on management responsibilities for the prevention of legal action, understanding federal and state regulations with an emphasis of study of recent litigation. Prerequisite: HESC 1603.

HESC2601 Introduction to Apparel Production (SP) An introduction to interior space articulation and the creation of small scale spaces. Study of human needs, activities, experiences, and spatial requirements. Exploration of design processes and graphic communication for creative design development and solutions. Studio 6 hours per week. Prerequisite: HESC 1041 and HESC 1044.

HESC2613 Studio II: Interior Design Process and Production (SP) Intermediate studio process and production with emphasis on conceptualization, design theory, ideation, programming, and project documentation. Studio 6 hours per week. Prerequisites: HESC 2803 and HESC 2833.


HESC2833 Introductory Presentation Media (FA, SP) Techniques of perspective drawing, illustration, and rapid visualization. Components of various presentation methods and formats. Exploration of a variety of compatible commercial products. Studio 6 hours per week. Prerequisites: HESC 1041 and HESC 1044.

HESC2842 Lighting Systems (SP) Exploration of lighting applications of lighting, design and scientific aspects. Lecture 2 hours per week. Corequisite: HESC 2824. Prerequisite: HESC 2803 and HESC 2833.

HESC2841 Lighting Studio (SP) Application of lighting design principles to interior design problems. Will include drafting and specification writing. Laboratory 2 hours per week. Corequisite: HESC 2842. Prerequisite: HESC 2803 and HESC 2833.

HESC2833 History of Interior Design I (FA) Study of historic interiors and furniture from antiquity through 1800. Emphasis is given to identification of the interiors style and furniture of these eras. Lecture 3 hours.

HESC2893 Principles of Computer-Aided Design (SP) Applying the use of computer aided design to the interior design process. The application of CAD with interior design projects that relate to both interior residential and commercial/retail stores with other segments of the fashion industry. Recommended for students seeking a career in business organizations which produce and/or distribute fashion products and services. Lecture 3 hours per week. Prerequisites: HESC 1013 and HESC 1035.

HESC3013 Introduction to Fashion Merchandising (FA) A study of the retailing of fashion. Included are market structures, store philosophies, job descriptions, responsibilities and techniques for determining 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 a career in business organizations which produce and/or distribute fashion products and services. Lecture 3 hours per week. Prerequisites: HESC 1013 and (AGEC 1103 or ECON 2143).

HESC3033 Fashion Merchandising Methods (SP) 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 and the application to the fashion industry. Prerequisite: HESC 3013.

HESC3204 Nutrition for Health Professionals and Educators (SP) Fundamental human nutrition, nutritive value of foods and general functions of nutrients based on...
HESC403 Advanced Textile Study (FA) Use of advanced computer-aided-design (CAD) software to enhance skills in textile studies. Prerequisite: HESC 1053 and HESC 2053.

HESC4043 History of Apparel (FA) The evolution of clothing from ancient times to the twentieth century with emphasis on the social, economic, and cultural changes that led to these changes. Prerequisite: HESC 1053 and HESC 2053.

HESC404 History of Apparel (FA) The evolution of clothing from ancient times to the twentieth century with emphasis on the social, economic, and cultural factors affecting dress and customs associated with dress will be stressed. Lecture 3 hours per week. Prerequisite: HESC 1053 and HESC 2053.

HESC4053 Contemporary Apparel (SP) 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 fashion publications. Prerequisite: HESC 3003 and HESC 4043.

HESC4063 Advanced Apparel Production (FA) An advanced study of product development incorporating technology used in the industry for a career in fashion merchandising and/or product development. Prerequisite: HESC 3003 and HESC 2053.

HESC4073 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 merchandising and operations. May be repeated for 2 hours. Prerequisite: junior standing and 2.50 GPA and HESC 3033.

HESC4103 Experimental Foods (SP) Application of experimental methods for investigations in cookery. Group and individual projects. Lecture 2 hours, laboratory 3 hours per week. Corequisite: HESC 2112 and HESC 2111L and CHEM 1123 and CHEM 1121L (or HESC 2112 and HESC 2111L and CHEM 1074 and CHEM 1071L).

HESC4100L Experimental Foods Laboratory (SP) Corequisite: HESC 4103.

HESC4213 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 3004.

HESC4223 Nutrition During the Life Cycle (FA) Study of normal nutrition emphasizing quantitative needs for nutrients as functions of biological processes that vary through the stages of the life cycle. Nutritional needs during pregnancy and childhood are emphasized with some attention to nourishing aging and elderly adults. Factors that affect food choices and eating behavior are also considered. Lecture 3 hours per week. Prerequisite: HESC 1213 and either (ZOOL 2213 and ZOOL 2211L or ANSC 3002 or POSC 3032 and ANSC 3042 or POSC 3042) or (CHEM 1074 and CHEM 1071L and BIOL 1545L and BIOL 1541L).

HESC4243 Community Nutrition (SP) Identifying, assessing, and developing solutions for nutritional problems encountered at the local, state, federal, and international levels. Lecture 3 hours per week. Pre- or Corequisite: HESC 3204.

HESC4245V Food and Nutrition Seminar 1 (SP) Upperclassmen, graduate students and members of faculty meet weekly for preparation of selected topics. Two credits (2 semesters) required of all nutrition and/or dietetics majors. May be repeated for 2 hours.

HESC4264 Medical Nutrition Therapy I (FA) Principles of nutritional care with emphasis on pathophysiology, assessment, and treatment of chronic illnesses. Lecture 3 hours, laboratory 3 hours per week. Pre- or corequisite: CHEM 3813. HESC 4213 and HESC 3213. Corequisite: HESC 4266L. Prerequisite: ZOOL 2213 and ZOOL 2211L (or ANSC or POSC 3042).

HESC4260L Medical Nutrition Therapy I Laboratory (SP) Study of pathophysiology, assessment, and critical illness. Lecture 3 hours per week. Pre- or corequisite: HESC 4264L.

HESC4273 Medical Nutrition Therapy II (SP) Principles of nutritional care with emphasis on pathophysiology, assessment, and treatment in critical illness. Lecture 3 hours per week. Pre- or corequisite: HESC 4260L.

HESC4303 Professional Development in Human Environmental Sciences (SP) Enhancements of the professional and personal development of students by fostering an understanding of the historical and philosophical basis of Human Environmental Sciences, with an emphasis on the interrelationships and integration of the component specializations. Clarification of career goals and development of professional skills. Prerequisite: HESC 4423. Examination of individual development beginning with the transition adulthood through middle age, approximate age ranges are 18-60 years. Content focuses on physical, cognitive, psychological, and social changes that occur throughout this period of the life span. The impact of love, work, and family on men’s and women’s movement through the transitions that comprise adulthood are emphasized. Prerequisite: HESC 1403 or PSYC 2033 and junior standing.

HESC4433 Dynamic Family Interaction (SP) Examination of family interaction patterns. Methods for enhancing marriage and family relations will be examined. Sources of marital conflict, intergenerational support and negotiations process will be analyzed. Lecture three hours per week. Prerequisite: HESC 2413 and junior standing.

HESC4443 Gerontology (SP) Physiological and psychological development of the aging individual, extended family structures, services, relationships, work, recreation, and social activities. Some attention to housing and care needs of persons in advanced years. Lecture 3 hours per week.

HESC4453 Parenting and Family Dynamics (FA, SP) Focus is on influence of parenting and family dynamics on individual development, especially factors in family life which contribute to normal psychological development. Topics include family values, the psychology of sex and pregnancy, the transition to parenthood, childbearing techniques, family influences on cognitive and social development, and changes in family relationships during the life cycle. Prerequisite: HESC 1403 or PSYC 2003.

HESC4463 Administration and Evaluation of Child Development Programs (SP) Information on planning, developing, operating, and evaluating child development programs. Topics include physical facilities, staff, curriculum, budgets, parent involvement, and evaluation. Lecture and discussion 3 hours per week. Prerequisite: HESC 3403 and junior standing.

HESC4472 Child Development Practicum (SP) Interaction with parents and planning, implementing, and evaluating directed experiences with children ages 3-5 in an NAECY accredited laboratory setting—U of L. A Nursery School, 2 hours lecture per week. Prerequisite: HESC 3402 and HESC 3401L, Corequisite: HESC 4472L.

HESC4472L Child Development Laboratory (SP) Actual experience facilitating children’s learning with classroom activities. Participation in planning, implementing, and evaluating individual children and programs. 6 hours laboratory per week. Coreerequisite: HESC 4472.

HESC4483 Internship in Human Development and Family Studies (FA, SP, SU) The internship experience provides practical experience for students in settings that are designed to serve the needs of individuals and/or families across the life span. Students must work a minimum of 60 hours per credit hour in the setting. Must be taken no sooner than the semester following completion of the degree. May be repeated for an additional 3 hours of elective credit if second experience is distinctly different from first internship. May be repeated for 3 hours. Prerequisite: HESC 4303.

HESC4493 Public Policy and Children and Families (PA) Public policy advocacy as related to children and family issues. Strategies for advocacy will be emphasized. Lecture three hours per week.

HESC455V Special Topics (1-6) (SP) Topics not covered in other courses, a focused study of specific topics in the students’ areas of concentration. Prerequisite: HESC 4613 Food Service Purchasing (FA) Food purchasing with emphasis on specifications. Relationship of food purchasing to available equipment. Receiving, storage, distribution, and inventory control. Meal quality control and costing. Lecture 3 hours per week. Prerequisite: HESC 3653 and HESC 3654.

HESC4623 Selection and Layout of Food Service Equipment (SP) Types of food service. Planning food flow from receiving to service of meals. Choosing proper equipment for the flow plan and service items. Sanitation, equipment for the flow plan and service items. Sanitation, maintenance, comparison of personnel requirements. Lecture 3 hours per week. Prerequisite: HESC 3653 and 3654.

HESC4693 Hospitality Management Internship (FA, SP, SU) Practical experience for upperclassmen, graduate students and members of faculty meeting weekly for preparation of selected topics. Two credits (2 semesters) required of all hospitality industry majors. May be repeated for 2 hours. Prerequisites: HESC 1212 and HESC 3654 and HESC 3653.

HESC4753 Family Financial Management (FA) Economic considerations of the family in a rapidly changing society. Family finance and consumer problems are empha-
HESC4803 Advanced Residential Design (FA) Advanced studio problems involving residential spaces. Design for new construction, remodeling, and restoration projects for a variety of lifestyles, budgets, physical conditions and lifestyle stages. Projects address the entire design process and can be developed through presentation. Prerequisite: HESC 3813.

HESC4813 Human Factors in Interior Design (SP) (Formerly HESC 4813). Emphasis is given to human behavior as applied to interior design. Types of interior spaces, environmental effects on behavior, ergonomics, interior design needs of special groups, and human factors programs are studied. Lecture 3 hours per week. Prerequisite: SOCI 2013 and PSYC 2003 and junior level standing.

HESC4811 Internship for Interior Design (SU) Summer supervised work experience and observation of operational management procedures in approved design, government or service business. HESC 4843 must be completed in spring prior to internship. Prerequisite: HESC 3813 and HESC 4843.

HESC4823 Professional Practice for Interior Design (FA) General procedures for operating and maintaining an interior design business. Business documentation, communication and computer application skills, professional responsibilities, and ethics. Lecture 3 hours per week. Prerequisite: HESC 3813.

HESC4843 Interior Design Internship Preparation (SP) Preparation for interior design internship, including resume writing, portfolio development, and other job search strategies. Students are responsible for research and selection of internship site. Lecture 3 hours per week. Must be taken spring semester prior to summer internship experience. May be repeated. Prerequisite: junior standing.

HESC485V Design Tours (1-3) (IR) Domestic and international study tours of a variety of design locations that contribute to the body of knowledge. Prerequisite: HESC 1045.

HESC4863 Studio VI: Advanced Commercial Design (SP) Advanced contract studio involving all aspects of a major project and its presentation. Combinations of design solutions for programming requirements and complex design and solutions. Studio 6 hours per week. Prerequisite: HESC 4863.

HESC4891 Senior Portfolio (SP) Continuation of HESC 4843 internship preparation. Professional portfolio presentation. Presentation of portfolio at annual exhibition is required. Studio 2 hours per week. Prerequisite: HESC 4843 and HESC 4863.

HESC4903 Recent Advances in Manufacturing and Merchandising (SP) 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.

HESC5003 Advanced Apparel Studies in the Global Economy (FA) Advanced analysis of economic, social, political, and cultural aspects of the domestic and international textile and apparel industries. Prerequisite: HESC 3013.

HESC5013 Advanced Apparel Pattern Design (SP) Use of computer aided design technology to perform pattern development for technical apparel production. Laboratory 5 hours per week. Prerequisite: HESC 3003.

HESC502V Special Problems Research (1-6) (FA, SP, SU)

HESC5033 Principles of Textile Testing (SP) Study of textile testing machines and methods utilized to determine construction and performance characteristics of woven and knit fabrics. Lecture 1 hour. Laboratory 4 hours per week. Corequisite: HESC 5033.


HESC5020 Special Topics in Nutrition (SP) Critical review of current literature; reports and discussion of original nutrition research pertinent to the topic(s) identified for study. Lecture/seminar format 3 hours per week. May be repeated. Prerequisites: APUS 4440 and CHEM 3813.

HESC522V Readings in Nutrition (1-6) (FA, SP) Seminar and individual study. Prerequisite: HESC 4213 or HESC 4223.

HESC5200 Advanced Family Relations (FA) Subtle elements in marriage, parent-child, and other relationships 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, with emphasis on 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, analytic method, interpretation, verification, presentation of results. Applications to research in economic or sociological problems of applied social and human environmental sciences. (Same as PSYC 5013, AGED 5463) Prerequisite: Any upper division (3000 or higher) statistics course. Special topics in the specialization of human environmental sciences. May be repeated.

HESC6003 Senior Thesis (1-6) (FA, SP, SU) HESC700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: candidacy.

HIED5003 Overview-American Higher Education (FA) A basic course in the study of higher education open to all students seeking careers in colleges and universities. Serves as an introduction to the programs, problems, issues, and trends in higher education.

HIED5033 College Students and Student Personnel Services (SP) Study of origins, functions, and policies in student personnel services in contemporary 2- and 4-year colleges and universities with emphasis on the student and student development.

HIED5043 The Student in Higher Education (SP) Provides those who work or plan to work in post secondary educational institutions with an understanding of the student population in contemporary colleges and universities.

HIED504V Practicum in Higher Education (1-6) (FA, SP, SU) Students are assigned to a department or agency within or outside the university for professional experience under the joint supervision of on-site personnel and university faculty. Periodic meetings are scheduled for evaluation, discussion, and examination of techniques.

HIED5053 The Community-Junior College (FA) An overview of the community college. Topics include the history and philosophy of the community college movement, students, curriculum, state and local campus governance, teaching, student personnel work, finance and issues, problems, and trends.

HIED5083 History and Philosophy of Higher Education (SP) An examination of the history and development of higher education including the study of the philosophy, objectives, and functions of various types of institutions.

HIED560V Working with Ethical and Innovative Instructional Strategies for Use in Higher Education (FA) Critical and concentrated consideration of selected topics of current interest to practitioners.

HIED574V Internship (1-3) (FA, SP, SU) Supervised field experiences in student personnel services, college administration, college teaching or institutional research, development, or other areas of college and university work.

HIED600V Master's Thesis (1-6) (FA, SP, SU) HIED6013 The Professoriate: Problems and Issues (SP) An examination of the vital issues and trends affecting college faculty personnel with emphasis upon institutional change setting.

HIED6022 Introduction to the Study of Higher Education (FA, SP) A requirement for all new doctoral and specialist students. Familiarization with writing requirements, library search procedures, library resources, and program requirements. Prerequisite admission to Higher Education program (Ed.S. & Ed.D.)

HIED605V Independent Study (1-6) (FA, SP, SU) Provides students with an opportunity to pursue special study in higher education.

HIED6073 Management of Higher Education Institutions (SU) Principles and concepts of management and their application in college and university settings.

HIED6173 Individual and Group Management Skills (SP, Even years) Development of knowledge, skill, and confidence in personal management, interpersonal relations, and structured group facilitation in a higher education setting.

HIED6183 Organization Development and Change in Higher Education (IR) An examination of the theory and practice of organization development as it relates to planned change in colleges and universities.


HIED6333 Curriculum Design in Higher Education (FA, Odd years) Types of undergraduate curricula and their supporting philosophies; approaches to curriculum planning and assessment; curricular reform; and factors influencing curricular policy making.

HIED6343 Strategies for Effective Course Teaching (SP, Even years) An examination of tradition- and innovative instructional strategies for use in college teaching.

HIED6423 Trends, Issues and Problems in Higher Education (FA, Odd years) A study of the current problems and trends related to the field of higher education.

HIED6653 Legal Aspects of Higher Education (SP) An examination of the legal status of higher education in the United States; the rights and responsibilities of educators and students including fair employment; due process; torts liability and contracts; student rights landmark court decisions; federal and state legislation having an impact on education.

HIED6663 Finance and Fiscal Management (SP) Higher education finance and budgeting practices; problems, issues, trends, and policy issues in higher education.

HIED6683 Governance and Policy Making in Higher Education (FA, Odd years) An examination of governance and policy making affecting the control of colleges and universities. Attention is given to policy generation, governing board supervision, and the impact of institutional, professional, and regional groups as well as community, state, and federal pressures.

HIED674V Internship (1-6) (FA, SP, SU) Supervised field experiences in student personnel services, college administration, college teaching or institutional research, development, or other areas of college and university work.

HIED680V Ed.S. Project (1-6) (FA, SP, SU) HIED699V Seminar (1-6) (FA, SP, SU) A series of seminar for specialized study into areas of current significance in postsecondary education, such as leadership and planning, organization, development, and change; human resource development and appraisal; the student in higher education; etc.

HIED700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: candidacy.

HIST1113 Institutions and Ideas of World Civilizations (FA) Introduces the major civilizations of the world in their historical context to 1500 AD.

HIST1113H Honors World Civilization (FA, SP, SU) Study of Western and non-Western civilizations. UNIVERSITY CORE COURSE

HIST1123 Institution and Ideas of World Civilizations (FA) Introduces the major civilizations of the world in their historical context, since 1500 AD.

HIST1123H Honors World Civilization (FA, SP) Study of Western and non-Western civilizations. UNIVERSITY CORE COURSE

HIST2003 History of the American People to 1877 (FA, SP, SU) A history of America encompassing constitutional, political, social, intellectual and economic development from prior to European colonization to 1877. UNIVERSITY CORE COURSE

HIST2003H Honors History of the American People to 1877 (FA, SP, SU) A history of America encompassing constitutional, political, social, intellectual and economic development from prior to European colonization to 1877. UNIVERSITY CORE COURSE

HIST2013 History of the American People, 1877 to Present (FA, SP, SU) A history of America encompassing constitutional, political, social, intellectual and economic development from 1877 to 1945. UNIVERSITY CORE COURSE

HIST3003 History of Christianity (IR) This course surveys the theological, political, and cultural history of...
HIST3033 Islamic Civilization (FA, Odd years) A survey of the foundation, evolution, and distinctive character of Islamic civilization. Topics include: pre-Islamic Arabia, the Umayyad and Abbasid Empires, the Seljuq Turks, and the development of Islamic culture and society.

HIST3043 History of the Modern Middle East (FA, Odd years) Examines the history of the Islamic Middle East from the rise of the Ottomans and Safavid Persians up to World War I. Emphasis concludes with the issues and patterns of 20th century Middle Eastern political and socio-economic life. Topics include Islam and politics, Arab nationalism, Western imperialism, the Arab-Israeli conflict, petroleum nationalism vs. traditionism.

HIST3063 Military History (IR) Survey of the basic principles and problems of strategy, tactics, and military organization from Alexander the Great to the present. Special attention will be given to the operation of these factors in the American Revolution, the Napoleonic Wars, the American Civil War, and World War II.

HIST3083 Women and Christianity (FA, SP, SU) From Rome to the Renaissance. A critical exploration of the role of women in society. The course considers women's religious expression, symbolic action, interaction with holy men, and their relationship with the ecclesiastical hierarchy. Other important questions include the construction of institutional subordination opportunities for autonomous action.

HIST3203 Colonial Latin America (FA) An introduction to the social, cultural, political and economic formation of Latin America during the period from 1492 to the movements for independence.

HIST3213 Modern Latin America (SP) An investigation of the varying courses of modernization in Latin America, covering the period from the 18th century to the present.

HIST3233 African American History to 1877 (FA) The course will study the African beginnings, the Caribbean and Latin American experiences, and the African American experience of early struggle to survive slavery in the new world, and the continuing social, political, and economical quest to become a first class citizen in American society until Reconstruction, 1860-1877.

HIST3243 African American History Since 1877 (SP) The course will study the major social, political, and economical issues relating to the African American experience beginning with the late post-Reconstruction period and will include, all of the major personalities and influences in the Civil Rights Movement, from 1877 to the present.

HIST3263 History of the American Indian (FA) Survey of the North American Indian History from their origins to their demise. Included is pre-Columbian Indian history, the interaction of Indian and white societies, U.S. Government policy, and the role of Indians in modern American culture.

HIST3273 History of the Middle East (SP) History of the Middle East from early times to the present. Issues include political, cultural and economic developments of Europe during the period, including the uprise of B.C. to its rule over a vast empire extending from Scotland to Iraq. Emphasis is placed upon the causes of Roman expansion during the Republic, the urbanization and Romanization of Western Europe, and the persecution and spread of Christianity.

HIST4043 Late Antiquity and the Early Middle Ages (IR) This course examines the political, spiritual, intellectual, and social-economic developments of Europe, c. 300-1000 CE. Special topics include the Christianization of the late Roman Empire and Byzantium, as well as the formation of Celtic and Germanic Kingdoms in the West.

HIST4053 Later Middle Ages (IR) This course examines the political, social-economic, intellectual, and spiritual developments of European history, c. 1000-1400 CE. Special topics include medieval kingship, the crusades, and the medieval university.

HIST4073 Renaissance and Reformation, 1300-1600 (FA, Even years) Examines the history of Europe from the mid-13th to the mid-16th centuries, with special emphasis on the Reformation and Counter-Reformation.

HIST4103 Europe in the 18th Century (IR) European history from 1688 to the French Revolution, with a focus on political and diplomatic history.

HIST4113 Twentieth Century Europe, 1898-1939 (FA, Even years) Background and impact of World War I to the outbreak of World War II.

HIST4133 Society and Gender in Modern Europe (SP, Odd years) Changes in values and gender roles in European history from the Renaissance to the present. The social impact of the Industrial Revolution, urbanization, demographic change, and the two world wars.

HIST4143 Intellectual History of Europe Since the Enlightenment (FA, Even years) A survey of the major developments in Europe in the 17th through the 19th centuries. The course covers the transformation of social and political life and the history of ideas in the West from 1650 to 1850.
years) An introduction to the Mediterranean as a region, including both its northern and southern shores. Cultural, economic, and political themes are pursued regionally from the 16th century until present.  

HIST4433 Social and Cultural History of the Modern Middle East (SP, Odd years) An analysis of Middle Eastern history as the 17th-20th centuries witness the processes on the social transformation of urban and rural life. Particular emphasis is given to the roles of economics, genealogy, art, and politics.  

HIST4433 American Ethnic History (FA, SP, SU) Covers issues of ethnicity and assimilation not covered in courses on African-American and Native American history. Focus is threefold: the experience of immigrants and their descendants; the institutions of government, popular movements, and influential opinion-makers to immigrants; and changes in immigration 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's 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 (IR) Examines the interactions between human culture and the natural environments. Concepts in the natural and human history of the physical Environment, case studies in Regional Environmental History and the Politics of Environmental movements.  

HIST4493 Reconstruction in America to 1860 (IR) History of Reconstruction in America to 1860 (IR) History of religion in early America, primarily from a social and cultural perspective. Topics will include region, social class, growth of institutions, slavery, print culture, and social reform in traditional communities. Western African religion, Catholicism, Native American religion, and Judaism.  

HIST4503 History of Political Parties in the United States, 1789-1896 (FA, Even years) Origin and development of the American party system as the implementation of the constitution to the election of McKinley.  

HIST4513 History of Political Parties in the United States Since 1896 (SP, Odd years) Response to America's emergence as an industrial nation and world power from the election of 1896 to present.  

HIST4533 American Social and Intellectual History to 1805 (SP) Survey of significant ideas and institutions from Colonial times through the Civil War with emphasis upon the nature of Arkansas history. The focus will be on social, economic and political themes. Topics include exploration, the fur trade, the cattle kingdom and the mining, farming, and military frontiers.  

HIST4673 The American Civil War (FA) An intensive study of the social, political, economic and military aspects of the American Civil War period.  

HIST4683 The Corporation in American Life and Thought (SP, Even years) The legal, social, and political background of the business corporation, seeking explanations as to why the corporation became the dominant form of economic organization in the 19th and 20th centuries. The course will also examine the social and political effects of corporate power.  

HIST4703 Emergence of Modern America, 1876-1917 (FA) A survey of the impact of World War I, the 19th and the Great Depression upon American society and culture.  

HIST4723 America Between the Wars, 1917-1941 (SP) The impact of World War I, the 19th and the Great Depression upon American society and culture.  

HIST4733 Recent America, 1941 to the Present (FA) A survey of the origins of modern society and world history. The focus will be on the origins of modern society and world power from the election of 1896 to present.  

HIST4743 History of Brazil (SP, Even years) A survey of five centuries of a new world in the tropics, covering exploration and settlement, slavery and export monoculture, industrialization, and popular culture.  

HIST4753 Diplomatic History of the United States, 1776-1900 (FA, Odd years) Survey of American foreign relations. The course examines U.S. relations with Europe, Latin America, and Asia, East Asia, plus America's first approach to the Middle East. Particular emphasis is placed on America's involvement in World War I and World War II. Prerequisite: HIST 4003.  

HIST4773 Diplomatic History of the US, 1945 to the Present (FA) U.S. involvement in world affairs since World War II. The Cold War from an international perspective, including strategies, nuclear deterrence, conflicts, economic developments, cultural relations among allies and adversaries. Post-Cold War scenarios, including war on terrorism.  

HIST4989 Senior Thesis (1-6) (FA, SP, SU)  

HIST5023 Historical Methods (FA) Practical introduction to historical research and writing. Consists of lecture, library reading, and class criticism of research papers.  

HIST5043 Historical Seminar (SP) Survey of the history of historical writing and a study of the important schools and historical interpretation. Prerequisite: graduate standing.  

HIST5053 Reading Seminar in Asian History (FA, SP, SU) Concentrated reading in selected areas of Asian History. Prerequisite: advanced graduate standing.  

HIST506V Readings in European History (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST507V Readings in American History (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST508V Research Problems in European History (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST509V Research Problems in American History (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST5103 Reading Seminar in American History (FA, SP, SU) Historiographical and bibliographical study of special areas of U.S. history, such as the Age of Jackson, the Civil War, etc. Prerequisite: graduate standing.  

HIST5123 Research Seminar in American History (FA, SP, SU) Research projects in selected fields of American history, such as the Civil War, the Age of Jackson, etc. Prerequisite: graduate standing.  

HIST5133 Reading Seminar in European History (FA, SP, SU) Historiographical and bibliographical study of special periods in European history, such as the Roman Empire, the medieval Ages, the French Revolution, etc. Prerequisite: graduate standing.  

HIST5143 Research Seminar in European History (FA, SP, SU) Research projects in selected fields of European history, such as the French Revolution, humanism, etc. Prerequisite: graduate standing.  

HIST5163 Research Seminar in British History (FA, SP, SU) Research projects in selected fields of British history.  

HIST517V Readings in Asian History (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST519V Readings in Near Eastern History (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST520V Research Problems in Near Eastern History (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST5213 Reading Seminar in Middle Eastern History (FA, SP, SU) Research projects in selected fields of Middle Eastern history. Prerequisite: graduate standing.  

HIST560V Teaching Foreign Cultures in Social Studies Curriculum (1-6) (SU) 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.  

HIST600V Master's Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.  

HIST700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: candidacy.  

(HKRD) HEALTH SCIENCE, KINESIOLOGY, RECREATION AND DANCE  

HKRD480V Workshop (1-18) (FA, SP, SU)  

HKRD5533 Research in Health Science, Kinesiology, Recreation and Dance (FA, SP, SU) Methods and techniques of research in health education, physical education and recreation including an analysis of examples of their use and practice in their application to problems of interest to the student.  

HKRD5373 Problems in Health Science, Kinesiology, Recreation, and Dance (SU) A study of current problems in the field of health education, kinesiology, and recreation.  

HKRD560V Workshop (1-3) (FA, SP, SU)  

HKRD5873 Leadership in HKRD Services (FA) Considers research, theory, and practical applications of leadership principles utilized in the provision of HKRD services. Focus is on motivation, attitude, communication, group dynamics, and problem solving.  

HKRD5883 Sports Facilities Management (FA) Considers basic elements and procedures in the planning, design, construction, operation, and maintenance of sport facilities; management considerations in conducting various types of events.  

HKRD5893 Public and Private Finance in HKRD (FA, SP, SU) Develops an understanding of both public and private finance management for students in public and private management positions, to include understanding of the budgeting processes and techniques used in obtaining and controlling funds, including public sector finance problems in areas of credit, pricing, indexing, and debt management.  

HKRD5983 Health Promotion at the Workplace (FA, SP, SU) Examines specific for health promotion program, organizational and administrative schemes for program delivery, and appraisal systems for determining health programming priorities in workplace settings.  

HKRD599V Seminar (1-3) (FA, SP, SU)  

HKRD6133 Research in Health Science (SU) A review of the significant social, demographic, behavioral, developmental, and technological issues that influence health, kinesiology, and recreation programs. Pre- or Corequisite: for doctoral level students.  

HKRD6233 Management in HKRD (SP) Deals with principles, procedures, relationships, problems, and current practices in the supervision of health education and kinesiology, includes management of facilities, programs, personnel, and processes.  

HKRD6333 Measurement in HKRD (SP, SU) Competencies for analysis and application of evaluation and measurement.  

HKRD660V Workshop (1-3) (FA, SP, SU)  

HKRD689V Directed Research (1-6) (FA, SP, SU) Laboratory investigations, in basic and applied research.  

HKRD699V Seminar (1-3) (FA, SP, SU)
HLSC1002 Wellness Concepts (FA, SP, SU) Interrelationship of mental, emotional, physical, social, and spiritual aspects of functioning to optimal health and wellness; implications for education about wellness in the schools and for adult living are provided.

HLSC1103 Personal Health and Safety (FA, SP, SU) Health and safety problems with emphasis on the promotion of individual and community health. (Not to replace content and application of health promotion concepts based on individual health hazard appraisal.)

HLSC1203 Preventing Drug Abuse (FA, SP, SU) Provides an overview of drugs of use and abuse in society. Also assists the student in evaluating drug abuse prevention approaches for public, private, or community settings.


HLSC2101 Special Topics (FA, SP, SU) Examination and application of health promotion concepts based on individualized health hazard appraisal. (Not to replace content and application of health promotion concepts based on individual health hazard appraisal.)

May be repeated for 5 hours.

HLSC2613 Foundations in Health Education (FA, SP, SU) History and philosophy of health education discipline; organization of health education programs; curriculum development and evaluation of educational efforts; and student observation in school and non-school settings.

HLSC2633 Introduction to Community Health (FA) An exploration of technological approaches for maintaining, protecting, and improving the health of the people through organized community efforts.

HLSC6862 Terminology for the Health Professions (FA, SP) Emphasis is on word roots and combined forms of words describing various facets of health and disease. Descriptive definitions with application of practical significance included for the health professional.

HLSC3003 Practicum in Community Health (FA, SP, SU) Supervised short-term work experience in various community health programs, designed to provide students with comprehensive views of the community health field.

HLSC310V Readings in Health Science (1-3) (FA, SP, SU) Study of combined forms of words describing various facets of health and disease. Descriptive definitions with application of practical significance included for the health professional.

HLSC3001H Honors Literacy Tutoring (FA, SP, SU) Preparation of students for work in literacy. Assistance in finding a tutor or supervised tutor experience. May be repeated. Prerequisite: honors candidacy.

HLSC3103H Honors Literacy Tutoring Tutorial (FA, SP, SU) Study of combined forms of words describing various facets of health and disease. Descriptive definitions with application of practical significance included for the health professional.

HLSC3343 Community Health Planning and Promotion (FA, SP, SU) Emphasis on community analysis; defining and verifying community health problems; establishing program goals; defining and assessing health behaviors; formulating educational goals, objectives, methods, and activities; promoting programs; and designing program evaluation.

HLSC3663 Principles and Practice of Mental Health Promotion (FA) Understanding and practicing the principles of sound mental health are key elements in achieving high level wellness. This course encourages students to explore the mental dimensions of holistic health and presents strategies to achieve a more healthful balance in life.

HLSC3673 Teacher Drug Education (FA) Specifically for educators; provides an overview of drugs of use, misuse, and abuse in society, and assists the educator in developing a sequential drug education program in public, private, or other settings.

HLSC3683 Health Care Consumerism (SP) Study of products and services provided by the health care delivery system; an analysis of those components lacking scientific credibility, yet promoted for the maintenance or restoration of health status.

HLSC4013 Emergency Medical Care I (FA) Initial phase of training that emphasizes the development of student skill in recognition of symptoms of illness, injuries, and proper procedures of emergency care presently considered with the responsibilities of the emergency medical technician.

Corequisite: HLSC 4011L.

HLSC4011L Emergency Medical Care I Laboratory (FA) A laboratory component for students enrolled in Emergency Medical Care I. Emphasis is on the development of specific hands-on competencies in the assessment and treatment of the trauma and/or medical patient utilizing appropriate adjunctive equipment.

Corequisite: HLSC 4013.

HLSC4023 Emergency Medical Care II (SP) Final phase of training that emphasizes life-threatening emergencies, childbirth and births of child patients, environment emergencies, extrication from automobiles and all operational aspects of the emergency vehicle. Also included will be 15 hours of hospital emergency room and ambulance experience.

Corequisite: HLSC 4021L.

HLSC4021L Emergency Medical Care II Laboratory (SP) A required laboratory component for students enrolled in Emergency Medical Care II. Emphasis is on the development of specific hands-on competencies in the assessment and treatment of the trauma and/or medical patient utilizing appropriate adjunctive equipment.

Corequisite: HLSC 4023.

HLSC404V Community Health Preceptorship (6-12) (FA, SP, SU) Designed to provide the student with an extended work experience in a selected community health program. The student works under college supervision with a professional in the health care delivery field. Prerequisite: senior standing.

HLSC4603 Application of Health Behavior Theories in Health Education (SU) Understanding the reasons for health behavior variations and providing a foundation for the health education professional. It is necessary to assist in the development of services and programs that are likely to move an individual from an unhealthy behavior to one that is more appropriate for a healthy lifestyle. This course surveys the major health behavior theories used in health education and applications of the theories will be used in the class.

HLSC4623 Human Diseases (FA, Odd years) (Formerly HLSC 3613) An examination of the various health behaviors, distribution, and management of both infectious and non-infectious diseases in human populations. Prerequisite: ZOOL 1004 or BIOL 1543 and BIOL 1541L.

HLSC479V Student Teaching (5-10) (FA, SP, SU) Involves time and an off-campus school where student teacher will have an opportunity under supervision to observe, to teach and participate in other activities involving the school and the community.

HLSC5353 Health Counseling (SP) A review of the role and function of the health counselor including a focus on problem solving approaches for coping with daily problems of living, decision making, and lifestyle planning. (Same as CNED 5533)

HLSC5543 Contemporary Issues in Human Sexuality (FA) Indepth analysis of the social, biological, and behavioral factors associated with the development of one’s sexuality.

HLSC5553 School Health Programs (FA) Study of program content, program organization, and administrative details in planning and conducting a school program which includes healthful school living, health services, and health instruction.

HLSC5563 Public Health (FA) A examination of the structure, functions, and major problems in public health and with the role of education in public health.

HLSC5573 Principles of Health Education (FA, SU) Current trends, basic issues, controversial issues, and fundamental principles of health education.

HLSC560V Workshop (1-6) (IR) HLSC5613 Principles of Epidemiology (FA, SP, SU) Analysis and evaluation of the various environmental factors proper procedures of emergency care presently considered. Credit, yet promoted for the maintenance or restoration of health status.

HLSC5623 Health Planning (FA, SP) Emphasis is on education health planning processes, principles, and concepts. Methods for health education agencies, issue in comprehensive health planning, and analysis of decision making steps for program implementation will be addressed.

HLSC5633 Health Services Administration (FA, SP, SU) Emphasis is on an examination of administrative factors related to health services. Administrative and professional authority, boards, consumers, delivery of services, federal role, and cost containment will also be addressed.

HLSC574V Internship (1-6) (IR)
scape will be presented. Basic home gardening, plant care and use, and urban agriculture practices.

HORT1203 Introduction to Plant Sciences (FA, SP) An introduction to basics of agricultural crop plant structure, growth, and production.

HORT2003 Horticulture (FA, SP) A course introducing students to the biological and technological underpinnings of horticulture. The use of plants for the benefit of humankind because of their aesthetic and nutritional value will be explored. Previous instruction in Plant Science, Plant Biology, or general Biology is strongly encouraged. Lecture 2 hours, laboratory 2 hours, drill 1 hour per week. Corequisite: HORT 2000L.


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.

HORT2303L Advanced Woody Landscape Plants Laboratory (FA) Corequisite: HORT 3103.

HORT3113 Herbaceous and Indoor Plant Materials (SP, Odd years) Identification, culture, and use of woody ornamental trees, shrubs and vines in interiors. Lecture 2 hours, laboratory 2 hours per week. Corequisite: HORT 3110L.

HORT3110L Herbaceous and Indoor Plant Materials Laboratory (SP, Odd years) Corequisite: HORT 3113.

HORT3133 Advanced Woody Landscape Plants Laboratory (SP, Odd years) Study of rare and unusual plant materials for specialized landscaping and an examination of cultures of commonly used landscape plants. Lecture 2 hours, laboratory 2 hours per week. Corequisite: HORT 3130L. Prerequisite: HORT 3103.

HORT3103L Advanced Woody Landscape Plants Laboratory (SP, Odd years) Corequisite: HORT 3133.

HORT3303 Vegetable Crops (SP, Even years) General course in vegetable crops with attention to the principles underlying methods of production and handling related to yields and quality of the products. Lecture 2 hours, laboratory 2 hours per week. Prerequisite: HORT 2003 and CSES 2203.

HORT3403 Turfgrass Management (SP) Laboratory-based course for students to gain practical knowledge and experience in turfgrass information gathering, species identification, calculations, calibration of application equipment, equipment maintenance, troubleshooting, and turfgrass establishment and renovation. Corequisite: HORT 3400L. Prerequisite: HORT 2303.

HORT4000L Turfgrass Management Laboratory (SP) Corequisite: HORT 4303.

HORT3901 Horticultural Career Development (SP) A course which presents concepts necessary for developing a career and becoming a professional in horticulture industries or businesses. Concepts of goal setting, effective communication and interpersonal skills, behavior and performance, portfolio and resume, development and job hunting skills will be presented. Prerequisite: 45 hours completed.

HORT400V Special Problems (1-6) (FA, SP, SU) Original investigations on assigned problems in horticulture.

HORT401V Special Topics in Horticulture, Turf or Landscape (1-6) (IR) topics related to horticulture, turfgrass or landscape science or management not covered in other courses or a more intensive study of a specific topic. May be repeated for up to 4 credits. May be repeated for 4 hours. Prerequisite: HORT 2003.

HORT402V Horticulture Judging and Competition Activity (1-3) (IR) Training for and participation on horticultural identification, judging and competitive teams. Repeatable for up to 4 credits. May be repeated for 4 hours. Prerequisite: HORT 2003.

HORT4033 Professional Landscape Installation and Construction (FA, Even years) Principles and practices involved in landscape installation and construction. Topics covered include sequencing construction activities, protecting existing plant materials, planting, transplanting plant materials, wood construction, cement and masonry construction, and low-voltage lighting. Lecture 3 hours per week. Preparatory training in agribusiness or business is suggested. Prerequisite: HORT 3003 and HORT 3103.

HORT4043 Professional Landscape Management (FA, Odd years) Principles and practices of landscape management and maintenance. Topics include low maintenance and seasonal color design, pruning and hazard tree management, water and fertilizer management, pesticide use, and other maintenance activities. Basic elements of marketing, specifications and contracts, estimating personnel management, and equipment selection and acquisition relevant for landscape services will be introduced. Preparatory training in agribusiness or business is suggested. Prerequisite: HORT 3003.

HORT4103 Fruit Production Science and Technology (FA, Even years) The management technologies and cultural practices of fruit crops including (but not limited) to blueberries, blackberries, raspberries, strawberries, grapes, peaches, and apples will be presented. The underlying scientific principles of crop genetics, nutrition, and physiology will be presented as a basis for making management decisions in the field. Corequisites: HORT 4100L. Prerequisite: HORT 2003.

HORT4100L Fruit Production Science and Technology Lab (FA, Even years) Corequisite: HORT 4103.

HORT4403 Plant Propagation (SP, Even years) Principles of plant propagation using seeds, cuttings, grafting, budding, layering, and tissue culture. The physiological basis of plant growth and physiology is needed. Lecture 2 hours, laboratory 2 hours per week. Corequisite: HORT 4400L.

HORT4400L Plant Propagation Laboratory (SP, Even years) Corequisite: HORT 4400.

HORT4503 Nursery Management (FA, Odd years) Principles and practices in the production and handling of woody ornamental stock; management of the retail nursery and garden center. Corequisites: HORT 4500L, and HORT 4503.

HORT4500L Nursery Management Laboratory (SP, Odd years) Corequisite: HORT 4503.

HORT4603 Practical Landscape Planning (SP, Even years) Ornamental planting design and landscape planning concepts. Preparing planting plans, materials sheets, and cost estimates for residential properties.

Prerequisite: HORT 3103.

HORT462V Landscape Horticulture Internship (1-6) (FA, SP, SU) A supervised practical work experience in a nursery or landscape design, maintenance, or contracting business. May be used to gain practical insight into cultivation, propagation, and employment opportunities. May be repeated for 6 hours. Prerequisite: junior standing.

HORT463V Horticulture Internship (1-6) (FA, SP, SU) A supervised practical work experience in a horticultural business or research program to gain practical experience in horticultural operations and insight into employment opportunities. A maximum of 6 hours credit is permitted for degree credit. May be repeated for 6 hours. Prerequisite: minimum of 60 hours completed coursework.

HORT464V Turf Management Internship (1-9) (FA, SP, SU) Practical experience in golf course management, sports turf management, residential and/or commercial turf management, turf production or related turf industries. May be repeated for 9 hours. Prerequisite: (60 completed coursework or junior standing) and HORT 3901 and (HORT 2303 or HORT 4803). Prerequisite: HORT 465V.

HORT465V Horticulture Merchandising Internship (1-9) (FA, SP, SU) Practical work and study experience in companies in Horticultural business management. May be repeated for 9 hours. Prerequisite: (60 completed coursework or junior standing) and HORT 3901.

HORT4703 Greenhouse Management and Controlled Environment Horticulture (FA, Odd years) Operates and manages greenhouses and other controlled environments used in horticultural production. Emphasis on system design and construction, control of light intensity and photoperiod, heating and cooling systems, substrates, materials and irrigation systems. Prerequisites: HORT 2003 and CHEM 1074.

HORT4701L Greenhouse Management and Controlled Environment Horticulture Lab oratory (FA, Odd years) Laboratory involving hands-on experiments designed to demonstrate principles discussed in the course. Includes field trips. Corequisite: HORT 4700.

HORT4803 Floriculture (SP, Even years) Principles and practices of production and marketing of containerized floricultural crops commonly produced in controlled environments including flowering containerized herbaceous species, houseplants and annual and perennial bedding plants.

Prerequisite: HORT 4703.

HORT4801L Floriculture Laboratory (Sp, Even years) Laboratory involving hands-on experiments designed to demonstrate principles discussed in the lecture section. Includes field trips. Corequisite: HORT 4803.

HORT4903 Golf and Sports Turf Management (FA, Odd years) Turf management techniques for golf courses, and athletic fields including species selection, rootzone construction and modification, fertilization, mowing, irrigation and pest control. Corequisite: HORT 4900L.

HORT4913 Rootzone Management for Golf and Sports Turf (SP, Odd years) An overview of the fundamental concepts of the physical and chemical properties of rootzones as related to construction and turfgrass management.

HORT5001 Seminar (FA, SP) Review of scientific literature and oral reports on current research in horticulture. May be repeated for 4 hours.

HORT500V Special Problems Research (1-6) (FA, SP, SU) Original investigations on assigned problems in horticulture. Prerequisite: graduate standing.

HORT5043 Advanced Plant Breeding (FA, Odd years) application of genetic principles to the improvement of crop plants. Presentation of conventional plant breeding methods and special techniques such as polyploidy, interspecific hybridization and induced mutation. Lecture 3 hours per week. Corequisites: BIOL 3323 and BIOL 3321L (or ANSC 3123 and AGRN 4103).

HORT5343 Seed Physiology (IR) Physiological process and molecular regulation in the development, dormancy, and early萌 termination of seeds. A basic knowledge of plant physiology expected.

HORT600V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

HORT602V Special Problems Research (1-3) (IR) Discussion and advanced studies on selected topics in genetics, plant breeding, physiology and culture of horticultural crops. May be repeated. Prerequisite: graduate standing.

HORT6033 Genetic Techniques in Plant Breeding (FA, Even years) Indepth study of genetic improvement and techniques. Covers both current and classical literature. Topics to be discussed: haploidy, genetic control of pairing, somatic instability, tissue culture and protoplast fusion, and male sterility. Lecture discussion 3 hours per week. Corequisites: BIOL 3323 and BIOL 3321L (or ANSC 3123 and AGRN 4103 or equivalents).

(HUMN) HUMANITIES

HUMN1103 Introduction to the Arts and Aesthetics (FA, 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, includes experimental and academic approaches. UNIVERSITY CORE COURSE

HUMN1003H Honors Introduction to the Arts and Aesthetics (FA, SP, SU) An interdisciplinary introduction to the arts through general aesthetic concepts and questions, including the nature of artistic media, form, style and interpretation, includes experimental and academic approaches. UNIVERSITY CORE/COURSE

HUMN1114H Honors Roots of Culture to 500 B.C.E. (FA) This course constitutes the first segment of a four-semester interdisciplinary study of the Egyptian Book of the Dead, the Dead Sea Scrolls, the Roman Comedy, and Hinduism and Confucianism, open to first-year Honors students by invitation only. Corequisite: HUMN 1110E. UNIVERSITY CORE COURSE

HUMN1110E Honors Roots of Culture to 500 B.C.E. Drill (FA) This comprises the discussion component of the Roots of Culture to 500 B.C.E. Required: Candidacy in Four-Year Scholars Program. Corequisite: HUMN 1114H.

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 incorporate interdisciplinary study of Islam, early Byzantium, Gothic architecture, Heian Japan, and the ancient Maya. Open to first-year Honors students by invitation only. Corequisite: HUMN 1120E. UNIVERSITY CORE COURSE.

HUMN1120E Honors Equilibrium of Cultures 500-1600 (SP) This comprises the discussion component of the Equilibrium of Cultures, 500-1600 C.E. Required: Candidacy in Four-Year Scholars Program. Corequisite: HUMN 1124H.

HUMN2003 Introduction to Gender Studies (FA, SP) This course explores cultural constructions of gender and sexuality using a variety of media, including literature, film, and architecture. UNIVERSITY CORE COURSE.

HUMN2003H Honors Introduction to Gender Studies (FA, SP) This course explores cultural constructions of gender and sexuality using a variety of media, including literature, film, and architecture. UNIVERSITY CORE COURSE.

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 3 may include the interdisciplinary study of Renaissance Venice, feudal Japan, Moghul India, Jefferson’s Monticello, and Saddam Hussein. Open to second-year Honors students by invitation only. Corequisite: HUMN 2110E.

HUMN2110E Honors Birth Culture 1600-1900 (FA) This comprises the discussion component of the Birth of Modern Culture. Required: Candidacy in Four-Year Scholars Program. Corequisite: HUMN 2114H.

HUMN2124H Honors Twentieth Century Global Culture (SP) This course constitutes the fourth segment of a four-semester focusing on world cultures. Semester 4 may include the interdisciplinary study of 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: HUMN 2120E.

HUMN2120E Honors Twentieth Century Global Culture (SP) This comprises the discussion component of the Twentieth Century Global Culture. Required: Candidacy in Four-Year Scholars Program. Corequisite: HUMN 2124H.

HUMN2213 Introduction to World Religions (SP) A survey of the major religions, including—but not limited to—Hinduism, Buddhism, Judaism, Islam, and Christianity. HUMN 3002 Religions of Asia (SP) This course explores the narrative, ritual, and communal practices of Hinduism, Judaism, Buddhism, Taoism, Confucianism, Shinto, Islam, and Sikhism.

HUMN3163 On Death and Dying (FA, SP, SU) Reviews the theory and humanistic importance of the concepts of death and dying. An exploration of religious perspectives in a variety of disciplinary approaches. Topics include the idea of the sacred, what is said, belief, sorrow, values, revelation, mysticism. Explores intersections between religions and culture which have an impact on personal and collective identity. Graduate credit cannot be obtained for both HUMN 3203 and HUMN 2203 (deleted).

HUMN3923H Honors Colloquium (IR) Treats a special topic or issue offered as a part of the Honors Program. May be repeated. Prerequisite: honors candidacy. UNIVERSITY CORE COURSE.

HUMN4043 Religion and Film (SP) In Religion and Film we will explore films which explicitly and intelligently portray religious traditions, practices, and culture. In our viewing and our critical work we will face vicariously, but still viscerally, the questions of living religion in personal, social, and cultural contexts. HUMN4040 Religion and Film (SP) We will study films which explicitly and intelligently portray religious traditions, practices, and culture. In our viewing and our critical work we will face vicariously, but still viscerally, the questions of living religion in personal, social, and cultural contexts.

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 autobiography, and the dangers of exploitation and trivialization.

HUMN4913H 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 autobiography, and the dangers of exploitation and trivialization.

HUMN4993 The City in American Art and Culture (FA, SP, SU) An examination of the role of the city in the urban experience. Selection from literary texts from the colonial times to the present. May not be used to satisfy the art history requirement for art majors.

(INEG) INDUSTRIAL ENGINEERING

INEG1103 Principles of Industrial Engineering (FA) Considers the past and present roles of the professional industrial engineer and evaluates future trends. Introduces courses to follow and shows their relationship to the systems analysis problems encountered. Corequisite: INEG 1100L. INEG1100L Principles of Industrial Engineering Laboratory (FA) Corequisite: INEG 1100L.

INEG1140 Industrial Cost Analysis (SP) The use of accounting information for planning and control with emphasis on the engineering viewpoint; introduction to general accounting procedures; cost accounting, analysis of alternative schemes. Corequisite: INEG 1141L.

INEG1403 Industrial Cost Analysis Laboratory (SP) Corequisite: INEG 1403.


INEG2513 Manufacturing System Design (FA, SP) Basic manufacturing processing and machining fundamentals; metals shaping and removal processes; economic tool life; machinability; machining economics. Selection and design of productive systems to manufacture products. Analysis of manufacturing systems, mechanized assembly, numerical control work centers, and robotics. Laboratory required. Corequisite: INEG 2513L. Prerequisite: INEG 1122.

INEG2510L Manufacturing System Design Laboratory (FA, SP) Corequisite: INEG 2513L.

INEG3113 Law and Ethics (IR) Analysis of the fundamental legal principles applicable in protecting the rights and interests of engineers and their employers; formation and discharge of contracts; agency responsibilities; torts; labor laws; patents; trademarks; copyrights; unfair competition, ethics; professional liability. Corequisite: INEG 3111.

INEG3213 Safety Engineering (IR) 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 Engineering Statistics (FA, SP, SU) Fundamentals of probability and distribution theory with applications to various branches of engineering; experimental procedures and sample size; statistical decision theory including significance testing and estimation. Drill required. Corequisite: INEG 3310D. Prerequisite: MATH 2554.


INEG3313 Engineering Economic Analysis (FA, SP, SU) Economic aspects of engineering, including current economic problems and the treatment of estimates when evaluating alternative courses of action. Methods of selection and replacement of equipment and break-even points of operation; desirability of new processes or projects where asset-life, rate of return on investment, and profit, fixed, differential, marginal, and sunk costs must be considered. Corequisite: INEG 3310D. Prerequisite: MATH 2554.

INEG3310D Engineering Economic Analysis Drill (FA, SP, SU) Corequisite: INEG 3313.

INEG3613 Introduction to Operations Research (SP) Simplex method of linear programming, dual problem and sensitivity analysis, transportation and assignment problems, game theory and linear programming; introduction to dynamic programming; deterministic and probabilistic inventory models; project control with PERT/CMP. Prerequisite: INEG 3313.

INEG3713 Methods and Standards (FA, SP) Fundamental rules of motion economy; motion analysis by means of charts, diagrams, and photography; equipment selection; operator selection; job description and analysis. Fundamentals of time study; observed and synthetic times; use of standard data and time formula; leveling, rating, allowing, computer program for time study, and electronic time study equipment. Laboratory required. Corequisite: INEG 3710L. Prerequisite: INEG 3313.

INEG3710L Methods and Standards Laboratory (FA, SP) Corequisite: INEG 3713L.

INEG3833 Data Processing Systems Engineering (FA, Odd years) Design and analysis of database management systems. Information systems applications development. Independent study in database management and design and analysis of data bases. Prerequisite: INEG 3710L. Prerequisite: senior standing.

INEG4100V Honors Special Problems (1-3) (FA, SP, SU) Prerequisite: senior standing.

INEG4101V Honors Special Problems (1-3) (FA, SP, SU) Prerequisite: senior standing.

INEG4121 L. E. Seminar (FA, SP, SU) Prerequisite: senior standing.

INEG4223 Occupational Safety and Health Standards (SP) Survey of standards and regulations established by federal and state laws and OSHA. Prerequisite: INEG 3313.


INEG4323 Quality Engineering and Management (SP) Provides the student with complete coverage of the functional area of ‘Quality Assurance’ ranging from the need for quality assurance to the works of quality assurance and the related historical management approaches for insuring its effectiveness.

INEG4313 Industrial Statistics (FA, SP, SU) Application of statistical techniques to industrial study of relationships between experimental measurements using regression and correlation theory and analysis of variance models; emphasis on inherent variability of production processes; control chart techniques and the use of exponential and Weibull models in reliability analysis; acceptance sampling procedures.

INEG4313L Industrial Statistics Laboratory (FA, SP, SU) Prerequisite: INEG 4313.

INEG4433 Industrial Engineering (FA, SP) Application of engineering concepts and principles in quality assurance and industrial management, analysis, design, and planning processes in industry. Prerequisite: INEG 4313.

INEG4433 Engineering Management (FA, SP) Studies of cases in engineering administration emphasizing human relationships in a technical environment. Productivity/quality enhancement through an understanding of organizational design and behavior, motivation and reward systems, and participative management. Prerequisite: senior standing.

INEG4443 Project Management (SP, Odd years) Analysis of the strategic level of engineering management including environment, planning, organization, and staffing. Prerequisites: INEG 4313 and INEG 3413.

INEG4453 Productivity Improvement (SP, Even years) Analysis of common productivity problems. Development of skills required to diagnose problems; measur-
ure productivity; develop improvement strategies; and provide for the transfer of findings on productivity measurement and improvement systems. Prerequisite: senior standing.

INEG4513 Electronics Manufacturing Processes (FA, SP) Advanced study of the various processes involved in the metal-cutting and nonmetal-cutting manufacturing operations. Emphasis on factors affecting process performance and industry trends. Prerequisite: senior standing.

INEG4523 Automated Production (FA, SP) Industrial robots and robot programming, industrial logic control systems, robotic controllers for the control of workstations and conveyor systems. On-line computer control and microprocessors. Group technology, flexible manufacturing systems, and computer-integrated manufacturing. Laboratory required. Corequisite: INEG 4520L. Prerequisite: INE 3613 or graduate standing.

INEG4520L Automated Production Laboratory (FA, SP) Corequisite: INEG 4523.

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, and arriving at a decision about the components of an image. Prerequisite: senior standing.

INEG4530L Application of Machine Vision Laboratory (SP) Corequisite: INEG 4533.

INEG4543 Materials Handling (FA, SP) Equipment, systems, problems and analysis of the materials handling environment, with emphasis upon manufacturing. Cars, conveyors, overhead systems, and miscellaneous equipment. Prerequisite: INEG 4543L. Prerequisite: senior standing.

INEG4540L Introduction to Simulation (FA) Elementary queuing models derivations and applications. Discrete simulation techniques. The SIMNET simulation language. Applications of simulation to the design of industrial and service installations. Simulation project. Prerequisite: INEG 3613.

INEG4563 Application of Robotics (FA) Industrial robotics, robotic programming and applications; tooling and interfacing with peripheral equipment; sensor technology, machine vision; applications of motion control, selection, and justification; research, economics, human interface. Laboratory required. Corequisite: INEG 4560L. Prerequisite: INEG 3413, INEG 3713 and INEG 4523.

INEG4553 Production Planning and Control (SP) Operational problems of production systems including a control of purchased materials inventory, scheduling a shop job, batch, and continuous production processes for single and multi-item product lines; planning of work force and inventory under seasonal and stochastic demand. Prerequisite: INEG 3613.

INEG45563 Transportation Logistics (SP) Descriptive and analytical treatment of the critical design and management 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 (FA, SP) 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 and physiological capabilities in the work environment, selection and training of workers, and the design of controls and displays. Corequisite: INEG 4720L. Prerequisite: INEG 4333.

INEG4720L Ergonomics Laboratory (FA, SP) Corequisite: INEG 4723.

INEG4733 Industrial Ergonomics (IR) Gives background information on measurement and evaluation of human performance as it pertains to the working environment. The physical, physiological and psychological capabilities of the tasks they are to perform. Laboratory projects required. Prerequisite: INEG 4723 and INEG 4333.

INEG4904 Industrial Engineering Design (FA, SP) Comprehensive design problem for an industrial enterprise; integration of predeveloped design, social systems, and physical systems and organizational characteristics, financial aspects, product analysis, equipment selection, production layout, distribution systems, and overall economic analysis. Students must be in last semester of degree program. Prerequisite: INEG 4543 and INEG 4623.

INEG4900L Industrial Engineering Design Graduate Seminar (FA, SP) Papers presented 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. Prerequisite: graduate standing.

INEG513V Master’s Research Project and Report (1-6) (FA, SP, SU) Required course for students electing the report option.

INEG514V Research and Special Topics (1-6) (FA, SP, SU) Fundamental and applied research. Prerequisite: graduate standing.

INEG5223 Safety and Health Standards Research (IR) For graduate students seeking Certified Industrial Hygienist or 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 determining indoor industrial environmental noise levels are examined. Prerequisite: INEG 4223 or OMGT 4303.

INEG5313 Engineering Applications of Probability Theory and Stochastic Proc esses (IR) Basic probability theory; random variables and stochastic processes; distribution of sums, products, and quotients of random variables; application to engineering, normal and Poisson processes; engineering applications of Markov chains, ergodic theorem, and applications. Prerequisite: INEG 3313 and MATH 2574.

INEG5323 Reliability (IR) Reliability and maintenance techniques including probability modeling, statistical analysis, testing and improvement. Emphasis on engineering applications and computer analysis methods. Prerequisite: INEG 3313 or equivalent.

INEG5333 Design of Industrial Experiments (SP) Statistical analysis as applied to problems and experiments in engineering and industrial research; experiment design and analysis; probability, response surface analysis. Prerequisite: INEG 4333 or equivalent.

INEG5343 Advanced Quality Control Methods (IR) Acceptance sampling by attributes; single, double, sequential, and multiple sampling plans; sampling plans for 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 Topical Readings in Quality Control (IR) Objectives 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; vastly increase the student’s knowledge of the industrial quality function; identify potential M.S., Ph.D., funded, and publishable research topics. Prerequisite: INEG 3313 or equivalent.

INEG5423 Engineering in Global Competition (IR) Studies of principles and cases in engineering administration in global competition. Emphasis on high-technology manufacture such as the electronics industry. Survey of markets, technologies, multinational corporations, cultures, and customs. Discussions of ethics, professionalism, difference valuing, human relations skills, and other topics relevant to global engineering. Prerequisite: INEG 4333.

INEG5433 Cost Estimation Models (FA, even years) Overview of cost estimation techniques and methodologies applied to manufacturing and service organizations. Accompanied lab for INEG 5433. Prerequisite: INEG 4333. Prerequisite: INEG 4333.

INEG5443 Decision Models (FA, Odd years) Focus on quantitative and qualitative decision models and techniques for technical and managerial problems. Emphasis on application and interpretation of results. Topics include decision trees, influence diagrams, weighting methods, value of information and utility models. Prerequisite: CSE 1913 and INEG 3313 (or equivalent).

INEG5511 Industrial Engineering Graduate Seminar (FA, SP) Papers presented 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. Prerequisite: graduate standing.

INEG5513 Advanced Materials Handling (IR) Computerized offline planning and on-line control of materials handling systems. Specific topics include programmable control, graphic simulations, and information systems. Emphasis on projects. Prerequisite: INEG 4543 or graduate standing.

INEG5523 Analysis of Inventory Systems (IR) Elements of production and inventory control, economic lot size (EOQ) models, price break models, sequence planning, Z-model, deterministic dynamic inventory model, probabilistic one-period and multi-period models, zero and positive lead time models, continuous review models. Prerequisite: INEG 5313.

INEG5563 Advanced Topics in Human Factors Engineering (IR) Human factors, human-computer interaction, natural language interfaces, computer interfaces, vision systems. Prerequisite: INEG 4523.

INEG5573 Graphs and Network Theory (IR) Graph theory, network algorithms, optimization problems, and applications. A survey of graph theory and network algorithms. Prerequisite: senior standing.

INEG5583 Systems Simulation I (IR) Objectives of course: extend the student’s knowledge of the industrial quality function; identify potential M.S., Ph.D., funded, and publishable research topics. Prerequisite: INEG 4333.

INEG55843 Scheduling and Sequencing I (SP, Odd years) An introduction to constructive 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.

INEG5843H Honors Scheduling and Sequencing (I, SP, Odd years) An introduction to constructive 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 5613.

INEG6823 Systems Simulation II (IR) Advanced top- ics in computer simulation including experimental design, simulation optimization, variance reduction, and statistical output analysis. No credit will be allowed for discrete event simula- tion. Prerequisite: INEG 5823.

INEG6843 Scheduling and Sequencing II (SP, Odd years) 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.

ISYS700V Doctoral Dissertation (1-18) (FA, SP, SU)

(ISYS) INFORMATION SYSTEMS

ISYS2263 Introduction to Information Systems Development (FA, SP, SU) This course presents the fundamental concepts used in developing information systems. The material and approach and is intended to provide a framework for students to use throughout their software development coursework. Also includes manage- ment of information systems concepts. This course requires extensive use of computer systems. Prerequisite: WCOB 1023 and MATH 2053 each with a grade of C or better.

ISYS3133 Statistical Analysis (IR) Intermediate sta- tistical inference for business decision making and research in business and other areas. Theory, tests of hypotheses, sampling and experimental design, multiple regression and non-parametric statistical methods. Prerequisite: WCOB 1023 with a grade of “C” or better.

ISYS2253 Information Technology Infrastructure (FA, SP) This course teaches an understanding of architec- tural models for computer hardware and software systems, data communications, security, and Internet networking. It covers the fundamentals including available technologies used in computing and networking environments. The student learns computer and data network analysis and design approaches from a business-oriented perspective. Prerequisite: ISYS 2263 with a grade of “C” or better.

ISYS2293 Systems Analysis and Design (FA, SP, SU) Practice and application of one structured analysis methodology; development of structured analysis specifica- tion; 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.

ISYS2293 Introduction to Information Systems Management (FA, SP, SU) Management information systems concepts and characteristics are presented. Emphasis on the determination of decision information requirements for strategic programs and operating management levels. Examples of marketing, personnel, financial, and other systems are used. Decision models, computer graphics, database management, decision support, and expert systems as they relate to MIS and business applica- tions are included. Prerequisites: ISYS 2253 and ISYS 2373.

ISYS3373 End User Computing (FA, SP, SU) 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, presentation graphics, data analysis, interoffice communications, and group decision support sys- tems. Prerequisite: ISYS 3333.

ISYS3393 Business Application Development in the Visual Basic Environment (FA, SP, SU) Principles of design and development of windows and web 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 con- junction with active server pages and XML for web applica- tions. Prerequisite: ISYS 2263 or CSCE 1023 or CSCE 1123, each with a grade of “C” or better.

ISYS3603 Production and Operations Management (FA, SP, SU) Provides a broad conceptu- al framework for the analysis and operations management of production processes and operations. The course covers the process of configuring and implementing an enterprise resource planning system. Business process reengineering. Students will develop a company and set up several modules in SAP R/3 for use. Develop understanding of how the business process- es work and integrate. Prerequisite: WCOB 4123 with a grade of “C” or better.

ISYS4223 Seminar in ERP Development (SP) ERP administration and system development practices. Advanced system support issues related to Enterprise Resource Planning Systems (ERPs) and global organizations. 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 of ERP systems. Prerequisite: WCOB 4723 and ISYS 2263 each with a grade of “C” or better.

ISYS4223 ERP Configuration and Implementation (FA) The process of configuring and implementing an enterprise resource planning system. Business process reengineering. 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 4123 with a grade of “C” or better.

ISYS4223 IT Management (IR) This course explores various e-business development technolo- gies and then utilizes the technologies for developing a rela- tively realistic business-to-consumer (B2C) e-business site. Students will learn how to develop an enterprise level information technolo- gy and how to develop an enterprise level information technolo- gy and how to develop an enterprise level information technolo- gy and how to develop an enterprise level information technolo- gy and how to develop an enterprise level information technolo- gy platform for such an enterprise. Prerequisite: ISYS 3393 or ISYS 4373 or CSCE 1123 with a grade of “C” or better.

ISYS4223 ERP Configuration and Implementation (FA) The process of configuring and implementing an enterprise resource planning system. Business process reengineering. 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 4123 with a grade of “C” or better.

ISYS4223 ERP Integration and Implementation II (FA) The process of configuring and implementing an enterprise resource planning system. Business process reengineering. 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 4123 with a grade of “C” or better.

ISYS4223 ERP Configuration and Implementation (FA) The process of configuring and implementing an enterprise resource planning system. Business process reengineering. 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 4123 with a grade of “C” or better.

ISYS4223 ERP Configuration and Implementation (FA) The process of configuring and implementing an enterprise resource planning system. Business process reengineering. 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 4123 with a grade of “C” or better.

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ISYS4223 ERP Configuration and Implementation (FA) The process of configuring and implementing an enterprise resource planning system. Business process reengineering. 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 4123 with a grade of “C” or better.

ISYS4223 ERP Configuration and Implementation (FA) The process of configuring and implementing an enterprise resource planning system. Business process reengineering. 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 4123 with a grade of “C” or better.
Course Descriptions

maximum of 3 credit hours. MIS Director approval is required. May be repeated for pre- or corequisite: MIS Director approval is required.

ISYS4423 Seminar in Systems Development (IR) Advanced study of structured systems development. Emphasis on research techniques of structured analysis and structured design for producing logical systems specifications and for deriving physical systems designs. Coverage of methodologies for dealing with complexity in the development of systems. Prerequisite: ISYS 3202 or ISYS 3502.

ISYS4543 Introduction to Enterprise Servers (FA) The focus of this course is to expose students to working with large scale mainframe computer systems. Mainframe computers are the heart of large company's transaction processing systems. This course provides the opportunity for students to gain valuable insight into computing in a mainframe operating environment. Prerequisite: ISYS 2263 or CSCE 1123 with a grade of "C" or better.

ISYS4563 Enterprise Transaction Systems (SP) Being able to accurately capture and store business transactions is an important processing function in many businesses. For many large companies with high volume processing, the tools of choice for transaction processing are CICS/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.

ISYS5503 Decision Support Systems (FA) An analysis of the highest level of information support which serves the decision-making process. Study of systems providing quantitative-based information derived from one or more databases within and/or external to the organization and used to aid quantitative-based information derived from one or more databases. Prerequisite: ISYS 2263 and ISYS 3333.

ISYS5613 Business Applications of Nonparametric Techniques (SP) Consideration of business applications related to sampling and experimental design, testing of hypotheses, and using nonparametric tests. Prerequisite: ISYS 5203 or equivalent.

ISYS5623 Statistical Analysis (SP) Applications of statistical techniques and analysis of business and economic research. For students in business and economics without regard to fields of specialization. Prerequisite: ISYS 5203.

ISYS5713 Seminar in Telecommunications (FA) General telecommunications characteristics and capabilities relative to business applications, networking, electronic commerce, consideration of IT management, security, and ethics. Prerequisite: ISYS 3332.

ISYS5733 Methods Computer Research in (SU) Applications of computers to business and industrial research. Numerical problem-solving techniques, statistical computational techniques and packages, accessing of government and private standard data bases. Prerequisite: ISYS 5623.


ISYS5803 Data Management Systems (FA) Investigation and application of advanced database concepts include database administration, database technology, selection and acquisition of database management systems. Data modeling and system development in a database environment. Prerequisite: ISYS 5423 and ISYS 2263.

ISYS5843 Seminar in Business Intelligence and Knowledge Management (SP) Business intelligence 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.

ISYS5933 Global Information Systems Seminar (SP) This course is designed to provide an updated, comprehensive understanding of the emerging IT fields. It summarizes current experiences, offers managerial insights, and incorporates foundational perspectives and examines significant issues from global perspectives.

ISYS5943 Management of Information Technology Seminar (SP) Presented in a way that allows you to play an active role in the design, use, and management of information technology. Using IT to transform the organization, as competitive strategy, and creating new relationships with other firms. Prerequisite: ISYS 5833. Prerequisite: ISYS 5423.

ISYS6001 Research Seminar in DSS (IR) An examination of research topics in decision support systems (DSS). Emphasis on understanding and conducting DSS research. Pre- or Corequisite: ISYS 5503.

ISYS6011 Graduate Colloquium (FA, SP) Presentation and critique of research papers and proposals. Prerequisite: ISYS 6001 Research Seminar in Systems Development. (IR) An examination of research topics in system development. Emphasis on understanding and conducting systems development research. Pre- or Corequisite: ISYS 5833.

ISYS6031 Seminar in Management Information Systems (IR) Focus on the relationship between an information system and the organization it supports. Topics include system theory, information system resources, types of information systems, and characteristics of the managerial activities that involve information systems. Prerequisite: ISYS 5723.

ISYS6113 Seminar in Computer Information Systems (IR) Provides the student with information in current CIS technological topics. Topics include end-user computing and development, advanced generation languages, artificial intelligence, human factors, small business computing, data center management, distributed data processing and communications, and technology. Prerequisite: ISYS 6103.

ISYS6123 Seminar in Computer Information Systems Research (IR) Directed special problems seminar provides a forum to study research in CIS. In addition, students and develop plans of research in light of current topics and methodology. Research topics in CIS. Prerequisite: ISYS 5423 and ISYS 5503 and ISYS 5833 and ISYS 6113.

ISYS6333 Research Seminar (FA, SP) Topical research seminar; emphasis on understanding and conducting information systems research. Topics will vary. May be repeated for 18 hours.

ISYS636V Special Problems (1-6) (IR) Independent reading and research under supervision of senior staff mem- ber.

ISYS6423 Seminar in Causal Modeling (SP) Exposure to use of causal modeling in current research. Particular emphasis given to confirmatory factor analysis, covariance structure modeling, and their applications in constraint construction and hypothesis testing. Prerequisite: ISYS 6011 (1-8) (FA, SP). Prerequisite: candidacy.

ITAL1003 Elementary Italian I (FA) Corequisite: ITAL 1003 or equivalent.

ITAL1013 Elementary Italian II (SP) Corequisite: ITAL 1013 or equivalent.


ITAL2013 Intermediate Italian II (SP) Corequisite: ITAL 2013 or equivalent.

ITAL3013 Introduction to Literature (FA) Development of reading skills and introduction to literary analysis. Prerequisite: ITAL 2013 or equivalent.

ITAL475V Special Investigations (1-6) (IR) May be repeated for 6 hours.

(ITAL) ITALIAN

ITAL1003 Elementary Italian I (FA) Corequisite: ITAL 1003 or equivalent.

ITAL1013 Elementary Italian II (SP) Corequisite: ITAL 1013 or equivalent.


ITAL2013 Intermediate Italian II (SP) Corequisite: ITAL 2013 or equivalent.

ITAL3013 Introduction to Literature (FA) Development of reading skills and introduction to literary analysis. Prerequisite: ITAL 2013 or equivalent.

ITAL475V Special Investigations (1-6) (IR) May be repeated for 6 hours.

(ITED) INDUSTRIAL / TECHNICAL EDUCATION

ITED1203 Drafting Technology I (FA) Use and care of instruments; lettering, sketching, applied geometry, pictorial drawing, and orthographic projection to computer-aided drafting. Corequisite: ITED 1201L.

ITED1201L Drafting Technology I Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of drafting technology. Corequisite: ITED 1201L.

ITED1303 Construction Methods and Materials (FA, SP, SU) Primary objective is to acquaint the student with various types of construction materials and their application. Corequisite: ITED 1303L.

ITED1301L Construction Methods and Materials Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of construction methods and materials. Corequisite: ITED 1303L.

ITED1403 Power and Energy (FA, SP, SU) How energy is extracted, processed, converted, and used to power societal needs. Corequisite: ITED 1403L.

ITED1401L Power and Energy Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of power and energy. Corequisite: ITED 1403L.

ITED1413 Principles of Electricity (FA, SP, SU) Principles of electricity; theory and practice in project design and construction.

ITED1411L Principles of Electricity Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of electricity.

ITED1503 Introduction to Industrial and Technical Education (FA, SP, SU) Surveying and interpreting the origin, principles, and objectives of industrial and technical education and providing an introduction to other educational programs. Required for all undergraduates in industrial/technical education.

ITED1603 Industrial Safety I (FA, SP, SU) Study of accident causes, the cost of accidents, accident prevention programs, safety performance, safety inspection, planning and maintaining a safe environment, and organization and operation of school laboratories and industrial accident prevention programs.

ITED2211 Industrial Design (FA, SP, SU) Principles of structural design; contour and surface ornamentation applied to 3-dimensional objects; sketches, details, and working drawings of projects. Corequisite: ITED 2211L.

ITED2211L Industrial Design Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of industrial design. Corequisite: ITED 2213.

ITED2313 Metals Fabrication (FA, SP, SU) A study of the tools, materials, and processes involved in sheet, metal, ornamental iron work, welding, and forging used to install metal products either in the fabrication shop or on the construction site. Corequisite: ITED 2311L.

ITED2311L Metals Fabrication Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of metals fabrication. Corequisite: ITED 2313.

ITED2423 Industrial Maintenance (FA, SP, SU) The principles and practices used in installing, maintaining, troubleshooting, diagnosing, and repairing electrical, mechanical, and facility components found in the manufacture, construction, and service industries. Corequisite: ITED 2423L.

ITED2421L Industrial Maintenance Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of industrial maintenance. Corequisite: ITED 2423.


ITED2611L Machine Tool Manufacturing Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of machine tool manufacturing.

ITED3222 Drafting Technology II (FA, SP, SU) Combination of drafting and design including section views, thread dimensions, and dimensioning working drawings combined with rendering of plans and specifications for houses of traditional and contemporary design; emphasis on computer-aided drafting and design. Corequisite: ITED 3222L.

ITED3221L Drafting Technology II Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of drafting technology II. Corequisite: ITED 3223.

ITED3323 Construction Coating Applications (FA, SP, SU) Use and application of various transparent and nontransparent finishes that are applied by spray, electrostatic, and powder-on methods, including finishes for wood, metal, and concrete. Corequisite: ITED 3321L.

ITED3321L Construction Coating Application Laboratory (FA, SP, SU) Laboratory exercises in princi-
ies and practices of construction coating applications. Corequisite: ITED 3212.
ITED433 Electronic Technologies (FA, SP, SU) Vacuum tubes, gas tubes, and semiconductors; electronic circuits including amplifiers, oscillators, switching and timing circuits; applications including sound and video systems, relays, controls, and industrial devices. Corequisite: ITED 3431L.
ITED4331L Electronic Technologies Laboratory (FA, SP, SU) Corequisite: ITED 3431.
ITED353 Applied Technology Education (FA, SP, SU) An introductory course in technology education focusing on the management of hands-on activities utilized in technology programs for elementary and secondary industrial technology teachers.
ITED3623 Wood Processing Technology (FA, SP, SU) Basic principles of design and construction processes using machines, materials, and supplies incorporated in machine tools. Corequisite: ITED 3621L.
ITED621L Wood Processing Technology Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of wood processing technology. Corequisite: ITED 3623.
ITED3633 Plastics in Industry (FA, SP, SU) Tools, materials, and processes involved in the use and fabrication of plastics relating to modern plastic industries. Corequisite: ITED 3631L.
ITED3631L Plastics in Industry Laboratory (FA, SP, SU) Laboratory exercises in principles and practices of plastics in industry. Corequisite: ITED 3633.
ITED4523 Advanced Technology Education (FA, SP, SU) Provides the student with the expertise to develop and update a technology education program in order to keep the program current with changes that occur in technology.
ITED459V Industrial Internship I (1-10) (FA, SP, SU) An in-depth experience that will study management functions, organizational practices, product design, production fabrication, routing, quality control, work schedules, industrial relations, and related activities of American industrial society. Lecture 15 hours.
ITED4643 Industrial Safety II (FA, SP, SU) Indepth study of accidents, causes, the cost of accidents, appraising safety performance, safety inspection, planning and maintaining a safe environment, and organization and administration of school laboratory and industrial accident prevention programs.

(JAPAN) JAPANESE
JAPN1003 Elementary Japanese I (FA) Elementary course covering pronunciation, aural comprehension, and simple speaking ability, and to lead to mastery of basic grammar and limited reading ability. Prerequisite: None.
JAPN1013 Elementary Japanese II (SP) Elementary course covering reading, writing, basic vocabulary, and spoken expressions. Prerequisite: JAPN 1003 or equivalent.
JAPN2003 Intermediate Japanese I (FA) Intermediate course to lead a greater facility in spoken language and to more advanced reading skills. Prerequisite: JAPN 2003 or equivalent.
JAPN2022 Intermediate Conversation I (FA, SP) Supplemental to 2003. Provides 2 hours of guided conversa-
tion per week with the objective of building the listening/reading skills.
JAPN2032 Intermediate Conversation II (FA, SP) Supplemental to 2013. Provides 2 hours of guided conversa-
tion per week with the objective of building the listening/reading skills.
JAPN3003 Advanced Japanese I (FA) Introduces more complex forms and structures of the language as well as more Kanji (Chinese Characters) aiming at the improvement of all the skills: speaking, listening, writing and reading. Prerequisite: JAPN 3003.
JAPN3993 Special Studies (IR) May be offered in a subject not specifically covered by courses otherwise listed. May be repeated for 6 hours. Prerequisite: JAPN 2013.
JAPN2421 Japanese Culture (IR) Insight into Japanese civilization and culture with special emphasis on the areas such as history, belief, costume, and customs of the Japanese people as a social group. For comparison purposes, this course also discusses western influence on Japanese socie-
ty, culture, language and how traditional and modern values are maintained. May be repeated for 6 hours. Prerequisite: JAPN 2013.
JAPN4313 Language and Society of Japan (FA) The primary objective of this course is to investigate the way the Japanese language is used in social, educational, religious, and cultural context. For comparison purposes, this course also makes reference to studies in American lan-
guage and culture. Proficiency in Japanese not required. Prerequisite: JAPN 2013 or equivalent Japanese proficiency.

(JOUR) JOURNALISM
JOUR1023 Media and Society (FA, SP) A survey of mass media (newspaper, radio, TV, magazine, advertising, public relations, photography, etc.) which stresses their importance in today's society and introduces students to the various areas in journalism. Recommended for students considering journalism as a major.
JOUR1033 Fundamentals of Journalism (FA, SP) Introduces students to the skills of observation, critical thinking and concise writing required in all aspects of journal-
ism, as well as to the technology needed in upper-level courses. Practice using references for grammar and journalistic style. A prerequisite to JOUR 2013, 2033, 2063 and 4143. Corequisite: JOUR 1030 L.
JOUR1030L Fundamentals of Journalism Laboratory (FA, SP, SU) Provides practice in hand printing and desktop publishing. Lecture 2 hours, laboratory 2 hours per week. Corequisites: JOUR 1023 and JOUR 1033.
JOUR2013H Honors News Reporting I (FA, SP) Intensive training in the methods of gathering and writing news. Lecture 2 hours, laboratory 2 hours per week. Prerequisites: JOUR 1023 and JOUR 1033.
JOUR2031L Broadcast News Reporting II Laboratory (FA, SP, SU) Provides experience in basic broadcast news reporting techniques. Laboratory 3 hours per week. Corequisites: JOUR 2013 and JOUR 2023.
JOUR2063 Media Technology (FA, SP) Introduction to computer skills required in journalism; focus is training in the major computer software used in the profession. Prerequisites: JOUR 1023 and JOUR 1033.
JOUR2332 Photojournalism I (FA, SP) Beginning course in the fundamentals of photography, including dark-
room procedures, composition, and the use of cameras. Lecture 2 hours per week. Corequisite: JOUR 2331L.
JOUR2331L Photojournalism Laboratory I (FA, SP) Provides experience in photography lab techniques. Laboratory facilities are supplied. Laboratory 2 hours per week. Corequisite: JOUR 2332.
JOUR3002 Graphics of Journalism (FA, SP) Principles of typography, including elementary printing, make-
up, type faces, design, and proofreading. Lecture 2 hours per week. Corequisites: JOUR 2031 and JOUR 2033.
JOUR3001L Graphics of Journalism Laboratory (FA, SP) Hands-on training and experience in graphics design and production techniques. Laboratory 2 hours per week. Corequisites: JOUR 2031 and JOUR 2033.
JOUR3013 Editing (FA, SP) Theories and practices in newspaper editing, copywriting, headline writing, page lay-
out and the gathering and publication of written and pictorial information. Prerequisites: JOUR 1023 and JOUR 2013.

JOUR3023 News Reporting II (FA, SP, SU) Continuation of JOUR 2013. Lecture 2 hours, laboratory 2 hours per week. Corequisites: JOUR 3020L, and 2.50 cumulative grade point average.
JOUR3020L News Reporting II Laboratory (FA, SP, SU) Corequisite: JOUR 3023.
JOUR3021L Editing Laboratory (FA, SP, SU) Hands-on practice in techniques of newspaper design and production. Laboratory 2 hours per week. Corequisite: JOUR 3020L.
JOUR3072 Broadcast News Reporting II (FA, SP) Advanced techniques in broadcast journalism including: cov-
ering beats; writing and interviewing; and producing news program for television. Corequisite: JOUR 3071L.
Prerequisites: JOUR 2032 and JOUR 2031L.
JOUR3071L Broadcast News Reporting II Laboratory (FA, SP) Television studio production includ-
ing producing, directing, teleprompter, character generation, audio, lighting, and camera operation. Produce weekly TV news program for broadcast. Corequisite: JOUR 3072.
Prerequisites: JOUR 3022 and JOUR 2031L.
JOUR3083 Photojournalism II (FA, SP, SU) Study of news and feature photography. Includes planning and shooting photographs for newspapers and magazines, photo-
journalistic techniques, and other aspects of photographing for publication. Lecture 2 hours, laboratory 2 hours per week. Corequisites: JOUR 3080L and JOUR 2331L.
JOUR3080L Photojournalism Laboratory II (FA, SP, SU) Corequisite: JOUR 3083.
JOUR3093 Web Design for Journalism, Advertising & Public Relations (SP) Course covers basic UNIX and HTML, and leading web design software. Major focus is on journalistic infographics and personal sites; minor focus on personal pages. Prerequisite: JOUR 2063.
JOUR3123 Feature Writing (FA, SP, SU) Study of non-fiction newspaper and magazine articles with emphasis on locating subjects, and on writing techniques and practice in article writing. Prerequisite: JOUR 2013.
JOUR3133 Editorial Writing (FA, SP, SU) Study of the function of the news editor. Focus on writing the newspaper, the newspaper/editorial/opinion columns, letters from readers, and broadcast commentary. Prerequisite: JOUR 2013 (or JOUR 2032) and junior standing.
JOUR3153 Sports Journalism (FA) Emphasis on techniques and principles of coverage of sports and sports-
related subjects and off the field, and on the relationship between sports and the mass media.
JOUR3333 Ethics in Journalism (SP) Critical exami-
nation of specific ethical problems confronting professionals in all areas of mass communications. Reading and writing assignments are aimed at familiarizing students with the nature of the mass media and their social responsibilities. Prerequisite: junior standing.
JOUR3363 Media Law (FA, SP) Constitutional guaran-
tees, statutory laws and court cases applicable to mass commu-
ications. Prerequisites: JOUR 2032 and junior standing.
JOUR3723 Advertising Principles (FA, SP) 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 location of professional and social responsibilities. Prerequisite: junior standing.
JOUR3743 Public Relations Principles (FA, SP) Study of theory, methods, and ethics of public relations in modern society, business, and communications. Influencing opinion through acceptable performance and 2-way communi-
cation. Recommended for students in many fields. Prerequisite: junior standing.
JOUR3923H Honors Colloquium (FA, SP, SU) Covers a special topic or issue, offered as a part of the honors pro-
gram. May be repeated. Prerequisite: honors candida-
ty and restricted to candidates in journalism who have completed an internship experience. May be repeated for 3 hours. Prerequisites: JOUR major and junior standing and 10 hours of journalism and a 2.5 cumulative grade average.
JOUR402V Internship in Journalism (1-3) (FA, SP, SU) Credit for practical experience gained through a jour-
nalistic internship. Report required on each aspect of internship experience. May be repeated for 3 hours. Prerequisite: JOUR major and junior standing and 10 hours of journalism and a 2.5 cumulative grade point average.
JOUR4043 Government and the Media (FA, SP,
Course Descriptions

JOUR4903 Community Newspaper (SP) This three-hour course will blend student reporting and editing skills with instruction on how to design and present news to a local audience. This course will instruct students in deciding news stories for regional readers, how those stories can best be written and displayed. The semester goal is to publish a paper. Prerequisite: junior standing.

JOUR4906 Specialized Journalism Seminar (1-3) (IR) Primary purpose of course is to enlarge the journalistic skills of students interested in advanced forms of mass communication. Students undertake projects related to particular aspects of journalism. Content varies. May be repeated twice for a maximum of 6 hours credit, as content will vary. May be repeated for 6 hours.

JOUR4983 Computer-Assisted Publishing (FA, SP, SU) Intensive, hands-on exploration of computer hardware and software in the design and production of media messages. Examination of developing media technologies and the computer's influence on design and conceptualization. Primarily for students intending to teach journalism or to supervise publications in high schools. Prerequisite: advanced standing.

JOUR4860L Television News Reporting I (FA, SP, SU) Laboratory component arranged. Prerequisite: JOUR 3072 and JOUR 3071L. Corequisite: JOUR 4860L.

JOUR4863 Television News Reporting I (FA, SP, SU) An introduction to the broad field of journalism, including ethics, and persuasion theories and/or issues relevant to advertising and public relations affecting individuals, organizations, societies. Prerequisite: graduate standing or honors program standing.

JOUR4873 Television News Reporting II (FA, SP, SU) Continuation of JOUR 4863. Laboratory component arranged. Corequisite: JOUR 4863.

JOUR4880L Advanced Television News Production Laboratory (FA, SP, SU) Corequisite: JOUR 4880L.

JOUR5003 Advanced Reporting (FA, SP, SU) Stresses public affairs coverage, interpretive, investigative, and analytic journalism, involving research, work with documents, public records, and budgets and specialized reporting. Prerequisite: JOUR 4873. Includes the study of media characteristics, market research, media strategies, media analysis, media-market measurements, and the development of media plans. Emphasis is placed on the analysis of major mass media strategies, tactics, and planning. Prerequisite: A grade of B or better in both JOUR 3723 and JOUR 3743.

JOUR5013 Broadcast Advertising and Sales (FA) The creation of advertising campaigns for the broadcast media and techniques involved in the presentation of these campaigns to prospective media buyers. Emphasis is also placed on the gathering and use of rating systems for broadcast advertising. Prerequisite: JOUR 3723.

JOUR5113 Television News Reporting II (FA) Seminar course involving the critical examination of electronic, ethical, economic, and political, ethical, and persuasion theories and/or issues relevant to advertising and public relations affecting individuals, organizations, societies. Prerequisite: graduate standing.

JOUR5123 Integrated Mass Communications (FA, SP, SU) Examination of national media systems, issues in international communications, the role of the media in coverage of international affairs, and the impact of new technologies on mass communications. Prerequisite: JOUR 193 Professional Journalism Seminar (IR) Examination of complex problems encountered by professional journalists with focus on research and analysis of the role of journalism in major social, economic, and political developments. May be repeated twice for a maximum of 6 hours credit, as content will vary. May be repeated for 6 hours.

JOUR5233 Media and Public Policy (FA, SP, SU) Focuses on the interaction between media, politics, government, and public policy, particularly on the impact and influence of the media on the public policy agenda. Prerequisite: JOUR 5113. A study of superior works of non-fiction journalism, past and present. Includes authors from Daniel Defoe to John McPhee. Prerequisite: JOUR 3233. Documentary Production I (FA) In-depth study of documentary film as non-fiction, long form journalism. Covers subject, funding, research and development, pre-production planning, field production, talent, music, post production, promotion, broadcast and distribution. Required trip to Hot Springs Documentary Film Festival. Prerequisite: JOUR 3233.

KINS2253 Motor Development (FA, SP, SU) An overview of contemporary motor development and movement theory, developmental hierarchies, and physiological aspects of development throughout the lifespan.

JOUR5253 Media and Public Policy (FA, SP, SU) Focuses on the interaction between media, politics, government, and public policy, particularly on the impact and influence of the media on the public policy agenda. Prerequisite: JOUR 5113.

KINS1101 Careers in Kinesiology: A History and an Overview (FA, SP, SU) An introduction to the broad field of Kinesiology, including historical aspects and career perspectives. Prerequisite: JOUR 5253.

KINS2253 Motor Development (FA, SP, SU) An overview of contemporary motor development and movement theory, developmental hierarchies, and physiological aspects of development throughout the lifespan.
Exercise Science KINS4571 Performance and Drugs (SP). The pharmacological and physiological effects of ergogenic aids upon the athlete and performance coupled with the ethical and moralistic viewpoints of drug taking. Prerequisite: KINS 3153.

KINS4583 Exercise Applications for Special Populations (FA, SP, SU) The study of the effects of exercise on special populations and the effects of exercise, exercise training, and other stressors in special groups. A detailed study of the biomechanical and physiological effects of exercise on the elderly, the diabetic, the post-cornary, and the individual with functional limitations. Prerequisite: KINS 3353 and KINS 3533.

KINS4903 Internship in Exercise Science (FA, SP) Provides opportunities for students in Exercise Science to gain experience in clinics, hospitals, fitness centers, athletic training facilities or related settings. Enrollment is limited to students in exercise science having taken KINS 3353 and KINS 3533. May be repeated for 12 hours. Prerequisite: KINS 3353 and KINS 3533.

KINS5303 Athletic Training Clinical I - Application of Athletic Preventive Devices (SU, Odd years) This course will serve as an introduction to the athletic training clinical program. Procedures and policies of the clinical program of athletic preventive devices will be included as well. Prerequisite: admission to the graduate program in athletic training.

KINS5222 Athletic Training Clinical II - Evaluation Lab - I (SP) This course will serve as a process for monitoring student's progression of athletic training proficiencies, acquire clinical hours under the direct supervision of a certified athletic trainer, and reinforce the evaluation skills of lower extremity, and spine/pelvis. Prerequisite: KINS 5212.

KINS5232 Athletic Training Clinical III - Evaluation - Upper Extremity (SP) This course will serve as a process for monitoring student's progression of athletic training competencies, acquire clinical hours under the direct supervision of a certified athletic trainer, and reinforce the evaluation skills of upper extremities, head, neck, and posture. Prerequisite: KINS 5222.

KINS5242 Athletic Training Clinical IV - Emergency Procedures Procedures/Mobility Lab (SU) This course will serve as a process for monitoring student's progression of athletic training competencies, acquire clinical hours under the direct supervision of a certified athletic trainer, and reinforce the evaluation of the upper extremities, head, neck, and posture. Prerequisite: KINS 5222.

KINS5252 Athletic Training Clinical V - Rehabilitation Lab (FA) This course will serve as a process for monitoring student's progression of athletic training competencies, acquire clinical hours under the direct supervision of a certified athletic trainer, and reinforce the evaluation skills of upper extremities, head, neck, and posture. Prerequisite: KINS 5222.

KINS5333 Instrumentation in Biomechanics (FA, SP, SU) The application of knowledge and skills necessary for data collection for sports analysis. Provides valuable information on instrumentation used specifically in biomechanics. Prerequisite: KINS 3364.

KINS3363 Evaluation Techniques of Athletic Injuries - Upper Extremity (FA, Even years) 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.

KINS3373 Evaluation Techniques of Athletic Injuries - Lower Extremity (SP, Even years) Use of scientific assessment methods to recognize and evaluate the nature and severity of athletic injuries to the hip and lower extremities. Prerequisite: admission to graduate athletic training program.

KINS4232 Assessment and Prescriptive Programming (FA, SU) This course is designed to provide instruction in the assessment, prescription, and use of instruction methods, materials, and equipment relevant to specific handicap conditions in the adapted physical education setting.

KINS4433 Perceptual-Motor Development and Clinical Application (FA, SP, SU) Indepth examination relevant to specific handicap conditions in the adapted physical education setting.

KINS5453 Exercise and Rehabilitation of Athletic Injuries (SU, Even years) Contemporary therapeutic modalities used in managing athletic injuries. Modalities covered are classified as thermal agents, mechanical agents, or mechanical modalities. Emphasis is placed on their physiological effects, therapeutic indications (and contraindications), and clinical application. Prerequisite: admission to graduate athletic training program.

KINS4653 Biomechanics of Exercise and Rehabilitation of Athletic Injuries (SU, Even years) A systematic approach to exercise program development, techniques, indications and contraindications of exercise, and progression related to athletic injury prevention, and return to play guidelines. Prerequisite: admission to graduate athletic training program.

KINS4773 Administration in Athletic Training (SU, Odd years) This course will serve as a process for monitoring student's progression of athletic training proficiencies, acquire clinical hours under the direct supervision of a certified athletic trainer, and reinforce the evaluation skills of lower extremity, and spine/pelvis. Prerequisite: KINS 5212.

KINS4832 Medical Conditions in Athletic Training (SP, Even years) This course will provide a collection of knowledge, skills, and attitudes 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.

KINS5493 Practicum in Adapted Physical Education (SP, SU) Deals with the application of skills, knowledge and concepts necessary for planning, organizing and conducting adapted physical education programs through supervised field experiences.

KINS5513 Physiology Exercise I (FA, SP, SU) A study of the functional responses of the body to exercise. Emphasis is placed on the muscular, cardiovascular, and respiratory systems.

KINS5523 Muscle Metabolism in Exercise (SP) A study of the metabolic mechanisms that occur in muscle as a result of exercise, exercise training, and other stressors. Prerequisite: KINS 5513 or equivalent.

KINS5533 Cardiac Rehabilitation Program (FA, SP, SU) An exam of the concepts, design, and implementation of cardiac rehabilitation programs. Emphasis on exercise programs but reference to nutrition, psychology, and other lifestyle interventions.

KINS5543 Cardiovascular Function in Exercise (FA, SP, SU) Study of the effects of exercise training and other stressors on the cardiovascular system. Detailed study of the components of the cardiovascular system and the responses and adaptions of those components to selected stimuli. Prerequisite: KINS 5513 or equivalent.

KINS5593 Practicum in Laboratory Instrumentation (FA, SP, SU) Practical experience in testing physical fitness utilizing laboratory equipment. Objective is to quantify physiological parameters, leading to the individualized exercise prescription.

KINS6501 Internship (FA) Concepts of motor learning and control are presented. Attention is given to an analysis of the literature in movement control, motor behavior, and motor learning. Prerequisite: KINS 5741.

KINS7573 Research in Sport Psychology (SU) Investigation of historical and contemporary research in sport psychology. Prerequisite: HKRD 5533.

KINS7573 Performance and Drugs (SU) The pharmacological and physiological effects of ergogenic aids upon the athlete and performance coupled with the ethical and moralistic viewpoints of drug taking. Prerequisite: Sports elective, and Sports electives 300 level or equivalent.

KINS5891 Independent Research (1-3) (FA, SP, SU) Development, implementation, and completion of basic or applied research project. Prerequisite: M.S. degree program in exercise and movement sciences and HKRD 5533 and EDFF 5593.

KINS5899 Special Seminar (1-3) (IR) Independent study. Prerequisite: KINS 5899.

KINS6051 Independent Study (1-3) (FA, SP, SU) Provides students with an opportunity for pursuit special study of educational problems.

KINS5333 Biomechanics (II) (FA, SU) Analysis of human movement with emphasis on sports skills by application of principles of anatomy, kinesiology, and cinematographic analysis. Prerequisite: KINS 5323.

KINS6343 Perceptual-Motor Development (SP) Detailed study of the body systems affected by exercise, the functions of these systems during exercise, the effects of age, sex, body type, and nutrition on capacity for exercise, the techniques of assessing work capacity, and a critical analysis of research literature in this area.

LARC1003 Basic Course in the Arts: Landscape Architecture (FA, SP) Mankind's changing attitudes toward urban and rural outdoor spaces and their aesthetic and cultural values. The origins of the environmental/cultural movement and the development of an American land ethic. Appreciation of the relationship of the natural and historic landscape to the arts and the aesthetic importance of open space. UNIVERSITY CORE COURSE

LARCH1121 Introduction to Landscape Architecture I (FA, SU) Interdisciplinary introduction to basic principles of design and the natural landscape. Urbanism and the public realm. Lecture 1 hour per week.

LARCH1221 Introduction to Landscape Architecture II (SP, SU) Theoretical, formal, and constructive principles and their impact in the design discipline, modernism and after. Introduction to the intellectual and philosophical foundations of landscape architecture. Lecture 1 hour per week. Prerequisite: LARCH 1211.

LARCH1315 Landscape Architecture Design I (FA, SU) Theory and craft of seeing, drawing, and model-building to record and communicate design. Basic design principles with architectural and natural geometries are introduced and employed. Studio and lecture. Corequisite: LARCH 1211. LARCH1325 Landscape Architecture Design II (SP, SU) Basic concepts of spatial, organizational and visual analysis are used in the investigation and evaluation of designed landscapes. Introduction to three-dimensional spatial organization systems and supporting principles. Continued drawing exercises and analysis graphs lead to conceptualization. Studio and lecture. Corequisite: LARCH 1221. Prerequisite: LARCH 1315 and LARCH 1211.

LARCH2113 Design Communications I (FA) Aimed at utilization of the design process from conception to completion. Provides a means to effectively communicate, evaluate, synthesize and refine ideas. Aimed at teaching various visual and output graphics associated with the design process. Communication of ideas through various techniques is explored and the computer is introduced as a graphics tool and as a means of organizing ideas in a creative, yet orderly, fashion.

LARCH2123 Design Communications II (SP) Continued of LARCH 2113 with a focus on computer technologies in two-dimensional graphic representation and three-dimensional modeling. Course includes an introduction to computer system use and software such as: CAD, GIS, Photoshop, desk-top publishing, Word, and other professional office programs. Studio and lecture.

LARCH336 Landscape Architecture Design III (FA) Introduction to design process(ies) which responds to site and context. Reinforcement of design principles and organization systems applied to small scale design projects. Studio and lecture. Prerequisite: LARCH 1221 and LARCH
Course Descriptions

LARC2013 Latin American Studies (FA) This course provides an interdisciplinary introduction to Latin America. Drawing on Latin American literature, history, sociology, and political science, the course examines the broad forces that have shaped the region.

LARC2013H Honors Latin American Studies Coquium (SP) An interdepartmental colloquium with an annual change in subject of investigation, required of all Latin American studies majors. May be repeated for 6 hours. Prerequisite: sophomore standing for Latin American studies majors and honors students.

LARC2103 Latin American Studies Coquium (SP) An interdepartmental colloquium with an annual change in subject of investigation, required of all Latin American studies majors. May be repeated for 6 hours. Prerequisite: sophomore standing for Latin American studies majors and honors students.

LARC4173 The Latin American City (IR) 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 examines a specific set of case studies. (Same as ANTH 4173, GEOG 4173, HIST 4173) May be repeated.

LARC470V Special Topics (1-6) (IR) An examination of pertinent issues in Latin America. May be repeated.

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. Prerequisite: LATN 1003 or equivalent.

LATN2003 Petronius’ Satyricon (FA) Development of reading skills through selections from Satyricon, and an introduction to imperial history and culture through critical study of the novel in translation. Prerequisite: LATN 1013 or equivalent. UNIVERSITY CORE COURSE

LATN2013 Catulus (SP) Development of reading skills through selections from Catulus, an introduction to the culture and history of the late republic through critical study of Catulus in translation and secondary works.
Prerequisite: LATN 2003 or equivalent.

LATN4063 Roman Pastoral and Lyric (FA) Selections from Propertius, Virgil, Ovid, and Statius. An overview of Roman pastoral poetry through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent.

LATN4073 Roman Novel (IR) Selections from Petronius or Aulus. An overview of the genre through the critical study of complete works in translation and secondary works. Prerequisite: LATN 3013 or equivalent.

LATN4093 Roman Philosophy (IR) 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. May be repeated for 6 hours. Prerequisite: LATN 3013 or equivalent.

LATN4153 Roman Narrative Epic (IR) 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. May be repeated for 6 hours. Prerequisite: LATN 3013 or equivalent.

LATN4175V Special Investigations (1-6) (IR) May be repeated.

LATN5633 Medieval Latin (IR) Selections from medieval writers from the 4th to the 17th century. Prerequisite: LATN 3003 or equivalent.

LATN575V Special Investigations (1-6) (IR) May be repeated.

LAWW4001 Introduction to Legal Research (FA, SP, SU) Students will be introduced to legal research processes dealing with legal and technical information. Students will gain the ability to perform legal research using primary and secondary sources for material on cases, statutes, and administrative regulations. Students will develop skills in the use of online research tools and determine the reliability of sources of information. Prerequisites: 6 or more hours of undergraduate or graduate credit in accounting courses. Those who have previously earned 6 or more hours of undergraduate or graduate credit in accounting courses.

LAWW4002 Critical Legal Studies (FA, SP, SU) Critical legal studies is an interdisciplinary field that challenges the traditional assumptions underpinning the legal system. Course content will vary each term. Prerequisites: LATN 3013 or equivalent.

LAWW4024 Torts A (FA, SP, SU) Tort law governs the protection of persons and property against physical harm, whether intentional or negligent, and a variety of related matters, 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, leases (landlord and tenant) and the sale of land are also considered. Land transfer techniques, including the sale contract, the deed, the recording system, and methods of real property title assurance are discussed. Certain aspects of land use controls are explored briefly.

LAWW4033 Contracts II (FA, SP, SU) Formation and enforcement by litigation and commercial arbitration of commercial and family agreements. Mutual assent or consideration; third-party beneficiaries; assignments; joint obligation; performance; anticipatory breach; discharge of contractual duties; the Statute of Frauds.

LAWW4042 Legal Method (FA, SP, SU) LAWW4041 Legal Method (FA, SP, SU) An introductory course on the judicial process, legal history, case analysis, significance of stare decisis, and the role and responsibilities of the lawyer as an advocate.

LAWW4040L Legal Methods (FA, SP, SU) LAWW4053 Property I (FA, SP, SU) 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, leases (landlord and tenant) and the sale of land are also considered. Land transfer techniques, including the sale contract, the deed, the recording system, and methods of real property title assurance are discussed. Certain aspects of land use controls are explored briefly.

LAWW4173 Criminal Procedure (FA, SP, SU) Concerned with the legal steps through which a criminal proceeding passes, commencing with the initial investigation of a crime and concluding with the release of the defendant. Does not deal exclusively with statutes, although considerable time is spent on them. Recent Supreme Court decisions receive special emphasis. Criminal Procedure does not deal with criminal tactics or with many of the special problems relating to the introduction of evidence at the trial.

LAWW4203 Civil Procedure II (FA, SP, SU) Study of the process of civil litigation from some preliminary matters to the selection and utilization of lawyers to the collateral attack of final judgments. Some attempt is given to cover the antecedents of modern procedure; and 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.

LAWW4294 Business Organizations (FA, SP, SU) Course constructed around case studies of business organizations, with emphasis on agency and partnership law, and corporation law.

LAWW4442 Law & Accounting (IR) 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 accounting 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.

LAWW4993 Pre-Trial Practice (FA, SP, SU) Develops fundamental lawyer’s skills using role-play in simulated settings that are videotaped and reviewed. Emphasis is on development of case theory, fact gathering, use of discovery tools, and case planning. Prerequisites: Successful completion of Civil Procedure I, Civil Procedure II, and Criminal Procedure.

LAWW500V Special Topics (1-18) (FA, SP, SU) Included under this heading will be a variety of one-credit 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 sometimes from other countries.

LAWW5013 Professional Responsibility (FA, SP, SU) A study of the lawyer’s role as advocate, and as a 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 profession as a whole; ethical problems of the profession; jurisdiction and powers of courts of equity, injunctions, and mandamus; the special problems relating to the introduction of evidence at the trial. Emphasis is on the Federal Rules of Civil Procedure and on code pleading and common law procedure used in state court systems.

LAWW5140T Torts (FA, SP, SU) Tort law governs the protection of persons and property against physical harm, whether intentional or negligent, and a variety of related matters, 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, leases (landlord and tenant) and the sale of land are also considered. Land transfer techniques, including the sale contract, the deed, the recording system, and methods of real property title assurance are discussed. Certain aspects of land use controls are explored briefly.

LAWW5242 Remedies (FA, SP, SU) Covers equity (jurisdictions and powers of courts of equity, injunctions, including adequate remedies, remedies of equity, interests protected, and defenses) damages (compensatory, exemplary, and nominal damages; direct and consequential damages; special and punitive damages; actions and restitution (relief afforded by the judicial process, to prevent unjust retention of benefits).

LAWW5232 Remedies (FA, SP, SU) Covers equity (jurisdiction and powers of courts of equity, injunctions,
including adequacy of legal remedies, balancing of equities, interest of the parties, damages (compensatory, exemplary, and nominal damages; direct and consequential damages; mitigation; special application in contract and tort actions) and restitution (relief afforded by the judicial process, to prevent unjust enrichment).

LAWW5033 Pension and Benefit Law (FA, SP, SU) Basic introduction to selected areas of the law applicable to private pension and employee benefit plans, including basic principles of regulation, fiduciary duties, taxation and plan termination.

LAWW5043 State and Local Government (FA, SP, SU) Study of units of local government and their relationship to the 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.

LAWW5053 STATE & LOCAL TAXES (FA, SP, SU) Study of state and local taxation. Emphasis on constitutional and legislative powers, duties, immunities, and activities of cities and towns. Not offered every year.

LAWW5063 Education Law (FA, SP, SU) Study of law as it applies to public education in America, including the theory of compulsory education, constitutional rights of students and teachers, school financing, equal opportunity in education.

LAWW5073 Domestic Relations (FA, SP, SU) Devoted primarily to the problems generated by family relationships. Topics include formation and dissolu-

LAWW5114 Constitutional Law (FA, SP, SU) 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.

LAWW5133 Real Estate Transactions (FA, SP, SU) 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 are treated.

LAWW5143 Constitutional Law B (FA, SP, SU) Civil and political liberties, including due process, equal protection, free speech, freedom of religion and other related topics.

LAWW5153 THE ECONOMICS OF AGRICULTURAL POLICY (FA, SP, SU) Course is conducted around Federal materials, but with some state references. Consider the origin and constitution- al basis for the administrative process; executive and legisla-

LAWW5163 Administrative Law (FA, SP, SU) Course is conducted around Federal materials, but with some state references. Consider the origin and constitution- al basis for the administrative process; executive and legisla-

LAWW5293 Business Associations (FA, SP, SU) An overview of agency and partnership law, and corporate law.

LAWW5304 Uniform Commercial Code (FA, SP, SU) A basic overview of Articles 2 and 9 of the Uniform Commercial Code covering sales, commercial paper and secured transactions.


LAWW5313 Negotiable Instruments (FA, SP, SU) Study of Articles 3 and 4 of the Uniform Commercial Code dealing with negotiable instruments.

LAWW5322 Remedies of Unsecured Creditors (FA, SP, SU) Emphasis on statutory, unilateral remedies for general creditors (pre- and post-judgment), including prophylactic measures that may be taken by a secured creditor to protect the collateral.

LAWW5332 Remedies of Secured Creditors (FA, SP, SU) Emphasis on statutory, unilatera
Course Descriptions

Municipal Court. Students are fully responsible for the cases assigned to the clinic. Opportunities include assessing the charges and investigation of law enforcement, interviewing witnesses, conducting discovery, evaluating cases for an agreed upon resolution, negotiating with defense counsel and privately negotiating settlements. Emphasis is given to preserving the court's independence, powerful position, and the races, genders, and other personal characteristics of the people who will be appearance in the court. The preparation and performance of student attorneys is supervised by clinic faculty who provide personal feedback to the students.

LAWW6503 ADMIRALTY
(FA, SP, SU) Study of commercial voyages and海洋 jurisdiction. Substantive law includes the tort and maritime law, and the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. The course also involves the legal regulation of maritime commerce. 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LAW7212 Jurisprudence Seminar (FA, SP, SU) Structured philosophies of the law, nature and function of the common law, judicial process, and topics in social science.

LAW7222 LAW & ENVIRONMENT (FA, SP, SU) Study of regulations, treaties, conventions, and other state and federal law dealing with conservation of natural resources and pollution of the environment; enforcement and compliance problems; dispute resolution; and intergovernmental relations.

LAW7243 Health Law (FA, SP, SU) An examination of the role of the law in determining access to and regulation of the quality of services provided by the health care industry.

LAW7252 Freedom of Information Seminar (IR) Examination of state laws governing public access to records and meetings, as well as constitutional issues pertaining to such access. The process of obtaining access, including litigation, is also considered. A research paper is required.

LAW7302 INTERNATIONAL BUSINESS TRANSACTIONS (FA, SP, SU) A survey course dealing with an array of legal issues surrounding the Internet, including contract, crime, copyright, free speech, and privacy.

LAW7352 Privacy Law: Selected Topics (FA, SP, SU) 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 under the constitution and by private remedy; and impacts and intrusions upon the right caused by governmental activities and technological developments (such as computer and data bases). Comparative law issues and questions are made. Completion of the Constitutional Law courses is highly recommended.

LAW7502 LEGISLATIVE PRACTICE (FA, SP, SU) LAW7513 Mass Communication Law (FA, SP, SU) LAW7512 Mass Communications Law Seminar (IR) Study of problems of 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.

LAW7603 Bankruptcy - Business Reorganizations (FA, SP, SU) 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.

LAW7612 Advanced Consumer Bankruptcy (FA, SP, SU) Study of recent developments in the law of bankruptcy as it affects consumers and nonconsumers transactions. Prerequisite: LAW7602.

LAW7662 American Indian Law (FA, SP, SU) 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. 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; federal law and federal environmental controls.

LAW770V Master’s Thesis in Agricultural Law (1-4) (FA, SP, SU) Research in a specialized area of agricultural law and development of a scholarly paper containing the results of this research.

LAW771V Independent Research in Agricultural Law (1-2) (FA, SP, SU) Independent research in agricultural law conducted under the supervision of a faculty member.

LAW7723 International Agricultural Transactions (FA, SP, SU) Examination of agricultural trade policies, import and export laws affecting agricultural products, international agricultural trade agreements, and the international aspects of financing of trade in agricultural commodities.

LAW7722 Colloquium in Agricultural Law (FA, SP, SU) Presentation and discussion of papers and topics by graduate students, faculty and guest speakers with an emphasis on current issues and problems in the practice of agricultural law.
Course Descriptions

Mathematics Courses

MATH0003 Beginning and Intermediate Algebra
- Topics in algebra and trigonometry. To be taken by students who expect to take a course in mathematics.
- Credit will be allowed for only one of MATH 2043 and MATH 2554. Prerequisite: MATH 1203.

MATH2043C Survey of Calculus (FA, SP, SU)
- Topics in elementary calculus and analytic geometry for students in business, agriculture, and social sciences. Credit will be allowed for only one of MATH 2043 and MATH 2554. Prerequisite: MATH 1203.

MATH2053C Finite Mathematics (FA, SP, SU)
- Topics in probability, vectors and matrices, linear programming. Terminal course for students in business, agriculture, and social sciences. This course will not prepare stu-
dents to take other mathematical courses. Prerequisite: MATH 1203.

MATH2053 Finite Mathematics (FA, SP, SU)
- Selected topics in elementary calculus and analytic geometry for students in business, agriculture, and social sciences. Credit will be allowed for only one of MATH 2043 and MATH 2554. Prerequisite: MATH 1203.

MATH2053H Honors Finite Mathematics (FA, SP, SU)
- Co-Requisite: MATH 2053 C.

MATH2055D Finite Mathematics (DR, SP, SU)
- Co-Requisite: MATH 2053.

MATH2103 Discrete Mathematics (FA, SP, SU)
- Introductory study of sets, relations, logic, proofs, algorithms, counting methods, graph theory, trees, and Boolean alge-
bras. Prerequisite: MATH 1203 or ACT math score of 21 or above.

MATH2103H Honors Discrete Mathematics (FA, SP, SU)
- Introductory study of sets, relations, logic, proofs, algorithms, counting methods, graph theory, trees, and Boolean alge-
bras. Prerequisite: MATH 1203 or ACT math score of 21 or above.

MATH2113 Survey of Mathematical Structures I (FA, SP, SU)
- Sets and logic, systems of numerations, number systems and operations, elementary number theory.

MATH2223 Survey of Mathematical Structures II (FA, SP, SU)
- Geometry and measurement, statistics and probability. Prerequisite: MATH 1203.

MATH2254 Calculus II (FA, SP, SU)
- Integral calculus of one variable and infinite series. Prerequisite: MATH 2254.

MATH2554H Honors Calculus I (FA, SP, SU)
- Topics in analytic geometry and calculus. Students may not receive credit for both MATH 2043 and MATH 2554.

MATH2554H Honors Calculus II (SP)
- Integral calculus of one variable and infinite series. Prerequisite: MATH 2554.

MATH2574 Honors Calculus III (FA, SP, SU)
- Topics in analytic geometry and calculus. Students may not receive credit for both MATH 2043 and MATH 2554.

MATH3083 Plane Trigonometry
- Topics in algebra and trigonometry. To be taken by students who expect to take a course in mathematics.
- Credit will be allowed for only one of MATH 1203 and MATH 1285.

MATH3113 Ordinary Differential Equations
- Topics in algebra and trigonometry. To be taken by students who expect to take a course in mathematics.
- Credit will be allowed for only one of MATH 1203 and MATH 1285.

MATH3113 Calculus I (FA, SP, SU)
- Credit will be allowed for only one of MATH 2043 and MATH 2554. Prerequisite: MATH 1203.

MATH3113H Honors Calculus I (FA, SP, SU)
- Credit will be allowed for only one of MATH 2043 and MATH 2554. Prerequisite: MATH 1203.

MATH3203 Theory of Numbers (IR)
- Prerequisite: MATH 2554 and junior standing.

MATH3233 Number Theory (FA, SP)
- Approximate solution of algebraic equations and differential equations. Applications of numerical methods and finite differ-
ences to differentiation and integration. Prerequisite: MATH 2574 and proficiency in high-level computer language.

MATH3340 Differential Equations and Laplace Transform (FA, SP, SU)
- First and second order ordinary differential equations, the Laplace transform, matrix systems of ordinary differential equations. Prerequisite: MATH 2574.

MATH3443 Complex Variable for Application (SP)
- Complex analysis, series, conformal mapping. Prerequisite: MATH 3404.

MATH3773 Foundations of Geometry I (FA)
- Axiomatic method; Euclidean geometry; non-Euclidean geometry.

MATH3993H Honors Colloquium (IR)
- Covers a spe-
topic or issue, offered as part of the honors program. Prerequisite: MATH 2554. May be repeated.

MATH3999H Honors Mathematics Course (1-6)
- Prerequisite: MATH 2554. May be repeated for 12 hours. Prerequisite: MATH 2554. May be repeated.

MATH400V Directed Readings (1-6)
- Co-requisite: MATH 2053.

MATH4103 Finite Dimensional Vector Spaces (IR)
- Linear functional, matrix representation of linear transforma-
tions, scalar product, dual space, orthogonal projection of linear trans-
formations. Prerequisite: MATH 3083.

MATH4113 Introduction to Abstract Algebra II (FA)
- Topics in abstract algebra including finite abelian groups, linear groups, factorization in commutative rings, quadratic field extensions, Gaussian integers, Wedderburn's theorem, and multilinear algebra. Prerequisite: MATH 3113.

MATH4113 Mathematical Modeling (FA)
- Mathematical modeling, existence and uniqueness of solutions. Prerequisite: MATH 3113. May be repeated.

MATH4203 Linear Programming and Game Theory (IR)

MATH4253 Advanced Calculus II (SP)
- The Riemann-Stieljes integral, uniform convergence of functions, Fourier series, implicit function theorems, composite functions, derivatives of higher order. Prerequisite: MATH 4513.

MATH4932 Mathematics Major Seminar (FA, SP, SU)
- 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 prominent role. The course also is a forum for sharing information about career opportu-
nities and preparation for employment.

MATH4932 Topics in Mathematics for Teachers (IR, FA, SP, SU)
- Topics from abstract and linear algebra of current interest to teachers. May be repeated. Prerequisite: graduate standing.

MATH5003 Topics in Analysis for Teachers (IR)
- Topics related to calculus of current interest to secondary school teachers. May be repeated. Prerequisite: graduate standing.

MATH504V Special Topics for Teachers (1-6)
- Prerequisite: MATH 504V. May be repeated.

MATH5050V Directed Readings (1-6)
- Prerequisite: MATH 3083.

MATH5033 Ordinary Differential Equations (FA)
- Existence, uniqueness, stability, qualitative behavior, and numerical solutions. Prerequisite: MATH 3404 and MATH 4513 and programming experience.

MATH5033 Functional Analysis (SP, Odd years)
- Linear vector spaces, 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 and the fundamental theorem of calculus L^P spaces, Holder and Minkowski inequalities, bounded linear functionals on the L^P spaces. Prerequisite: MATH 4523.

MATH5513 Theory of Functions of a Real Variable II (SP)
- Measure integration on abstract measure spaces, signed measures, Lebesque decomposition, Radon-Nikodym theorem, Lebesque decomposition, measures on algebras and their extensions, product measures, Funki'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, Mibius maps. Prerequisite: MATH 4513.

MATH5533 Theory of Functions of a Complex Variable II (SP)
- Riemann Mapping Theorem, analytic continuation, harmonic functions, entire functions. Prerequisite: MATH 5523.

MATH5703 Foundations of Topology (FA)
- Metric and general topological spaces, separation axioms, Urysohn's lemma, Tietze extension theorem, connectedness, compactness, and the Tychonoff theorem. Prerequisite: MATH 4513.

MATH5713 Algebraic Topology (FA)
- Homotopy, singular and relative homology, excision theorem, Mayer-Vietoris sequence, Betti numbers, and the Euler characteristic.

MATH599VV Directed Readings (1-6)
- Current research interests in topology. May be repeated.

MATH600V Master's Thesis (1-6)
- Prerequisite: graduate standing.

MATH610V Directed Research (1-6)
- Current research interests in topology. May be repeated.

MATH619V Topics in Algebra (1-6)
- Prerequisite: MATH 5513.

MATH659V Topics in Analysis (1-6)
- Current research interests in topology. May be repeated.

MATH700V Doctoral Dissertation (1-6)
- Current research interests in topology. May be repeated.
MBA5013 MBA Foundations I (SU) A focus on leader ship, teamwork, process improvement, and communica tion, in association with business content in the area of financial and economic analysis and production and opera tions management. Corequisite: MBA 5132.

MBA5112 Corporate Financial Management (FA) Financial analysis, planning and control; decision mak ing and modeling for financial managers; and financial poli cies for management. Corequisite: MBA 5132 and MBA 5222. Prerequisite: MBA 5122 and MBA 5212 and MBA 5232.

MBA5122 Accounting Decisions and Control (FA) Preparation and utilization of financial information for internal management purpose; planning and special deci sions, cost determination, performance evaluation, and con trols. Corequisite: MBA 5121 and MBA 5232.

MBA5132 Information Technology and Decision Making (FA) Utilization of information, quantitative tech niques, and computer in decision making and problem solving for managers. Corequisite: MBA 5112 and MBA 5222. Prerequisite: MBA 5122 and MBA 5212 and MBA 5232.

MBAD5212 Leading High Performance Organizations (FA, SP) Managing in a global workforce, including human resource issues, motivation, performance evaluation, quality concepts, transformational leadership, and selection/ development of personnel. Corequisite: MBA 5121 and MBA 5232.

MBAD5222 Managing Ideas, Products, and Services (FA, SP) Product management, market research, competitor communications, retailing and distrib ution, consumer behavior, and social and ethical implications of marketing. Corequisite: MBA 5112 and MBA 5132. Prerequisite: MBA 5121, and MBA 5212 and MBA 5232.

MBAD5232 Economics of Management and Strategy (FA, SP) Information economics and applied game theory. Corequisite: MBA 5212 and MBA 5212. MBA 5231.

MEEG1103 Introduction to Mechanical Engineering (FA, SP) Course Descriptions

MEEG1103 Introduction to Mechanical Engineering (FA, SP) Introduction of the mechanical engineering profession to 1st year students using mechanical engineering projects and experiments. Corequisite: MEEG 1100D and MEEG 1100L.

MEEG1100D Introduction to Mechanical Engineering Drill (FA, SP) Prerequisite: MEEG 1103 and MEEG 1100L.

MEEG1100L Introductory Mechanical Engineering Laboratory I (FA, SP) Corequisite:
Course Descriptions

2403. Equations, eigenvalues, eigenvectors, and coordinate transformations. Applications to mechanics and to calculus to mechanics. Prerequisite: MATH 2574.

2403. Air Pollution Abatement (SP) Design of air pollution abatement systems and equipment including scrubbers, bag filters, and electrostatic precipitators. Other topics discussed are air pollution regulations; permitting, dispersion modeling, and national air quality standards.

MEEG4443 Environmental Concepts and Design (IR) Selection of structural materials to provide an introduction to the environmental aspects of production design and illustrate the consequences of costs and waste pollution and air pollution abatement. The course will also define pollution prevention and waste minimization techniques and will introduce the student to the design for the environment (DfE) concept, life cycle analysis, and total quality environmental management techniques.

MEEG493K Honors Design Engineering Honors Research (FA, SP, SU) Independent research for mechanical engineering honors students. Prerequisite: student must be enrolled in Honors Program.

MEEG4919H Honors Special Projects (1-6) (FA, SP, SU)

MEEG5013 Advanced Mechanical Vibrations (IR) Continuation of MEEG 4013 with a more analytic approach. Included are techniques for modeling and understanding the vibratory behavior of multi-degree of freedom discrete systems, continuous systems, nonlinear systems, and random variables. Prerequisite: MEEG 4013.

MEEG5033 Advanced Mechanics of Materials I (IR) Combined stress, theories of failure, thick-walled cylinders, bending, torsion, buckling, plastic deformations, noncircumferential section plate, stresses, and strain energy analysis. Prerequisite: MEEG 2013 and MEEG 4703.

MEEG5103 Structural Dynamics (FA) The forced and random vibration response of complex structural systems are studied through the use of the finite element method. Computational aspects of these problems are discussed and digital computer applications undertaken. Prerequisite: MEEG 4013 and graduate standing.

MEEG5113 Modal Analysis Methods (SP) Fundamental concepts of both analytical and experimental modal analysis methods are examined and applied to the study of complex mechanical systems. Computational aspects of these problems are discussed, and digital computer applications undertaken with experimental verification. Prerequisite: MEEG 5103 and graduate standing.

MEEG5123 New Methods II (SP) Development and application of finite element (FE) methods used to solve transient and two-dimensional boundary value problems. Applications are taken from solid and fluid mechanics, heat transfer, and acoustics. Emphasis is placed on the FE methodology in order to make accessible the research literature and commercial software manuals, and to encourage responsible use and interpretation of FE analysis. May be repeated for 3 hours. Prerequisite: MEEG 4103 and graduate standing or consent.

MEEG5143 Advanced Machine Design (SU) Application of advanced topics such as probability theory, fracture mechanics, life management, design of experiments methods to the design and analysis of complex mechanical systems. Prerequisite: MEEG 4103 and graduate standing.

MEEG5213 Microprocessors in Mechanical Engineering II Real-time Control (IR) Feedback control system theory and design. C programming.

MEEG5263 Introduction to Micro Electro Mechanical Systems (FA) A study of mechanics and devices on the micro scale. Course topics will include: introduction to micromachining, fabrication of silicon surface and bulk micromachining, device packaging, device reliability, examples of micro sensors and actuators.

Recitation three hours per week.

MEEG5273 Electronic Packaging (FA) An introduction to electronic packaging from single chip to multichip including materials, design, mechanical design, package modeling and simulation, processing considerations, reliability, and testing. Credit cannot be earned for both MEEG 5273 and ELEG 5273. Prerequisite: (ELEG 3213 or ELEG 3913) and MATH 3404.

MEEG5303 Physical Metallurgy (IR) Physical and chemical properties of solids and the application of materials in commerce. Lecture 4 hours per week. Prerequisite: MATH 3404.

MEEG5313 Materials and Design (IR) Analysis, design, and testing of high strength and modulus materials, brittle materials, composites, and anisotropic materials. Effect of environment on design with particular emphasis on nuclear application. Prerequisite: MATH 3404 and graduate standing.

MEEG5393 Engineering Materials Topics (IR) Detailed study of selected materials engineering topics; topics will vary, but may include diffusion processes in solids, thermodynamics of solids, fracture of materials, failure analysis, advanced techniques in electron microscopy, analytical methods in materials science, advanced corrosion and engineering, etc. Prerequisite: graduate standing.

MEEG5403 Advanced Thermodynamics (SP) An in-depth review of classical thermodynamics including availability analysis, combustion, and equilibrium, with an introduction to quantum mechanics and statistical thermodynamics. Prerequisite: (MEEG 2403 and MATH 3404).

MEEG5423 Statistical Thermodynamics (IR) Concepts and techniques for describing high temperature and chemically reactive gases from a molecular point of view. Introductory kinetic theory, chemical thermodynamics, and statistical mechanics applied. Prerequisite: MEEG 2403 and MATH 2574.

MEEG5433 Combustion (FA, Even years) Introduction to combustion of solid, liquid, and gaseous fuels. Equilibrium and kinetics of hydrocarbon oxidation including linear and turbulent flames, premixed and non-premixed combustion processes, ignition, quenching, stability, emissions, diagnostics. Prerequisite: (MEEG 2403 and MATH 3404).

MEEG5453 Gas Dynamics (SU, Even years) Spectral analysis, radiant exchange in gray and non-gray enclosures, radiation, and multi-mode heat transfer. Prerequisite: MEEG 5453 or equivalent.

MEEG5513 Advanced Heat Transfer (FA) More in-depth study of topics covered in MEEG 413, Heat Transfer, and coverage of some additional topics. Prerequisite: MEEG 413 or CHEG 3413 or equivalent.

MEEG5463 Conduction and Convection Heat Transfer (SU, Odd years) Deeper, broader coverage of topics studied in MEEG 4413 and 5453. Steady and transient, one and multidimensional conduction with emphasis on solution methods, analytical and numerical. Forced and free convection in laminar and turbulent, internal and external flow. Porous media heat and mass transfer and/or mass diffusion. Prerequisite: MEEG 5453 or equivalent.

MEEG5473 Radiation Heat Transfer (SU, Even years) Spectral analysis, radiative exchange in gray and non-gray enclosures, gas radiation, and multi-mode heat transfer. Prerequisite: MEEG 5453 or equivalent.

MEEG5733 Numerical Methods I (SP) A basic survey of the characteristics of fluid flow under various conditions with examples. Begins with a derivation of the Navier-Stokes equations and an evaluation of the dimensionless groups found from these equations. Topics to be covered include viscous laminar and turbulent boundary layers, jets and wakes, Stokes flow, inviscid flows with and without free surfaces and turbulence. Prerequisite: MEEG 3503 and MATH 3404.

MEEG5513 Gas Dynamics (IR) Basic concepts of gas dynamics and gas properties applied to compressible flows including quasi one-dimensional isentropic flow in variable area ducts, normal shock waves, flow in ducts with friction, heating and cooling, oblique shock and expansion waves and shock tube flow. Prerequisite: MEEG 3503 and MATH 2574.

MEEG5643 Nuclear Heat Transport (IR) Heat generation and removal in nuclear power reactors, including water, gas, and liquid-metal cooled designs; boiling and 2-phase flow considerations. Prerequisite: MEEG 4603 and MEEG 3413 and MEEG 3503.

MEEG5733 Numerical Methods II (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; predominantly finite difference but also finite element tech- niques; computer applications. Prerequisite: MEEG 3703 or MATH 3353.

MEEG590V Research (1-6) (FA, SP, SU) Fundamental or applied research. Prerequisite: graduate
MEEP600V Master’s Thesis (1-6) (FA, SP, SU) Prerequisite: graduate standing.

MEEP6273 Advanced Electro Mechanical Systems (SP) An advanced study of microscale mechan- 
ics and devices. The course material will include in depth dis-
cussion of 3 to 4 current MEMS technology areas such as 
microfluidics, optical MEMS, and inertial sensors. Study will also 
be required to fabricate and test a functional MEMS device 
in a processing laboratory. Recitation one hour per 
week. Laboratory fours hours per week. Prerequisite: MEEG 
5263.

MEEP6273 Advanced Electronic Packaging (SP) An advanced treatment of electronic packaging 
concentrating on multichip modules. Topics covered include electrical 
design, thermomechanical design, packaging modeling 
and simulation, computer-aided engineering and design, 
procession limitations on MCM performance, reliability, test-
ing, and economic considerations. (Same as ELEG 6273) 
Prerequisite: ELEG 5273.

MEEP6800 Graduate Seminar (FA, SP) A periodic 
seminar devoted to mechanical engineering research topics. 
Appropriate grade to be "S".

MEEP710V Seminar in Dissertations (1-18) (FA, SP, SU) Prerequisite: candidacy.

(MEPH) MICROELECTRONICS-PHOTONICS

MEPH488V Microep REU Research (1-3) (SU) Special research topics associated with the Microelectronics-
Photonics Graduate Program’s REU (Research Experience for Undergraduate) summer program. Enrollment is limited to 
microEP REU participants, or by special permission of the 
microEP Director to UA undergraduates engaged in summer research with microEP faculty members.

MEPH488V Honor’s Microep REU Research (1-3) (SU) Special research topics associated with the 
Microelectronics-Photonics Graduate Program’s REU (Research Experience for Undergraduate) summer program. 
Enrollment is limited to microEP REU participants, or by 
special permission of the microEP Director to UA undergradu-
ates engaged in summer research with microEP faculty 
members.

MEPH5613 Introduction to Advanced 
Computation for Scientists and Engineers (SU) Introduction to computing model in science and engine-
ering and their advantages. Review of programming needed 
for modeling applications. Introduction to finite difference 
and finite element procedures to solve science and engineering 
problems. Importance of visualization and grid generation. 
Prerequisite: senior or graduate student in Science or 
Engineering.

MEPH5713 Advanced Nanomaterials Chemistry (FA) Most science and engineering graduates will one day face 
materials problems. Nanomaterials are evolving into the 
backbone of chemistry. Modern as well as future industry 
demands more and more scientists and engineers with 
materials chemistry knowledge. Learn how to under-
stand materials from the perspective of fundamental chemistry 
principles, be exposed to the frontiers of materials science 
and technology, and build up a picture of tomorrow’s materi-
als. Pre- or Corequisite: lab experience in physics, chemistry, 
or biology. Prerequisite: general chemistry.

MEPH5723 Science of Nanostructures (SP) This is a 
cross-disciplinary course that is focused on teaching 
nanoscience and engineering by studying surface science, 
the building and analysis of quantum-confined structures 
and related nano-manufacturing processes. Students will 
achieve an integrated knowledge of the concepts of surface 
science, quantum mechanics, nano processing and manipu-
ation, and techniques of materials research. Prerequisite: 
MEPH 5713.

MEPH5801 Graduate Seminar (FA, SP, SU) Papers 
presented by candidates for the Master of Science degree in 
Microelectronics-Photonics on leading edge topics in the 
field. Prerequisite: graduate standing.

MEPH5811 Operations Seminar (FA, SP, SU) Weekly 
seminar of Microelectronics-Photonics candidates for 
Doctor of Philosophy degree 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.

MEPH5821 Ethics for Scientists and Engineers (SU) This course will introduce methods useful in the prac-
tice of ethical decision making in the high technology aca-
demic and industrial environments. Emphasis will be placed 
on applying the methods discussed in the text to study and 
instructor past professional experiences. Prerequisite: gradu-
ate standing.

MEPH5831 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 the content of different sections of successful propos-
als; and it introduces the student to the legal responsibilities 
and ramifications of proposal management. At the end of 
the course, each student will have ready for submission at least 
one proposal to an appropriate funding agency for their 
research group. Prerequisite: graduate standing.

MEPH587V Special Topics in Microelectronics-
Photonics (1-3) (FA, SP, SU) Consideration of current 
microelectronic-photonic topics not covered in other courses. 
May be repeated for 9 hours.

MEPH589V Special Problems in Microelectronics-
Photonics (1-3) (FA, SP, SU) Opportunity for individual study of advanced subjects related to 
a graduate degree in Microelectronics-Photonics on current research in the field of 
microelectronics-photronics. Prerequisite: graduate stand-
ing.

MEPH6811 Operations Seminar (FA, SP, SU) Weekly 
seminar of Microelectronics-Photonics candidates for 
Doctor of Philosophy degree 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.

(MEST) MIDDLE EAST STUDIES

MEST2003 Islam in History, Practice, and Experience (FA, SP, SU) This course introduces Islam 
as a global religion and world civilization, including study of 
the Qu’ran, prophet Muhammad, ritual and community prac-
tices, metaphysics, mysticism, art, literature, and sacred 
critical history.

MEST2013 Gateways to the Middle East (FA, SP, SU) This course is designed to provide students with funda-
mental building blocks for understanding the contemporary 
Middle East/Asia. It introduces students to the diverse 
variety of disciplinary approaches to the study of the geo-
cultural region, including history, politics, arts and literature, 
religion and culture, social geography, and economics. 
MEST4003 Middle East Studies Colloquium (FA, SP, SU) An interdepartmental colloquium with an annual 
change in subject required of all students in the Middle East 
Studies program. May be repeated for 6 hours. Prerequisite: 
graduate standing.

MEST4003H Honors Middle East Studies Colloquium (FA, SP, SU)

(MGMT) MANAGEMENT

MGMT1033 Introduction to Business (FA, SP) Survey of organization principles, practices of business 
world; provides general view of field as a whole, serves as 
foundation for specialized courses.

MGMT3563 Management Concepts and Organizations (IR) Explores trends, concepts, and develop-
ments in management as they impact on organizational performance. Topics are selected by the Management Department faculty for 
each semester the course is offered. May be repeated. 
Prerequisite: completion of C/B, IR.

MGMT4203 Understanding Complex Organizations (FA) Focuses on the internal functioning of complex 
organizations and on the organization-environ-
ment interface. Students are exposed to a variety of perspec-
tives on the process of organizing, the differences among 
various forms of organizations, and the potential outcomes of 
organizing. Topics include organizational effectiveness, struc-
tures, environments, technologies and internal coordinating 
mechanisms, among others. Prerequisite: MGMT 3563.

MGMT4333 Nonprofit Organizational Management (IR) Environmental analysis, development of 
objectives for nonprofit and voluntary organizations, evalua-
tion and selection of alternative service methods, program 
development and implementation, and performance evalua-
tion. Case studies, practical examples of management prob-
lem solving, considerations of public policy, government, 
provisions, and other nonprofit organizations. Prerequisite: MGMT 3563.

MGMT4403 Total Quality Management (SP) The management of quality as an organization-wide process, 
beginning with strong leadership by top management. Also 
includes strategic quality planning, employee empowerment, 
customer orientation, and data-based decision making. 
Competencies in these and other quality dimensions are 
developed in this course. Prerequisite: MGMT 3563.

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 knowledge to small enterprise management. 
Prerequisite: MGMT 3933.

MGMT450V Independent Study (1-3) (FA, SP, SU) Permits students on individual basis to explore selected 
topics in management. May be repeated for 3 hours.

MGMT4533 Labor Legislation (IR) Governmental 
approach to solution of labor problems; analyzes labor laws 
and their administration. Contact the instructor for lab 
procedure requirements. Prerequisite: ECON 2013 and ECON 2023.

MGMT4583 International Management (SP) Develops an understanding of international business man-
agement and the cultural environment in which such busi-
ness occurs today. Students examine international business practices and 
learn about unique elements of business as it practiced in 
selected nations and diverse cultures. Prerequisite: MGMT 3563.
MGMT4833 Strategic Management (FA, SP, SU) This capstone course allows students to integrate the knowledge they have acquired about the functioning of complex organizations. Focuses on top management’s roles, responsibilities, and decision making in the processes of competitive environment analysis, strategy implementation, strategy control, international strategy management, ethical/socially responsible behavior. Prerequisite: senior status and completion of all junior level B.A. core courses.

MGMT4833H Honors Strategic Management (FA, SP, SU) This course is designed to provide students with the knowledge that they have acquired about the functioning of complex organizations. Focuses on top management’s roles, responsibilities, and decision making in the processes of competitive environment analysis, strategy implementation, strategy control, international strategy management, and ethical/socially responsible behavior. Prerequisite: senior status and completion of all junior level B.A. core courses.

MGMT4943 Organizational Staffing (FA) Indepth 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: MGMT 3743.

MGMT4953 Organizational Rewards and Compensation (SP) Develops an understanding of reward systems theory and its application to the design of compensation systems. Provides theoretical and legal background and practical applications for the use of reward systems in attracting, motivating, and retaining employees. Prerequisite: MGMT 3743.

MGMT4963H Honors Seminar I (FA) MGMT4973H Honors Seminar II (SP) Open to limited number of juniors in major. Classroom experience in decision making through solution of policy and management problems. Prerequisite: invitation.

MGMT4993 Entrepreneurship Practicum (FA, SP, SU) Focuses on 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, marketing, management, and in organizations. Prerequisite: admission to a Ph.D. program.

MGMT6213 Seminar in Research Methods (IR) Familiarizes students with the principles and techniques underlying research in management and organizations. Issues of basic philosophy of science and research methods are covered. Special attention given to the practical problems of research design, measurement, data collection, sampling, and interpretation. Prerequisite: admission to a Ph.D. program.

MGMT6223 Seminar in Management Topics (IR) Seminar on special management topics in management. Topics vary depending upon instructor. Prerequisite: admission to a Ph.D. program.

MGMT6233 Seminar in Human Resource Management (IR) Provides an overview of current issues in human resource management. Designed to familiarize students with the seminal research in human resource management, and to provide them with the conceptual and methodological tools necessary to work in the area. Prerequisite: admission to a Ph.D. program.

MGMT636V Special Problems in Management (1-6) (FA, SP) Individual reading and research. Prerequisite: MGMT700V Doctoral Dissertation (1-6) (FA, SP) Prerequisite: candidacy.

(MILS) ARMY ROTC

MILS1001 Basic Outdoor Skills and Leadership Introduction (FA) Incorporates various outdoor field craft skills involving both classroom and outdoor instruction. Subjects include: survival skills, basic map reading, water safety and first aid. Introduction to safe use of a rifle and basic marksmanship. Introduction to organization, values, and role of the Army. Classroom 1 hour per week. Lab 1 hour per week.

MILS1000L Basic Outdoor Skills and Leadership Introduction Lab (FA) Practical experience at leading and decision making is provided to all students. Labs include marksmanship, hiking, field leaders reaction course and varied outdoor activities. Corequisite: MILS 1001.

MILS1011 Rappelling, Outdoor Field Craft and Leadership Development (SP) Incorporates various outdoor field craft involving both classroom and outdoor instruction. Subjects include: rappelling, map reading, water safety and first aid. Introduction to small group leadership principles. Classroom 1 hour per week. Lab 1 hour per week.

MILS1010L Rappelling, Outdoor Field Craft and Leadership Laboratory (SP) Practical experience at leading and decision making is provided to all students. Labs include rappelling/ orienteering, hiking, field leaders reaction course, whitewater skills and varied outdoor activities. Corequisite: MILS 1011.

MILS1101 Basic Rifle 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 (FA, SP) Introduction to basic military survival skills and outdoor craft field. Subjects include cold/hot weather survival, water procuring methods, plant identification, expedient field shelters, 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. Course focus is on small unit leadership, team building and management skills. Includes an introduction to water procuring methods, plant identification, and equipment necessary for the Army’s training and maintenance management system. Lecture 3 hours, laboratory 3 hours, physical training 3 hours per week. Corequisites: MILS 2001L and MILS 2001 or approval of Professor of Military Science.

MILS2002L Leadership Development I Laboratory (SP) Corequisite: MILS 2001L.

MILS2012 Leadership Development II (SP) Continuation of leadership skills presented in MILS 2002. Course focus is on decision making process, time management and interpersonal skills. Includes an introduction to military writing and basic tactics. Cadets continue training in land navigation, first aid, and outdoor craft field. Classroom 2 hours per week. Lab 1 hour per week. Corequisite: MILS 2001L and MILS 1001 or approval of Professor of Military Science.

MILS2010L Leadership Development II Laboratory (SP) Corequisite: MILS 2010L.

MILS2011 Advanced Defensive Rifle Marksmanship (SP) Course to teach students the 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. Students learn advanced rifle tactics and demonstrate their leadership potential using this medium. Students are required to lead in drill and ceremony, physical training, and tactical infinity situations. The training is intended to prepare the student for the ROTC Advanced Camp experienced 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: MILS 3000L.

MILS2011L Leadership Principles I (SP) Provides an overview of major issues in management and leadership. Designed to familiarize students with the seminal research in human resource management, and to provide them with the conceptual and methodological tools necessary to work in the area. Prerequisite: admission to a Ph.D. program.


MILS2012L Leadership Development II Laboratory (SP) Corequisite: MILS 2012L.

MILS2021 LDR 5000 Advanced Rifle Marksmanship (IR) This capstone course allows students to integrate the knowledge they have acquired about, and managing a business. Topics covered include accounting, economics, finance, information systems, law, logistics, management, and in organizations. Prerequisite: admission to a Ph.D. program.

MILS2022 Seminar in Management Topics (IR) Seminar on special management topics in management. Topics vary depending upon instructor. Prerequisite: admission to a Ph.D. program.

MILS2023 Seminar in Human Resource Management (IR) Provides an overview of current issues in human resource management. Designed to familiarize students with the seminal research in human resource management, and to provide them with the conceptual and methodological tools necessary to work in the area. Prerequisite: admission to a Ph.D. program.

MILS2025 Special Problems in Management (1-6) (FA, SP) Individual reading and research. Prerequisite: MGMT700V Doctoral Dissertation (1-6) (FA, SP) Prerequisite: candidacy.

MILS2030 LDR 5004 Advanced Leadership I (FA) Development of managerial and leadership abilities, maximizing performanc oriented hands-on training. Training is intended to prepare the student for the ROTC Advanced Camp experienced 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: MILS 3000L.

MILS2031L Leadership Principles I (SP) Provides an overview of major issues in management and leadership. Designed to familiarize students with the seminal research in human resource management, and to provide them with the conceptual and methodological tools necessary to work in the area. Prerequisite: admission to a Ph.D. program.

MILS2032L Leadership Principles II (SP) Corequisite: MILS 2032L.

MILS2033L Leadership Principles III (SP) Corequisite: MILS 2033L.

MILS2034L Leadership Principles IV (SP) Corequisite: MILS 2034L.

MILS2035L Leadership Principles V (SP) Corequisite: MILS 2035L.

MILS2036L Leadership Principles VI (SP) Corequisite: MILS 2036L.
MKTG3433 Principles of Marketing (FA, SP, SU) (Formerly MKTT 3433, First offered Spring 2004) Broad overview of the marketing of industrial products, emphasizing the similarities and differences of consumer and industrial products. Marketing research, marketing policies, channels of distribution, product management, product pricing and promotion as they affect industrial products are examined. Prerequisite: MKTG 4833, First offered Spring 2004
MKTG4833 International Marketing (IR) (Formerly MKTT 4833, First offered Spring 2004) Studies overseas environmental forces; their impact on international marketing decision makers; case analysis of decision theories; and problem solving in the international setting. Prerequisite: MKTG 3433.
MKTG4933 Retail Marketing Strategy (FA, SP, SU) (Formerly MKTT 4933, First offered Spring 2004) Concentrates on planning to meet the objectives and satisfy the retail marketing concept. Attendance is devoted to the retail strategy process, institutions of retailing, consumer behavior, retailing research, selection of a store location, the retail organizational structure, merchandise planning and management, communication with the customer, pricing, planning for service retailers, integrating and controlling the retailing strategy, and retailing trends. Prerequisite: MKTG 3433.
MKTG4943 Retail Buying and Merchandise Control (FA, SP, SU) (Formerly MKTT 4943, First offered Spring 2004) Duties, problems of store buyer, merchandise manager, demand forecasting, sources of buying information, analysis of records as aids to merchandise control; evaluation of resources; buying policies and practices; buyer as department manager; budgeting problems. Prerequisite: MKTG 3433.
MKTG5313 International Marketing (IR) (Formerly MKTT 5313, First offered Spring 2004) Studies overseas environmental forces; their impact on international marketing decision making; stresses marketing problem solving in the international setting.
MKTG5333 Retailing Strategy and Processes (SU) (Formerly MKTT 5333, First offered Spring 2004) Strategic planning and operation of retailing organizations. Investigation of the various types of retailing with emphasis on both the strategic and functional aspects in retail processes. Prerequisite: MKTG 3433.
MKTG5433 Consumer and Market Research (SP) (Formerly MKTT 5433, First offered Spring 2004) Modern marketing research techniques and their applications to problems related to marketing strategy, pricing, forecasting, and policy determination. Special attention is given to consumer research, behavioral concepts, and the measurement for marketing purposes. Prerequisite: ISYS 5203.
MKTG5533 Strategic Category Management (SU) (Formerly MKTT 5533, First offered Spring 2004) Strategic planning and management of brands and product categories from both manufacturing and retailing perspectives. Focus is on the product brand development, pricing, distribution, and promotion of brands and their strategic and functional roles in the product mix.
MKTG5553 Buyer Behavior (FA) (Formerly MKTT 5553, First offered Spring 2004) Behavioral science concepts, applied research relating to consumer and executive purchasing processes, and buyer behavior research, conceptual integration, relevance to marketing management. Prerequisite: MKTG 5103.
MKTG630V Special Problems in Marketing (1-6) (IR) (Formerly MKTT 630V, First offered Spring 2004) Individual research problems.
MKTG6413 Special Topics in Marketing (FA) (Formerly MKTT 6413, First offered Spring 2004) Seminar in special topics in marketing. Topics vary depending upon the instructor.
MKTG6423 Seminar in Causal Marketing (IR) (Formerly MKTT 6423, First offered Spring 2004) Extensive survey and critical review of the history of marketing thought and contemporary schools of thought in marketing discipline. In-depth research, review, synthesis, and a research proposal will be required in a selected topic from the perspectives of advancing marketing theory. Prerequisite: MKTG 5103 and MKTG 5303.
MKTG6443 Seminar in Marketing Theory (SP) (Formerly MKTT 6443, First offered Spring 2004) Comprehensive review of literature illustrative of marketing studies. Focuses upon theoretical foundations of research design, methodology, and analysis as well as interpretation of univariate, bivariate, and multivariate data in marketing theory exploration.
MKTG6445 Seminar in Transportation and Business Logistics (IR) (Formerly MKTT 6445, First offered Spring 2004) Underlying theories and problems related to the development of logistical systems in the U.S. Attention focused on transport economics, the role of government in providing transportation facilities, and managerial issues related to integrating transportation, inventory control, warehousing, customer service levels, and facility location.
MKTG6453 Seminar in Strategic Marketing Management (IR) (Formerly MKTT 6453, First offered Spring 2004) Comprehensive survey of literature of strategic marketing management area. Focuses on critical evaluation of conceptual frameworks, research methodologies, and interdisciplinary integrations. Requires indepth research, synthesis, integration, and conceptualization resulting in a research paper aimed at advancing the field of strategic marketing management. Prerequisite: MKTG 4933
MKTG700V Doctoral Dissertation (1-18) (FA, SP) (Formerly MKTT 700) First offered Spring 2004) Prerequisite: candidacy.
including breathing, vocal clarity, and pronunciation of conso-
nants.

MUAP2111 Music Technology I (FA, SP, SU) Students will develop skills in transcribing music using music notation software and learn about sound reinforcement sys-
tems. Prerequisite: MUAP 1231.

MUAP2121 Music Technology II (FA, SP, SU) 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: MUAP 1231.

MUAP2141 Class Instruction in Oboe, Bassoon, and Saxophone (FA, SP) The elementary study of oboe, bassoon, and saxophone. Class instruction designed to familiarize the student with basic playing skills and teach-
ing techniques of the instruments. Prerequisite: MUAP 1231 or MUAP 1341.

MUAP2231 Piano Class for Music Majors (FA) A continuation of MUAP 1231. Two meetings per week. Prerequisite: MUAP 1231.

MUAP2231 Piano Class for Music Majors IV (SP) A continuation of MUAP 2231. Two meetings per week. Prerequisite: MUAP 2221.

MUAP4371 Teaching the High School Percussionist (SP, Odd years) A study of solo literature and band ensemble literature appropriate for the high school percussionist. Emphasis on advanced snare drum and marimba lit., timpani and the broad range of per-
cussionist instruments. Includes study of high school band, orchestra and perc. ensemble scores. Prerequisite: MUAP 1371.

(MUAP) MUSIC PRIVATE

MUAP1001 Applied Voice/Instrument-Secondary Level (FA, SP, SU) Private study at the secondary level. May be repeated.

MUAP110V Applied Voice/Instrument (1-4) (FA, SP, SU) Private study of the major instrument. May be repeated.

MUAP3001 Applied Voice/Instrument-Secondary Level (FA, SP, SU) Private study at the secondary level. May be repeated. Prerequisite: MUAP 1001.

MUAP310V Applied Voice/Instrument (1-4) (FA, SP, SU) Private study of the major instrument. May be repeated. Prerequisite: MUAP 110V.

MUAP310VH Honors Applied Voice/Instrument (1-18) (FA, SP, SU) Private study of the major instrument. May be repeated.

MUAP3201 Recital I (FA, SP, SU) Preparation and performance of a public recital of a minimum of 25 minutes of music. May be repeated.

MUAP3201H Honors Applied Recital I (FA, SP, SU) Preparation and performance of a public recital of a minimum of 5 minutes of music. May be repeated.

Corequisite: MUAP 310H.

MUAP4201 Recital II (FA, SP, SU) Preparation and performance of a public recital of 5 minutes of music. May be repeated. Prerequisite: MUAP 3201.

MUAP4201H Honors Applied Recital II (FA, SP, SU) Preparation and performance of a public recital of a minimum of 5 minutes of music. May be repeated.

Corequisite: MUAP 310H.

MUAP5001 Applied Voice/Instrument-Secondary Level (FA, SP, SU) Private study at the graduate second-
ary level. May be repeated. Prerequisite: MUAP 310 or equivalent.

MUAP510V Applied Voice/Instrument (1-5) (FA, SP, SU) Private study at the graduate level. May be repeat-
ed. Prerequisite: MUAP 310 or equivalent.

MUAP5201 Graduate Recital I (FA, SP, SU) Preparation and performance of a public recital of a minimum of 50 minutes of music. May be repeated.

MUAP5211 Graduate Recital II (FA, SP, SU) Preparation and performance of a public recital of a minimum of 50 minutes of music. May be repeated.

(MUED) MUSIC EDUCATION

MUED2012 Introduction to Music Education (FA, SP) A course designed to provide early experiences for the prospective music education majors. Students will become familiar with professional trends, music classroom organizational and management issues, and principles of effective education.

Emphases will include basic psychological and philosophical orientation, as well as an understanding of the role of music in the elementary classroom. Required of all prospective Music Education majors.

MUED3021 Supervised Practicum in Teaching Musical Skills (FA, SP, SU) Provides for supervised teaching experiences for use in the elementary classroom. Required of all prospective Music Education Majors. May be repeated.

MUED3031 Seminar for Professional Entry into Music Education (FA, SP) An introduction to the roles and responsibilities of a music educator. Includes professional ethics and classroom management, evaluation and grading, and application for employment.

MUED4273 Methods for Teaching String Instruments (FA) Professional training for an in-depth understanding of the tools and materials for teaching string instruction. Prerequisite: MUAP 1231.

MUED4275 Musicianship I (1-4) (FA, SP, SU) Private study of the major instrument. May be repeated. Prerequisite: MUAP 1231.

MUED4275V Student Teaching: Music Education Internship (1-4) (FA, SP, SU) A minimum of 5 hours and a maxi-
mum of ten weeks will be spent in an off-campus school, where the student will teach under supervision in the ele-
mentary 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: MUED 452. Prerequisite: Bachor of Music in Music Education.

MUED452V Student Teaching: Secondary Music (4-8) (FA, SP, SU) A minimum of five weeks and a maxi-
mum of ten weeks will be spent in an off-campus school, where the student will teach under supervision in the ele-
mentary 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: MUED 452. Prerequisite: Bachelor of Music in Music Education.

MUED477V Special Topics in Music Education (1-
4) (IR) Subject matter not covered in other sources. With permission, may be repeated for credit if topics are different. May be repeated.

MUED5513 Seminar: Resources in Music Education (FA, SP, SU) Study of the analytical and writ-
ing skills necessary for academic research in music education. Each student identifies one problem specific to music education, finds and reviews related literature and sources, develops a comprehensive bibliography, and writes a paper which synthesizes the research. Open to graduate students and undergraduates in honors in music education.

MUED5653 Seminar: Issues in Music Education (FA, SP, SU) A seminar exploring the relationships between the profession of teaching music and selected views about learning theories, teaching methods, philosophy, psy-
chology, and other selected topics relevant to contemporary music education.

MUED5733 Music Education in the Elementary School (FA, SP, SU) Concepts of elementary music edu-
cation; methods, materials, curriculum design, and supervi-
sion in the elementary music classroom. Prerequisite: MUAP 1231 & MUAP 1301. May be repeated. Prerequisite for inclusion in public elementary classroom. MUAP 1301 may also count toward this requirement.

MUED3813 Music for Elementary Education Majors (FA, SP, SU) Develops music knowledge, skills, and pedagogical content knowledge for use in the elementary class-
room. Lecture 3 hours, keyboard laboratory 1 hour per week. Prerequisite: MUAP 1161.

MUED3810L Music for Elementary Education Lab (FA, SP, SU) Provides for supervised teaching experiences for use in the elementary classroom. May be repeated.

MUED3833 Music Education in the Elementary School (FA, SP, SU) Concepts of elementary music edu-
cation; methods, materials, curriculum design, and supervi-
sion in the elementary music classroom. Prerequisite: MUAP 1231 & MUAP 1301 and any of three of those listed for “band” concentration. Prerequisites for vocal (elementary) emphasis: MUAP 1221 & MUAP 1301 and any four of those listed for “string” concentration.

MUED3821 Honors Applied Recital (FA, SP, SU) Preparation and performance of a public recital of a minimum of 50 minutes of music. May be repeated.

MUED3821H Honors Recital I (FA, SP, SU) Preparation and performance of a public recital of a minimum of 5 minutes of music. May be repeated.

Corequisite: MUAP 310H.

MUED4201 Recital II (FA, SP, SU) Preparation and performance of a public recital of 5 minutes of music. May be repeated. Prerequisite: MUAP 3201.

MUED4201H Honors Recital II (FA, SP, SU) Preparation and performance of a public recital of a minimum of 5 minutes of music. May be repeated.

Corequisite: MUAP 310H.

MUED5001 Applied Voice/Instrument-Secondary Level (FA, SP, SU) Private study at the graduate second-
ary level. May be repeated. Prerequisite: MUAP 310 or equivalent.

MUED510V Applied Voice/Instrument (1-5) (FA, SP, SU) Private study at the graduate level. May be repeat-
ed. Prerequisite: MUAP 310 or equivalent.

MUED5201 Graduate Recital I (FA, SP, SU) Preparation and performance of a public recital of a minimum of 50 minutes of music. May be repeated.

MUED5211 Graduate Recital II (FA, SP, SU) Preparation and performance of a public recital of a minimum of 50 minutes of music. May be repeated.

(MUEN) MUSIC ENSEMBLE

MUEN3341 Collegium Musicum (FA, SP) Performance of early music various combinations of instru-
ments and/or voices. Two hours rehearsal weekly. May be repeated.

MUEN3401 Opera Theatre (FA, SP) Study of opera through performances of scenes, chamber and major operat-
ic production. Admission with director's approval. May be repeated.

MUEN3411 Concert Choir (FA, SP, SU) Three hours of rehearsal weekly, with extra rehearsals at the director's discretion. Admission with director's approval. No audition required prior to registration. May be repeated.

MUEN3421 Inspirational Singers (FA, SP) Performance of African-American literature with particular emphasis on Negro Spirituals and traditional/contemporary gospel music. No audition required to registration. Rehearsal 3 hours per week. May be repeated.

MUEN3431 Symphony Orchestra (FA, SP, SU) Rehearsal 3 hours per week with extra rehearsals at direc-
tor's discretion. Admission with director's approval. May be repeated.

MUEN3430L Symphony Orchestra Lab (FA, SP, SU) Functions as part of major's performance requirements. May be repeated.

MUEN3441 Marching Band (FA) Rehearsal 8 hours per week. Admission with director's approval. May be repeat-
ed.

MUEN3451 Schola Cantorum (FA, SP) Vocal ensemble limited to the more experienced singers. Rehearsal 5 hours per week. Admission with director's approval. May be repeated. Corequisite: MUEN 3441.

MUEN3461 Wind Symphony (FA) Rehearsal 3 to 5 hours per week. Admission by audition and approval of the conductor. May be repeated. Corequisite: MUEN 3440.

MUEN3460L Wind Symphony Lab (FA) May be repeated. Corequisite: MUEN 3461.

MUEN3471 Jazz Performance Lab (FA, SP) Training in the various styles of jazz and popular music. Rehearsal 3 hours per week. Admission by audition. May be repeated.

MUEN3481 Concert Band (SP) Rehearsal 3 hours per week. Admission by audition and approval of the conduc-
tor. May be repeated.

MUEN3501 Chamber Music (FA, SP, SU)
Course Descriptions

University of Arkansas, Fayetteville

Performance of small ensemble music for any combination of instruments and/or voice. Rehearsal 3 hours per week. May be repeated.

MUEN3511 Symphony Band (SP) Rehearsal 3 hours per week. Admission by audition and approval of the conductor. May be repeated.

MUEN3521 Woodwind Quintet (FA, SP) Study and performance of music for woodwind quintet. Weekly coaching will emphasize intonation, blend, stylistic awareness, and ensemble precision. Repertorie ranges from the 18th to the 20th centuries. 3 hours of rehearsals weekly. May be repeated.

MUEN3531 Brass Ensemble (FA, SP) Study and performance of chamber music for brass instruments. Rehearsal 2 hours per week. May be repeated.

MUEN3541 Accompanying (FA, SP) Piano accompanying of vocal and instrumental soloists. Rehearsal 2 hours per week. May be repeated. Prerequisite: MUAP 110. MUEN3551 Percussion Ensemble (SP, SU) Study and performance of ensemble music for multiple percussion instruments. Rehearsal 2 hours per week. May be repeated.

MUEN3581 Vocal Ensemble (FA, SP, SU) Study and performance of vocal chamber music. Rehearsal 2 hours per week for 1 hour of credit. May be repeated.

MUEN3591 Chamber Orchestra (FA, SP, SU) Performance of orchestral music for a small group of instrument as opposed to large symphonic works. Rehearsal 3 hours per week. May be repeated. Prerequisite: concurrent enrollment in MUEN 3431 and MUEN 5431. MUEN3571 Flute Ensemble (FA, SP) Study and performance of music for multiple clarinets, including trios, quartets, quintets, and clarinet choir. Rehearsal 2 hours per week. May be repeated.

MUEN3561 Clarinet Ensemble (FA, SP) Study and performance of music for multiple clarinets, including trios, quartets, quintets, and clarinet choir. Rehearsal 2 hours per week. May be repeated.

MUEN3549 Saxophone Ensemble (FA, SP) Study and performance of music for multiple saxophones, including trios, quartets, quintets, and saxophone choir. Rehearsal 2 hours per week. May be repeated.

MUEN3512 Double Reed Ensemble (FA, SP) 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.

MUEN3571 Trumpet Ensemble (FA, SP) Study and performance of music for multiple trumpets, including trios, quartets, quintets, and trumpet choir. Rehearsal 2 hours per week. May be repeated.

MUEN3571 Trombone Ensemble (FA, SP) Study and performance of music for multiple trombones, including trios, quartets, and trombone choir. Rehearsal 2 hours per week. May be repeated.

MUEN3540 Tuba Ensemble (FA, SP) Study and performance of music for multiple tubas and euphonium, including trios, quartets, and tuba choir. Rehearsal 2 hours per week. May be repeated.

MUEN3511 Concert Choir (FA, SU, SP) Rehearsal 3 hours per week with extra rehearsals at the director's discretion. Admission with director's approval. May be repeated.

MUEN3541 Opera Theatre (FA, SP) Study of opera through performances of scenes, chamber and major operatic production. Admission with director's approval. May be repeated.

MUEN3541 Marching Band (FA) Rehearsal 8 hours per week. Admission with director's approval. May be repeated.

MUEN3541 Marching Band (FA) Rehearsal 3 hours per week with extra rehearsals at the director's discretion. Admission with director's approval. May be repeated. Prerequisite: MUAP 210.

MUEN3542 Inspirational Singers (FA, SP) Performance of African-American literature with particular emphasis on Negro Spirituals and traditional/contemporary gospel music. No audition required to registration. Rehearsal 3 hours per week. May be repeated.

MUEN3541 Flute Ensemble (FA, SP, SU) Study and performance of music for multiple flutes including trios, quartets, quintets, and brass choir. One hour of rehearsal weekly. May be repeated.

MUEN3541 Schola Cantorum (FA, SP) Vocal ensemble limited to the more experienced singers. Rehearsal 5 hours per week. Admission by audition and approval of the conductor. May be repeated. Prerequisite: one year of MUEN 3411.

MUEN3541 Wind Symphony (FA, SP) Rehearsal 3 to 5 hours per week. Admission by audition and approval of the conductor. May be repeated. Corequisite: MUEN 4540.

MUEN3540 Wind Symphony Laboratory (FA) May be repeated. Corequisite: MUEN 5461.

MUEN3547J Jazz Performance Laboratory (FA, SP) Training in the ensemble performance of jazz and popular music. Rehearsal 3 hours per week. Admission by audition. May be repeated.

MUEN3551 Concert Band (SP) Rehearsal 3 hours per week. Admission by audition and approval of the conductor. May be repeated.

MUEN3551 Symphony Band (SP) Rehearsal 3 hours per week. Admission by audition and approval of the conductor. May be repeated.

MUEN3552 Woodwind Quintet (FA, SP) Study and performance of music for woodwind quintet. Weekly coaching will emphasize intonation, blend, stylistic awareness, and ensemble precision. Repertorie ranges from the 18th to the 20th centuries. 3 hours of rehearsals weekly. May be repeated.

MUEN3561 Accompanying (FA, SP) Piano accompanying of vocal and instrumental soloists. Rehearsal 2 hours per week. May be repeated. Prerequisite: concurrent enrollment in MUEN 3431 and MUEN 5431.

MUEN3551 Percussion Ensemble (SP, SU) Study and performance of music for multiple percussion instruments. Rehearsal 2 hours per week. May be repeated.

MUEN3551 String Ensemble (FA, SP) Study and performance of music for multiple string ensembles, including trios, quartets, quintets, and string choir. Rehearsal 2 hours per week. May be repeated.

MUEN3561 Wind Ensemble (FA, SP) Study and performance of music for multiple wind ensembles, including trios, quartets, quintets, and wind choir. Rehearsal 2 hours per week. May be repeated.

MUEN3561 Flute Ensemble (FA, SP) Study and performance of music for multiple flutes, including trios, quartets, quintets, and clarinet choir. Rehearsal 2 hours per week. May be repeated.

MUEN3571 Flute Ensemble (FA, SP) Study and performance of music for multiple flutes, including trios, quartets, quintets, and clarinet choir. Rehearsal 2 hours per week. May be repeated.

MUEN3571 Trombone Ensemble (FA, SP) Study and performance of music for multiple trombones, including trios, quartets, and trombone choir. Rehearsal 2 hours per week. May be repeated.

MUEN3571 Tuba Ensemble (FA, SP) Study and performance of music for multiple tubas and euphonium, including trios, quartets, and tuba choir. Rehearsal 2 hours per week. May be repeated.

MUEN3571 University Bassoon Ensemble (FA, SP) Study and performance of music for multiple bassoons and contrabassoon, including trios, quartets, and bassoon choir. One hour of rehearsal weekly. May be repeated.

MUHS3511 Jr. Honors Concert Choir (SP, SU) Study and performance of choral literature for student choir. Rehearsal 2 hours per week. May be repeated. Prerequisite: MUHS 2201.

MUHS3513 History of Music from 1800 to Present (FA) Survey of the history of music in western culture from 1800 to present. Lecture 3 hours, listening/quiz laboratory 1 hour per week. Prerequisite: WCIV 1003 and WCIV 1013 and MLT 1003.

MUHS3513 History of Music from 1800 to Present (FA) Survey of the history of music in western culture from 1800 to present. Lecture 3 hours, listening/quiz laboratory 1 hour per week. Prerequisite: WCIV 1003 and WCIV 1013 and MLT 1003.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.

MUHS398BV Honors Independent Studies (1-2) (FA, SP, SU) Independent projects in music history and literature. One credit hour per semester. Open to undergraduates in honors or consent of the instructor. May be repeated. Prerequisite: MUHS 3722.
MUPD5800V Master’s Thesis (1-6) (FA, SP, SU) 

MUPD5801 Lecture-Recital (1-6) (IR) 

MUPD589V Special Workshop in Music (1-6) (FA, SP, SU) 

MUPD599V Research Project (1-6) 

MUSY5113 Proseminar: Ethnomusicology (FA, SP) 

MUSY5123 Proseminar: Musical Notations, Transmutation, and Analysis (SP, SU) 

MUSY5223 Seminar: Advanced Trumpet (SP) 

MUSY5313 Seminar: Topics in Asian and Middle Eastern Music \( \text{(FA, SP)} \) 

MUSY5323 Seminar: Topics in Asian and Middle Eastern Poetry and Music \( \text{(IR)} \) 

MUSY5343 Seminar: Special Topics in Traditional Musics and Dance of Europe and the Americas \( \text{(IR)} \) 

MUSY5353 Seminar: Topics in Musical Notations, Transmutation, and Analysis \( \text{(IR)} \) 

MUSY5363 Seminar: Topics in Systematic Musicology \( \text{(IR)} \) 

MUSY5371 Early Asian Music Performance Workshop \( \text{(IR)} \) 

MUSY5383 Ethnomusicology Seminar \( \text{(IR)} \) 

MUSY5391 Ethnomusicology Performance Studies \( \text{(IR)} \) 

MUSY5413 Seminar: Cross-cultural Performance Practices \( \text{(SP)} \) 

MUSY5423 Seminar: History of Jazz \( \text{(FA, SP)} \) 

MUSY600V Ethnomusicology Thesis (1-6) (FA, SP, SU) 

MUSY6103 Basic Musicianship (SP) 

MUSY6161 Aural Perception I \( \text{(FA, SP, SU)} \) 

MUSY6261 Aural Perception II \( \text{(FA, SP, SU)} \) 

MUSY6360V Advanced Studies in Ethnomusicology \( \text{(IR)} \) 

MUSY6363 Advanced Studies in Computer-Aided Asian Musicology \( \text{(IR)} \) 

MUSY6371 Advanced Studies in Conducting \( \text{(IR)} \) 

MUSY640V Harpsichord Laboratory \( \text{(IR)} \) 

MUSY664V Honors Composition II \( \text{(FA, SP, SU)} \) 

MUSY666V Honors Composition I \( \text{(FA, SP, SU)} \) 

MUSY6671 Independent Study, Others \( \text{(FA, SP, SU)} \) 

MUSY6675 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6676 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6677 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6678 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6679 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6680 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6681 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6682 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6683 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6684 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6685 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6686 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6687 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6688 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6689 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6690 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6691 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6692 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6693 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6694 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6695 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6696 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6697 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6698 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6699 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6700 Independent Study \( \text{(FA, SP, SU)} \) 

MUSY6701 Independent Study \( \text{(FA, SP, SU)} \)
Clinical judgment to promote optimal health among adults experiencing illness and/or undergoing surgery. This is a Level II course. Corequisite: NURS 3634. Prerequisite: completion of Level I courses.

NURS3742 Nursing Concepts: Mental Health and Illness (SP) Presents the basic concepts and theories of mental health and illness. Examines various therapeutic modalities in the care of clients experiencing mental health or psychosocial disorders. This is a Level II course. Corequisite: NURS 3755. Prerequisite: completion of Level II courses.

NURS3752 Professional Role Implementation IV: Caregiver (SP) Students work with clients who have mental health problems, observe group process in therapy sessions, and develop interpersonal communication skills. Students apply research-based knowledge in assisting assigned clients meet mental and other health care needs. This is a Level II course. Corequisite: NURS 3742. Prerequisite: completion of Level II courses.

NURS3842 Research in Nursing (SP) Introduction to the research process through a comparative analysis of selected studies exemplifying various theoretical, methodological, and methodological approaches. Students acquire the basic competencies to critically read, evaluate, and interpret nursing research studies for use in professional nursing practice. This is a Level II course.

NURS3841L Professional Nursing Skills: Advanced (SP) Introduction to advanced nursing skills. Students will apply advanced skills in laboratory and clinical settings. This is a Level II course. Prerequisite: completion of Level I courses.

NURS4154 Nursing Concepts: Children and Family (FA) This course provides theory and research-based knowledge regarding holistic nursing care of children and their families. Principles of health and illness, and the role of the nurse in education for expanding families are integral to this course. This is a Level II course. Corequisite: NURS 4164. Prerequisite: completion of Level I courses.

NURS4164 Professional Role Implementation V: Teacher (SP) Clinical and laboratory experience for application of research-based knowledge and skills in the nursing care of children and families. Emphasis is on teaching role of the nurse in the classroom. This is a Level II course. Corequisite: NURS 4145. Prerequisite: NURS 3841L and completion of Level I courses.

NURS4242 Management in Nursing (FA) Introduces principles of management and the professional nurse's role in the healthcare system. Considers the perspectives of management, organization, and change theory. Includes strategies for managing healthcare teams and organizations. This is a Level II course. Corequisite: NURS 4273. Prerequisite: completion of Level I courses.

NURS4263 Nursing Concepts: Older Adult Health and Illness (FA) This course focuses on gerontologic theories, concepts, and principles as they relate to nursing care of older adults. Students explore socio-cultural context of geriatric nursing, professional roles, and current issues common to health and illness. This is a Level II course. Corequisite: NURS 4154. Prerequisite: completion of Level I courses.
are explored in a community health context. This is a Level III course. Corequisite: NURS 4613. Prerequisite: completion of Level I and II courses.

NURS4613 Professional Role Implementation VIII: Role Synthesis (SP) Application of community health concepts and the nursing process to promote community health by identifying needs in a variety of primary care settings. This is a Level III course. Corequisite: NURS 4603. Prerequisite: completion of Level I and II courses.

NURS491V Independent Study in Nursing (SP) Focuses on integrating the nursing caregiver, teacher and manager roles. Preparates students to analyze practice issues, trends and future demands. Explores the roles of baccalaureate prepared professional nurses and facilitates students to incorporate those roles as they enter professional practice. This is a Level III course. Prerequisite: completion of Level I and II courses - taken last semester.

NURS5003 Role Development of the Advanced Practice Clinical Nurse Specialist (FA, SP) The study of role development of the Advanced Practice Nurse with specific emphasis on the role of the Clinical Nurse Specialist (CNS). Concepts include role development, interdisciplinary communication and collaborative strategies, patient advocacy and serving as change agent for role implementation.

NURS5003 Role Development of the Advanced Practice Clinical Nurse Specialist (FA, SP) This study of role development of the Advanced Practice Nurse with specific emphasis on the role of the Clinical Nurse Specialist (CNS). Concepts include role development, interdisciplinary communication and collaborative strategies, patient advocacy and serving as change agent for role implementation.

NURS5053 Foundations of Nursing Education (FA) The course utilizes the critical reasoning process to examine the nature of knowledge. Emphasis is placed on concept analysis and the evaluation of nursing theories. Identification of the links between theory and empirical indicators is examined. The clinical relevance of mid-range and strong research is reviewed.

NURS5103 Advanced Nursing Research I (FA) This course focuses on scientific approaches to the knowledge, logic, and techniques of the research process. Reciprocal relationships among theory, research, ethics, and evidence based nursing practice are emphasized. Pre-requisite or Corequisite: NURS 5003.

NURS5203 Advanced Nursing Research II (SP) Builds on the content of Advanced Nursing Research I. Focuses on specific research methodologies, statistical analysis, and interpretation of findings. Emphasis is placed on critical analysis of nursing research outcomes for support of evidence-based nursing knowledge. Emphasis is placed on the ability to critique a particular research study.

NURS5225 Clinical Practicum: Advanced Medical-Surgical Nursing I (FA) Focuses on utilization of advanced theories, concepts, knowledge and skill in the care of diverse adult populations with complex acute health problems. Prerequisite: all core courses.

NURS5225 Clinical Practicum: Advanced Medical-Surgical Nursing I (FA) Focuses on utilization of advanced theories, concepts, knowledge and skill in the care of diverse adult populations with complex acute health problems. Corequisite: NURS 5212. Prerequisite: all core courses.

NURS5232 Advanced Medical-Surgical Nursing II (SP) Focuses on utilization of advanced theories, concepts, knowledge and skill in the care of diverse adult populations with complex chronic health problems. Corequisite: NURS 5245. Prerequisite: all core courses.


NURS5313 Curriculum and Evaluation (SP) Considers the principles, philosophies, theories, and strategies of teaching, learning, and evaluation needed in nursing education.

NURS5323 Teaching in Nursing Practicum (SP) Supervised experience in the nurse educator role in both classroom and clinical settings. Prerequisite: NURS 5303 and NURS 5313.

NURS5379V Independent Study (1-3) (FA, SP) Independent study designed by student with faculty advisor. May be completed as alternative to thesis. Corequisite: NURS 5379V (IR) Practice-based topics for the advanced practice nurse.

NURS599V Seminar (1-3) (IR) Selected topics in nursing explored in discussion format.

OMGT4303 Introduction to Operations Management (FA, SP, SU) 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.

OMGT4303 Introduction to Operations Management (FA, SP, SU) An overview of the curricu-

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SP, SU) Financial planning in military and civilian opera-
tions; the application of budgets and controls for operational
systems.
OMGT5133 Industrial Engineering in the Service
Sector (FA, SP, SU) Review of the development of indus-
trial engineering into the service sector, e.g., health care sys-
tems, banking, telecommunications, utilities, and postal serv-
ices. Emphasizes those principles and methodologies applica-
tible to the solutions of problems within the service industries. Prerequisite: Graduate standing.
OMGT5143 Contemporary Issues in Human
Resource Management (IR) Emerging issues affecting
employee well-being and workforce productivity. Impact of
such issues as diversity, job evaluation, compensation, incen-
tive pay, performance appraisals, work-life balance, and legal aspects of FMLA, EAP, and ADA are included. Students will develop a
wage survey and an action plan to implement into an organi-
zation.
OMGT5223 Safety and Health Standards
Research (FA, SP, SU) For graduate students who seek
Certified Professional or Certified Industrial Hygienist status,
or both. Includes a review of the current OSHA database
for standards, interpretations, court decisions, and
field memonada. Test equipment and procedures for deter-
mining indoor industrial air containement PEL concentrations
and industrial hygiene criteria. Typical equipment and
processes conducive to the students development as a public
administration degree. Prerequisite: INEG4233 or OMGT4303.
OMGT5303 Health Care Policies and Issues
(IR) Health care management and policy development. Health
insurance, quality care, health benefit, and health services;
their role of government and business in policy formulation.
Financing of health care. Legal and ethical considerations
in health care. Hospital and outpatient management.
OMGT5373 Total Quality Management
(FA, SP, SU) Implementation of modern participative qual-
ity 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. For operations manage-
ment students in alternative course is INEG 4323. Either course
may be used for credit toward the operations
management degree.
OMGT5423 Engineering & Global Competition
(SP) Studies of principles and cases in engineering admin-
istration in global competition. Emphasis on high-technology
manufacturing such as the electronic industry. Survey of mar-
kets, technologies, multi-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 (FA, SP, SU)
An examination of the methodologies for estimating and fore-
casting government costs. Types of cost recovery systems,
work process functions, product improvement curves, deter-
mination of hourly rates, parametric estimating systems,
and the development of software for computer-assisted estimating
systems. Prerequisites: MATH 3213 and INEG 4563.
OMGT5463 Economic Decision Making
(FA, SP, SU) Principles of engineering 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 alterna-
tives.
OMGT5503 Maintenance Management (FA, SP,
SU) Principles and practices of maintenance department
organization, prevention procedures, and typical equipment
problems. Includes related topics such as plant protection,
preventative and plant maintenance.
OMGT5553 Human Factors Analysis (FA, SP, SU)
Psychological and physiological factors to be considered by
the operations manager. Human perceptual and work capaci-
ties are examined in relation to various task situations, with
emphasis on controlling and monitoring tasks. Fundamentally,
design factors are also considered. Human behavioral
aspects of management decisions are considered.
OMGT577V Special Problems (1-3) (FA, SP, SU)
Applicants for graduate course work knowledge to problems
countered in military base and civilian operations.
Problems are proposed by students according to individual
interests and needs.
OMGT5883 Computer Applications (FA, SP, SU)
Computer systems for analysis and control of operations
management problems. Coding of operations models and
currently available software systems. Microcomputers, mini-
computers, and time-sharing systems. Networking and nave-
gating the Internet as a resource for solving operations man-
agement problems.
OMGT5873 Organization and Control (FA, SP, SU)
Examination of organizational decision making authority,
structures, and controls. Functions of management-planning,
organizing, staffing, directing, and controlling. Comparison of
military and civilian environments for the implementation of
management principles.
OMGT600V Masters Thesis (1-6) (FA, SP, SU)
(PADM) PUBLIC ADMINISTRATION
PADM5803 Quantitative Methods Analysis (FA)
Data analysis techniques, including descriptive and inferential
statistical models 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 programs and problems. Prerequisite:
PADM5803 or equivalent and graduate standing.
PADM5823 Grantwriting for the Social Sciences
(FA) This course will teach the fundamentals of
obtaining grants from local, state and federal agencies.
PADM584V Special Topics in Public
Administration (1-3) (IR) Topic varies. May be repeated
for credit. No more than 9 hours.
PADM587V Professional Development (1-6) (FA, SP,
SU) Encompasses internships, professional projects if
individual is employed full-time and not eligible for an intern-
ship, conference and workshop participation, and other activi-
ties conducive to the students development as a public serv-
ces professional.
PADM588V Directed Readings (1-3) (FA, SP, SU) Prerequisite:
graduate standing.
(PAEAC) PHYSICAL EDUCATION / ACTIVITY
PEAC1111 Adaptive Activities (FA, SP) Instruction
and participation in sports, recreational and fitness type
activities.
PEAC1121 Adaptive Activities (FA, SP) Instruction
and participation in sports, recreational and fitness type
activities.
PEAC1131 Beginning Swimming (FA, SP) Includes:
essentials of water safety; basic strokes and tech-
niques of swimming; and beginning diving.
PEAC1141 Aquatic Fitness (FA, SP) Instruction
and participation in various types of aerobic and strengthening
water activities.
PEAC1221 Beginning Jogging (FA, SP) Instruction
and participation in jogging.
PEAC1231 Beginning Bowling (FA, SP) Instruction
and participation in bowling.
PEAC1241 Beginning Volleyball (FA, SP) Instruction
and participation in volleyball.
PEAC1251 Beginning Racquetball (FA, SP) Instruction
and participation in racquetball.
PEAC1351 Beginning Golf (FA, SP) Instruction
and participation in golf.
PEAC1371 Beginning Fencing (FA, SP) Instruction
and participation in fencing.
PEAC1391 Fitness Walking (FA, SP) Instruction
in participation in vigorous walking for cardiovascular develop-
ment and improvement.
PEAC1401 Beginning Gymnastics for Men’s
Apparatus (FA, SP) Instruction and participation in gym-
astics and men’s apparatus.
PEAC1411 Beginning Gymnastics for Women’s
Apparatus (FA, SP) Instruction and participation in gym-
astics with women’s apparatus.
PEAC1431 Beginning Tennis (FA, SP) Instruction
and participation in tennis.
PEAC1471 Beginning Badminton (FA, SP) Instruction
and participation in badminton.
PEAC1481 Beginning Archery (FA, SP) Instruction
and participation in archery.
PEAC1621 Fitness Concepts (FA, SP) acquaints
students with a basic knowledge, understanding, and value
of physical activity as related to optimal wellness.
PEAC1631 Beginning Self Defense (FA, SP) The
fundamental techniques of dealing with assailants.
PEAC1641 Beginning Judo (FA, SP) The fundamen-
tal skills of judo.
PEAC1651 Beginning Karate-Do (FA, SP) The funda-
tamental skills of karate-do as a martial art.
PEAC1661 Weight Training (FA, SP) Instruction
and participation in weight training.
PEAC1801 Aerobic Dance I (FA, SP) The fundamen-
tals of aerobic dance as a physical fitness program.
PEAC1811 Beginning Canoeing (FA, SP) Instruction
and participation in canoeing.
PEAC1830D Beginning Scuba Diving (FA, SP)
Instruction and participation in scuba diving. Corequisite:
PEAC1830D.
PEAC1901 Special Topics (FA, SP) Instruction
and participation in specialized activity. May be repeated
for 4 hours.
PEAC2121 Intermediate Swimming (FA, SP) Refinement
of basic strokes and techniques of swimming and
progressive instruction in techniques of diving.
Prerequisite: PEAC1131.
PEAC2221 Intermediate Volleyball (FA, SP) A con-
tinuation of the study and practice of volleyball fundamentals
with emphasis on advanced skills and strategies.
Prerequisite: PEAC1241.
PEAC2251 Intermediate Racquetball (FA, SP) A con-
tinuation of the study and practice of racquetball fundamen-
tals with emphasis on advanced skills, tournament play
and strategy. Prerequisite: PEAC1251.
PEAC2351 Intermediate Gymnastics (FA, SP, SU) A con-
tinuation of the study and practice of gymnastics with
emphasis on improvement of techniques already possessed
by the student and mastery of advanced techniques.
Prerequisite: PEAC1371.
PEAC2421 Intermediate Tumbling (SP) The funda-
mentals of tumbling from basic rolls and balances to aerial
movement and combinations. Prerequisite: PEAC1401 and
1411.
PEAC2431 Intermediate Tennis (FA, SP, SU) A con-
tinuation of the study and practice of tennis fundamentals
with emphasis on advanced skills, strategy, knowledge, and
doubles play. Prerequisite: PEAC1431.
PEAC2511 Adaptive Activities (FA, SP) Instruction
and participation in sports, recreational and fitness type
activities.
PEAC2521 Adaptive Activities (FA, SP) Instruction
and participation in sports, recreational and fitness type
activities.
PEAC2631 Intermediate Self Defense (FA, SP) A con-
tinuation of the study and practice of self defense with
emphasis on advanced skills. Prerequisite: PEAC1431.
PEAC2651 Intermediate Karate (FA, SP) A continu-
tion of the study and practice of karate-do with emphasis
on advanced skills. Prerequisite: PEAC1651.
PEAC2801 Aerobic Dance II (FA, SP) A continu-
tion of the study and practice of aerobic dance fundamen-
tals with emphasis on improvement of physical fitness
already possessed by the student. Prerequisite: PEAC1801.
(PHED) PHYSICAL EDUCATION
PHED2003 Teaching Styles/Lesson Planning (FA,
SP) This course would present a variety of teaching tech-
niques that can be utilized in the K-12 physical edu-
cation curriculum. Discussion will also focus on proper plan-
ing procedures to assure efficient delivery of physical edu-
cation classes.
PHED2013 Teaching Progressions and
Assessment of Basic Skills (FA, SP) This course
serves as an introduction to motor skill analysis. Emphasis is
placed on teaching and task analysis of locomotor, non-locomo-
tor, and manipulative skills.
PHED2023 Teaching Progressions and
Assessment of Advanced Skills (FA, SP) This
course is designed to teach the progression and analysis of
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motor and sport skills. Specific emphasis is on the common- 
lities that apply to various sport and movements. Prerequisites: PHED 2003 and PHED 2013.

PHED2122 Coaching Baseball (SP) Discussion and participation of preseason and in-season training methods, skill development and administrative principles in the coach- 
ing of baseball. Prerequisite: sophomore standing.

PHED2142 Coaching Track and Field (SP) Discussion and participation of preseason and in-season training methods, skill development and administrative principles in the coaching of track and field. Prerequisite: sopho-
more standing.

PHED2252 Coaching of Football (SP) Discussion and participation in preseason and off-season training meth-
ods.

PHED2272 Coaching Basketball (FA) Discussion and participation of preseason and in-season training meth-
ods, skill development and administrative principles in the coaching of basketball. Prerequisite: sophomore standing.

PHED3001 Practicum I (FA) All 5-year teaching option majors serve as teaching assistants in 1 physical education or dance education class under an experienced teacher. Prerequisite: junior standing.

PHED3012 Teaching Games (FA) This course is designed to provide opportunities for the student to acquire an understanding of the concepts and skills related to appropriately appropriating games and why they should be part of a quality physical education pro-
gram. Prerequisite: PHED 2003 and PHED 2013 and junior standing.

PHED3222 Coaching Stunts and Tumbling (SP) Instructional strategies for teaching public school students stunts and tumbling skills. Prerequisite: PHED 2003 and 
PHED 2013 and junior standing.

PHED3273 Long-Range Planning (SP) Designed to teach K-12 Physical Education majors how to perform, teach and develop and implement systematic and tumbling skill programs. Prerequisite: PHED 2003 and PHED 2013 and junior standing.

PHED3303 Principles and Problems of Coaching (FA, SP) 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 is given to be principles, problems and understand-

PHED4001 Practicum II (FA, SP, SU) All 5-year teaching option majors serve as a coaching assistant at the K-12 level. Prerequisite: senior standing and PHED 3203.

PHED4003 Teaching Individual/Dual Sports (FA, SP) Instructional strategies for teaching individual and dual 
sports concepts to public school children. Corequisite: PHED 4003. Prerequisite: PHED 4003.

PHED4005 Teaching Team Sports (FA, SP) Instructional strategies for teaching team sports concepts to public school children. Corequisite: PHED 4003. Prerequisite: PHED 4003 and PHED 2023) and junior standing.

PHED4053 Student Teaching-Elementary (1-12) (FA, SP, SU) Involves time at an off-campus school, where the student teacher has an opportunity to supervise under 
observation to teach, and participate in other activities involving school and the community.

PHED4574V Student Teaching-Secondary (1-6) (FA, SP, SU) Involves time at an off-campus school, where the student teacher has an opportunity to supervise under 
observation to teach, and participate in other activities involving school and the community.

PHIL1203 Reflective Thinking (FA, SP) Helping stu-
dents acquire basic reasoning skills. Degree credit may not be earned for both 1203 and 2003.

PHIL2000 Introduction to Philosophy (FA, SP, SU) An examination of such basic philosophical topics as the 
existence of God, the nature of the human mind, the relation-
ship between appearance and reality, the forms and limits of human knowledge, freedom, and standards of right and wrong. Includes both historical and contemporary read-
ings. UNIVERSITY CORE COURSE

PHIL2003C Introduction to Philosophy (FA, SP) An examination of such basic philosophical topics as the 
existence of God, the nature of the human mind, the relation-
ship 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 read-
ings. Corequisite: PHIL 2000. UNIVERSITY CORE COURSE

PHIL2003H Honors Introduction to Philosophy (FA, SP, SU) An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relation-
ship 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 read-
ings. Corequisites: PHIL 2000, UNIVERSITY CORE COURSE

PHIL2203 Ethics and the Professions (FA, SP, SU) After a survey of the standard theories of moral obli-
gation, justice, and rights, the course focuses on specific moral 
problems that arise within engineering, business, and the 
professions. UNIVERSITY CORE COURSE

PHIL3013 Ethics and the Professions (FA, SP, SU) Traditional and modern methods of deductive and inductive inference. Degree credit may not be earned for both PHIL 1203 and 2203. UNIVERSITY CORE COURSE

PHIL3063 Nineteenth Century Continental 

PHIL 390V Readings (1-6) (FA, SP, SU) Treats a special topic of issue offered as part of the honors program. May be repeated. Prerequisite: honurs candidacy (not restricted to candidacy in philosophy).

PHIL3933 Special Studies (not restricted to candidacy in philosophy). Prerequisite: junior standing. May be repeated for 12 hours. Prerequisite: junior standing. May be repeated for 12 hours. Prerequisite: junior standing. May be repeated 3 times for 6 hours. Prerequisite: junior standing.

PHIL4043 Philosophy and the Christian Faith (IR) An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relation-
ship 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 read-
ings. UNIVERSITY CORE COURSE

PHIL4073 The Physical Education Program (SP) Principles, problems, procedures, and the influence of educa-
tional philosophy on programs in physical education and their application in the construction of a course of study for a spe-
cific situation.

PHIL5013 Movement Education in the Elementary School Program (SP) Movement con-
cepts applied to the elementary school physical education 
program. Considers movement exploration techniques, loco-
motor, non locomotor, and manipulative skills.

PHIL5073 Movement Experiences for Elementary School Children (FA, SP, SU) This cohort 5th year course includes taxonomies of physical edu-
cation forms and limits of human knowledge, freedom of the will, and standards of right and wrong. Includes both historical and contemporary read-
ings. UNIVERSITY CORE COURSE

PHIL507V Cohort Teaching Internship (1-6) (FA, SP, SU) May be repeated for 6 hours.

PHIL5213 Philosophical Foundation (FA, SP, SU) Presentation of philosophical approaches to the student of 
physical education and kinesiology. Special attention is given to the development of qualitative approaches enabling students to examine problematic issues and practices in physical education, sport, and other move-
ment forms.

PHIL5233 Research on Teaching in Physical Education (FA, SP, SU) A review of contemporary research literature informing effective teaching practices in physical education. Students gain experience in critically reviewing literature in physical education as well as related behavioral science, education, and humanities discipli-
ines; emphasis is placed in incorporating research finding into pedagogical practice, and the influence of the 
will and responsibility, facts and values, individual liberty and so-
ciety. Application of theories to substantive questions. UNI-
VERSE CORE COURSE

PHIL6090 Honors Colloquium (FA, SP, SU) Traditional and modern methods of deductive and inductive inference. Degree credit may not be earned for both PHIL 1203 and 2203. UNIVERSITY CORE COURSE

PHIL6635 Systematic observation Research in Physical Education (FA, SP, SU) This cohort 5th year course focuses on the skills necessary to develop and maintain an effective 
physical education learning environment. Special attention is given to the development of effective units of instruction 

PHIL6650V Workshop (1-3) (FA, SP, SU) Scheduled student frail knowledge gained in PHED 5011 (Meads/Research/Stat Lab), PHED 5031 (Curr Lab), and KINS 5643 (Motor Learning).

PHIL674V Internship (1-6) (SP) Effective Teaching in Physical Education (FA) This cohort fifth year course focuses on the skills necessary to develop and maintain an effective physical education learning environment. Special attention is given to the development of effective units of instruction throughout the K-12 curriculum. Corequisite: M.A.T. cohort.

PHIL6753 Systematic observation Research in Physical Education (FA, SP, SU) This cohort 5th year course focuses on the skills necessary to develop and maintain an effective physical education learning environment. Special attention is given to the development of effective units of instruction throughout the K-12 curriculum. Corequisite: M.A.T. cohort.

PHIL6833 Virtual Immediate (1-6) (FA, SP) Supervision in Physical Education (FA, SP, SU) Cohort 5th year course that emphasizes class management; includes professional ethics and school policies related to students, faculty and programs. A major part of course time will be field based.

PHIL6850V Workshop (1-6) (FA, SP, SU) Cohort 5th year course that emphasizes class management; includes professional ethics and school policies related to students, faculty and programs. A major part of course time will be field based.

PHIL7000D Introduction to Philosophy (FA, SP, SU) An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relation-
ship 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 read-
ings. Corequisite: PHIL 2000. UNIVERSITY CORE COURSE

PHIL7001H Honors Introduction to Philosophy (FA, SP, SU) An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relation-
ship 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 read-
ings. Corequisites: PHIL 2000, UNIVERSITY CORE COURSE

PHIL2003 Ethics and the Professions (FA, SP, SU) After a survey of the standard theories of moral obli-
gation, justice, and rights, the course focuses on specific moral 
problems that arise within engineering, business, and the 
professions. UNIVERSITY CORE COURSE

PHIL3013 Ethics and the Professions (FA, SP, SU) Traditional and modern methods of deductive and inductive inference. Degree credit may not be earned for both PHIL 1203 and 2203. UNIVERSITY CORE COURSE

PHIL390V Readings (1-6) (FA, SP, SU) Treats a special topic of issue offered as part of the honors program. May be repeated. Prerequisite: honors candidacy (not restricted to candidacy in philosophy).

PHIL3933 Special Studies (not restricted to candidacy in philosophy). Prerequisite: junior standing. May be repeated for 12 hours. Prerequisite: junior standing. May be repeated 3 times for 6 hours. Prerequisite: junior standing.

PHIL4043 Philosophy and the Christian Faith (IR) Examination of the metaphysical and epistemological implica-
tions of specific physical theories with an emphasis on twen-
tieth-century physics. Topics covered may include the nature of space and time (particularly as described in relativit-
theory), the nature of the quantum mechanical world, and the temporal asymmetries found in thermodynamics and other areas of physics. Prerequisite: PHIL 2003.

PHIL399VH Honors Course (1-6) (FA, SP, SU) May be repeated for 12 hours. Prerequisite: junior standing.

PHIL4003 Ancient Greek Philosophy (FA, SP) Pre-
Socratic, Socrates, Plato, and Aristotle. Prerequisite: 3 hours of philo-
PHIL4036 Twentieth Century Continental Philosophy (SP) Major figures (e.g. Husserl, Heidegger, Derrida) and trends (phenomenology, existentialism, hermeneutics, critical theory, deconstruction) in 20th century French and German thought. Topics include major figures and their place in the world of history and culture, and the possibility of critical reflection.

PHIL4073 History of Analytic Philosophy (SP) From Frege to recent figures, including Russell, Moore, Wittgenstein, Schilpp, Carnap, Aver, 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 Existentialist (SP) Readings in major figures associated with "Existentialism" (e.g. Kierkegaard, Nietzsche, Heidegger, Sartre, Merleau-Ponty). Emphasis on connections between the metaphysical views of these thinkers and their views of freedom, their conceptions of modernity, and their responses to it.

PHIL4093 Special Topics in Philosophy (IR) This course will cover subject matter not covered in regularly offered courses. Tect for making up 6 hours of credit, as content will vary. May be repeated for 6 hours.

PHIL4113 Social and Political Philosophy (SP) Selected moral-legal and social theories of society, 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 Plato to Nietzsche. Topics may include Plato, Aristotle, Butler, Hume, Kant, and Mill. Prerequisite: 3 hours of philosophy.

PHIL4133 Contemporary Theoretical Ethics (FA) A study of contemporary philosophical theories of ethics from G.E. Moore to the present. Philosophers covered may include Plato, Aristotle, Butler, Hume, Kant, and Mill. Prerequisite: 3 hours of philosophy.

PHIL4323 Philosophy of Science (FA) Examination of issues related to scientific explanation, empirical foundations of science, observation and objectivity, nature of laws and theory, the nature of scientific method, confirmation, models, causation, and simplicity, beginning with historical survey set in the context of the history of science but emphasizing works from the 1930s to the current period, and progressing to major philosophical developments.

PHIL4323 Philosophy of Language (SP) A survey of mainstream philosophical theories of meaning, reference, truth, and logical form. Attention given to the views of such figures as Frege, Russell, Tarski, Searle, Dummett, and the advocates of possible worlds semantics.

PHIL5933 Seminar: Philosophy of Mind (IR) An introduction to fundamental concepts of psychology and philosophy. Prerequisite: 3 hours of philosophy.

PHIL5973 Seminar: Metaphysics (IR) Supervised individual readings in historical and contemporary philosophy.

PHIL700V Doctoral Dissertation (1-18) (FA, SP, SU) Prerequisite: candidacy.

PHSC003 Survey of Chemistry and Physics (SP) An introduction to fundamental concepts of chemistry and physics. Designed for freshman assigned a course deficiency in natural sciences. Credit earned in this course may not be applied to the total required for a degree.

PHSC503 Higher Order Thinking in Science (FA, SP, SU) Laboratory approach to teaching science as integrated, constructive processes involving experimentation, investigation, communication, reasoning, and problem solving. Subject foundation shows connections and applications in life, earth, and physical systems. Training to improve content learning, learning environments, and the use of manipulatives, calculators, and science equipment.

PHYS100V Projects (1-2) (FA, SP, SU) Independent study in experimental or theoretical physics for lower division undergraduate students. May be repeated for 2 hours.

PHYS1023 Physics and Human Affairs (FA, SP, SU) 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.

PHYS1023H Honors Physics and Human Affairs (FA, SP, SU) 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.

PHYS2013 College Physics I (FA, SP, SU) A non-calculus survey of the principles of physics including mechanics, heat and sound. Lecture 3 hours per week and laboratory 2 hours per week. Corequisite: PHYS 1013D or equivalent. UNIVERSITY CORE COURSE

PHYS2011L College Physics I Lab (FA, SP, SU) Laboratory 2 hours per week. Corequisite: PHYS 2011D or PHYS 2011L. Prerequisite: (MATH 1213) or equivalent. UNIVERSITY CORE COURSE

PHYS2033 College Physics II (SP, SU) Continuation of PHYS 2013. Topics include electricity and magnetism, light, relativity, quantum mechanics, atomic and nuclear structure. Lecture 3 hours, drill (PHYS 2030D) 1 hour per week. Corequisite: PHYS 2030D and PHYS 2031L. Prerequisite: PHYS 2013 or PHYS 2013L. UNIVERSITY CORE COURSE

PHYS2013L College Physics II Lab (FA, SP, SU) Laboratory 2 hours per week. Corequisite: PHYS 2013D and PHYS 2013L. UNIVERSITY CORE COURSE PHYS2033D College Physics II Lab (SP, SU) Corequisite: PHYS 2031L and PHYS 2033L.

PHYS2054 University Physics I (FA, SP, SU) Introduction to the principles of mechanics, wave motion, temperature and heat, with calculus. Lecture three hours per week and practicum two hours a week (included in PHYS 2050L). Pre- or Corequisite: MATH 2545. Corequisite: PHYS 2050L UNIVERSITY CORE COURSE

PHYS2054H Honors University Physics I (FA, SP, SU) Introduction to the principles of mechanics, wave motion, temperature and heat, with calculus. Lecture three hours per week and practicum two hours a week (included in PHYS 2050L). Pre- or Corequisite: MATH 2545. Corequisite: PHYS 2050L UNIVERSITY CORE COURSE

PHYS2050L University Physics I Lab (FA, SP, SU) The laboratory includes a practicum component integrating it with the lecture (PHYS 2054E) and meets twice a week for three hours at each meeting. Corequisite: PHYS 2054E. UNIVERSITY CORE COURSE

PHYS2050M Honors University Physics I Lab (FA, SP, SU) The laboratory includes a practicum component integrating it with the lecture (PHYS 2054E) and meets twice a week for two hours at each meeting. Corequisite: PHYS 2054H. UNIVERSITY CORE COURSE

PHYS2074 University Physics II (FA, SP, SU) Continuation of PHYS 2054. Topics covered include electricity, magnetism, light and geometric optics. Lecture three hours per week and practicum two hours per week. Pre- or Corequisite: MATH 2546. Corequisite: PHYS 2070L. Prerequisite: PHYS 2054. UNIVERSITY CORE COURSE

PHYS2074H Honors University Physics II (SP) Continuation of PHYS 2054H. Topics covered include electricity, magnetism, light and geometric optics. Lecture three hours per week and practicum two hours per week (included in PHYS 2070M). Pre- or Corequisite: MATH 2546. Corequisite: PHYS 2070M. Prerequisite: PHYS 2054 or PHYS 2054H. UNIVERSITY CORE COURSE

PHYS2070L University Physics II Lab (FA, SP, SU) The laboratory includes a practicum component integrating it with the lecture (PHYS 2074E) and meets twice a week for two hours at each meeting. Corequisite: PHYS 2074E.
PHYS 2054 and PHYS 2074. Topics include waves, physical optics, thermodynamics, kinetic theory, and an introduction to statistical techniques. Pre- or Corequisite: MATH 2050L. Prerequisite: PHYS 2074.

PHYS 2094) meets twice a week for two hours at each meeting. Corequisite: PHYS 2084.

PHYS 3614 Modern Physics

PHYS 399VH Honors (1-6) Honors study for physics students enrolled in the honors program. May be repeated. Prerequisite: honors candidacy (not restricted to candidates for the department (on campus)). Prerequisite: graduate standing.

PHYS 3613 Physics in Perspective (1-3) (FA, SP , SU) Regular infor-
mation surveys of current research topics. This course focuses on basic research techniques available to the department (on campus). Prerequisite: graduate standing.

PHYS 3614 Linear Algebra Theory (FA) Newton's laws of motion applied to particles, systems of particles, and rigid bodies. Pre- or Corequisite: MATH 2050L. Prerequisite: PHYS 2054.

PHYS 5734 Laser Physics

PHYS 5333 Advanced Electromagnetic Theory (FA) Modern atomic and molecular physics with emphasis on the applications in communication systems. Pre- or Corequisite: PHYS 3414 and PHYS 3544. Prerequisite: PHYS 3414 and PHYS 3544. 

PHYS 5346 Laser Physics (SP) A combined lecture/laboratory course covering the theory of laser operation, laser resonators, propagation of laser beams, specific lasers such as gas, solid state, semiconductor and chemical lasers, and laser applications. Prerequisite: PHYS 3414 and PHYS 3544. 

PHYS 57474 Introduction to Optical Materials (SP, Odd years) A combined lecture/laboratory course covering crystal symmetry optical transmission and absorption, light scattering (Ramam and Brillouin) optical constants, carrier mobility, and polarization effects in semiconductors, quantum wells, insulators, and other optically important materials. Prerequisite: PHYS 3414 and PHYS 3544. 

PHYS 57474 Lightwave Communication (SP, Even years) A laboratory based course on light propagation in planar and fiber waveguides, optical coupling, operation principles of semiconductor lasers, detectors, and LEDs, hands-on experience with applications in communication systems. Prerequisite: PHYS 3414 and PHYS 3544.

PHYS 574803 Mathematical Physics (IR) Development of mathematics used in advanced physics, including tensors, matrices, group theory, special functions and operators. Prerequisite: MATH 2050L.

PHYS 5498V Senior Thesis (1-6) (FA, SP, SU) A senior project under faculty supervision. Prerequisite: PHYS 3414 and PHYS 3544.

PHYS 5499I Physics Senior Seminar (FA, SP, SU) Student mastery of the principles of physics are assessed by means of research projects and independent study conducted under the supervision of a faculty member. The research project may be submitted to the Fulbright College writing requirement. (Required of all B.S. and B.A. physics majors.) Prerequisite: MATH 2050L. 

PHYS 5523 Theory of Relativity (IR) Conceptual and mathematical structure of the special and general theories of relativity with selected applications. Critical analysis of Newmanian mechanics; relativistic mechanics and electrodynamics; tensor analysis; continuous media; and gravitational field theory. Prerequisite: PHYS 5103.

PHYS 5713 Solid State Physics (SP, Even years) Crystalline structure, lattice dynamics. Debye theory, electron theory of metals, band theory of solids, superconductivity, laser physics. Prerequisite: PHYS 3414 or PHYS 4070 or PHYS 5413. 

PHYS 5734 Laser Physics (SP) A combined lecture/laboratory course covering the theory of laser operation, laser resonators, propagation of laser beams, specific lasers such as gas, solid state, semiconductor and chemical lasers, and laser applications. Prerequisite: PHYS 3414 and PHYS 3544. 

PHYS 5747V Internship in College or University Teaching (2-9) (FA, SP, SU) Supervised experiences in student personnel services, college administration, college physics teaching, institutional research, development, or other areas of college and university work. May be repeated for 3 hours. Pre- or Corequisite: PHYS 3073 or for the department (on campus). Prerequisite: graduate standing.

PHYS 5754 Applied Nonlinear Optics (FA, Odd years) A combined lecture/laboratory course. Topics include: practical optical processes, such as electro-optic effects, acousto-optic effects, narrow-band optical filters, sec-
PHYS5774 Introduction to Optical Properties of Materials (SP, Odd years) A laboratory-based course in light propagation in planar and fiber waveguides, optical coupling, operation principles of semiconductor lasers, detectors, and LEDs, hands-on experience with applications in communication systems. Prerequisite: PHYS 3414 or PHYS 3544.

PHYS5794 Lightwave Communication (SP, Even years) A laboratory-based course in light propagation in planar and fiber waveguides, optical coupling, operation principles of semiconductor lasers, detectors, and LEDs, hands-on experience with applications in communication systems. Prerequisite: PHYS 3414 or PHYS 3544.

PHYS700V Doctoral Dissertation (1-18) (FA, SP, SU) Research and operations Management Seminar (FA, SP, SU) Weekly seminar of physics candidates for the Master of Science degree to discuss issues that impact a technical group’s research and operational effectiveness. Topics include ethics, applications of procedures, cultural impact on operations, and team-based methodologies as well as current events in the interaction between theoretical research and the marketplace. May be repeated for 6 hours. Prerequisite: physics graduate standing.

PLSC2003 American National Government (FA, SP, SU) An introductory survey of comparative political systems. UNIVERSITY CORE COURSE

PLSC2013 Introduction to Comparative Politics (FA, SP) An introductory survey of comparative political systems. UNIVERSITY CORE COURSE

PLSC2030 American National Government (FA, SP, SU) 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. UNIVERSITY CORE COURSE

PLSC2030H Honors American National Government (FA, SP, SU) 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. UNIVERSITY CORE COURSE

PLSC2813 Introduction to International Relations (SP, SU) Introduction to the international system, theories of international behavior, political economy, and peace making, the third world, international law and organizations, and the nature of the post-cold war world. PLSC2813 Internship in International Relations (1-3) (FA, SP, SU) Work experience in a public agency arranged by the student under the guidance of a faculty member. Paper required. May be repeated for 6 hours.

PLSC3103 Public Administration (FA, SP) Trends and organization of public administration, dynamics of management; fiscal and personnel management; administrative powers and responsibility. Prerequisite: PLSC 2003.

PLSC3113 Dynamics of Service Sector
Course Descriptions

Organizations (SP) Study of service sector organizations (public and nonprofit organizations). Emphasis is placed on management of service organizations. Prerequisites: PLSC 2003 or PLSC 2013.

PLSC3153 Public Policy (SP) A study of public policy formulation, implementation, and evaluation at various levels of government. Prerequisites: PLSC 3003 or PLSC 3013.

PLSC3183 Public Personnel Management (FA, SP, SU) Development of the merit system in government, career systems, human resource planning and development, labor relations, diversity issues, and the role of labor unions. Prerequisite: PLSC 3003 or PLSC 3013.

PLSC3203 Political Opinion (FA) Survey of the process by which people formulate their opinions on public matters. Emphasis is placed on how personal and social factors operate in the political decision-making process. Prerequisite: PLSC 2003.

PLSC3223 Arkansas Politics (FA) The political system in Arkansas including the political process, public policy, social problems, political behavior, governmental structure, and contemporary issues. Prerequisite: PLSC 2003.

PLSC3243 The Judicial Process (FA) The structure and operation of the state and national court systems. Emphasis is placed on the role of the judiciary in the American political system. Prerequisites: PLSC 2003 and one of the following: PLSC 2013.

PLSC3603 Scope and Methods of Political Science (FA) An introduction to the major theoretical approaches and methods used in the study of politics. May be repeated. Prerequisite: PLSC 2003.

PLSC3613 Comparative Politics (FA) An introduction to comparative politics, the study of political systems beyond the states and territories of the United States. Emphasis is placed on the role of comparative methods in political science. Prerequisite: PLSC 2003 or PLSC 2013.


PLSC3763 The Middle East (FA, SP, SU) An introduction to the political development of the Middle East, as evidenced in historical legacies, state formation, civil society, social class, and political identity. Prerequisites: PLSC 2003 or PLSC 2013.

PLSC3763 The Middle East (FA, SP, SU) An introduction to the political development of the Middle East, as evidenced in historical legacies, state formation, civil society, social class, and political identity. Prerequisites: PLSC 2003 or PLSC 2013.

PLSC3803 Scope and Methods of Political Science (IR) The basic principles and assumptions of political inquiry (methodology) and research techniques for gathering and analyzing data about political phenomena. Prerequisite: PLSC 2003.

PLSC3803 Scope and Methods of Political Science (IR) The basic principles and assumptions of political inquiry (methodology) and research techniques for gathering and analyzing data about political phenomena. Prerequisite: PLSC 2003.

PLSC3813 International Law (SP) Analysis of the principles of public international law including the law of war, the law of sea and air, the law of legal statehood, and the function of selected principles of private international law relevant to such topics as the multinational corporation, international arbitration, commerce with Communist states, and the expropriation of foreign property. Prerequisite: junior standing.

PLSC3823 Theories of International Relations (FA, SP) Analysis of major intellectual traditions in the field of international relations, including realism, liberalism, and social constructivism. Emphasis will be placed on how they help us to understand war, revolution, global capitalism, nationalism, peace, and other significant international phenomena. Prerequisites: PLSC 2003 or PLSC 2013.

PLSC3853 American Foreign Policy (FA, SP) The structure and process for making and implementing the foreign policy of the United States, and the formulation and maintenance of stable political orientations, the patterns linking the individual to the polity, and major modes of inquiry. Prerequisite: PLSC 3003.

PLSC4283 Federalism and Intergovernmental Relations (FA, SP, SU) Analysis of changes in intergovernmental relations in the American federal system. Discussions will focus on political, economic/fiscal and administrative aspects of policy changes of the pre-and post-Reagan era.

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)

PLSC4503 African Politics (SP) Comparative analysis of structures, processes and problems of selected Sub-Saharan African political systems.

PLSC4513 Creating Democracies (FA, Even years) Analysis of the creation of democracies in Europe, South America, Asia, Africa, the Middle East, East Europe, and the former Soviet Union. Prerequisite: PLSC 2013.

PLSC4543 Government and Politics of Eastern Europe (SP) Study of the politics of East European nations primarily after World War II, with emphasis on the role of the period of communist rule and democratization. Prerequisites: PLSc 2003 or PLSC 2013.

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 PLSC 2013.

PLSC4573 Gender and Politics (SP, Even years) Examines the significance of gender in politics. Includes discussion of the women's movement and feminist theory, but emphasizes the content and practice of gender politics in the United States and how it relates to women and men. Focus is on the U.S. but final third is devoted to comparative topics. Prerequisites: PLSC 3003 or PLSC 2013.

PLSC4583 Political Economy of the Middle East (FA, SP, SU) 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, state development, liberalization, democratization, institutions, and resources and population movements to understand power and class in the area.

PLSC4593 Islam and Politics (FA, SP, SU) Compares contemporary Islamist political movements. Seeks to explain causes, debates, agendas, and strategies of Islamists in the political arena. Addresses sovereignty, the role of law, visions of the good state and society, and relations between nationalism, religion and political development. Focus on Middle East with comparative reference to other cases.

PLSC4603 Foreign Policy Analysis (SP) Study of the foreign policy analysis methodology paid to explanations at a variety of levels, such as the individual, group, organizational, societal, systemic.

PLSC4613 Politics of the Cold War (FA) Examines the rise of the Cold War from different perspectives, 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; post-cold-war world order.

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.

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 hemisphere interactions that constitute the inter-American System, with special emphasis on conflict and cooperation in the hemisphere and policies of the American republics. Prerequisite: junior standing.

PLSC4903 Democratic Theory (FA, SP, SU) Analysis and comparison of classical and contemporary theories of democracy.
PLSC4923 Karl Marx: Life, Work and Legacy (SP)
This course examines the writings of Karl Marx. Students will read and discuss his 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.

PLSC498V Senior Thesis (1-6) (FA, SP, SU)
PLSC499VH Honors Essay (1-3) (FA, SP, SU)
Not part of the 30 hour requirement for the major. May be repeated for 6 hours.

PLSC5103 Human Behavior in Complex Organizations (FA)
Review of the fundamental literature and a systematic analysis of various theories and research focusing on organization and behavior in public administration, including the discussion of organizational development, human motivation, leadership, rationality, efficiency and conflict management in public organizations. Prerequisite: graduate standing.

PLSC5113 Seminar in Human Resource Management (SP)
Intensive study of public personnel policies and practices, including legal foundations, classification and compensation, recruitment and selection processes, training, employment policies and morale, employee relations and organization. Prerequisite: graduate standing.

PLSC5123 Public Budgeting and Finance (FA)
Focuses on the budgeting process and governmental fiscal policy formulation, adoption, and execution. Prerequisite: graduate standing.

PLSC5153 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, and ethics. The relationship among various board members, trustees, fund raising, public relations, and program personnel are analyzed, and the complex environments with service sector agencies are explored.

PLSC5163 Administrative Law (IR)
A seminar which examines the constitutional and statutory basis and authority of public organizations. Special attention focuses on the nature of the rule-making and adjudicatory powers of public agencies. Emphasis is on administrative, and judicial review on such activities. Also considered is the role, scope, and place of public regulatory activities. Prerequisite: graduate standing.

PLSC5163 Seminar in American Political Institutions (FA, Even years)
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 environmentalism.

PLSC5163 Environmental Politics and Policy (FA, Even years)
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 environmentalism.

PLSC5183 Comparative Public Administration (IR)
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, developmental goals, and the 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, function, and practice with an emphasis on the relevance and application of technical analysis. Prerequisite: graduate standing.

PLSC5203 Seminar in American Political Behavior (SP)
Reading seminar surveying major works on 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 (FA, SP, SU)
An analysis of public policy approaches to disability in the United States. Examines the political and philosophical origins of disability policy; reviews major disability legislation affecting any stakeholders; depicts recent policy initiatives; analyzes evolution of disability policy with context of changing societal, economic and political conditions. Prerequisite: graduate standing.

PLSC5234 Seminar in Sand and Local Politics (FA, SP, SU)
Research seminar dealing with selected aspects of state and local institutions and politics such as comparative policy-making, political culture variations, and community power structures. Prerequisite: graduate standing.

PLSC5383 Seminar in Political Communication (IR)
Research seminar focusing on selected topics such as candidate imagery, diffusion of political information, or political symbolism. (Same as COMM 5383) Prerequisite: graduate standing.

PLSC5503 Comparative 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.

PLSC5523 Topics in the Middle East (FA, SP, SU)
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.

PLSC5525 Topics in Politics of the Middle East (FA, SP, SU)
In depth analysis of specific political phenomenon in the contemporary Middle East. Inquiry will vary but may focus on gender, political economy, politics of inclusion and exclusion (democratization or authoritarianism), or the politics of oil. Prerequisite: graduate standing.

PLSC5563 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 (SP, Even years)
Research seminar analyzing obstacles to change in Latin America while utilizing both North American and research frameworks and techniques that deal with the theory and measurement of stability and development. Prerequisite: graduate standing.

PLSC5575 Teaching Foreign Cultures in Social Studies Curriculum (1-6) (SU)
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.

PLSC5580 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.

PLSC5583 Seminar in Contemporary Problems (FA)
Seminar with concentrated reading in selected and specialized areas of contemporary international relations. May be repeated for graduate standing.

PLSC5584 International Legal Order (SP)
Analysis of distinctive characteristics of contemporary international law. Topics include role of legal order in controlling the use of force in international relations and the impact of social and political environment on growth of international law and relations among international political systems. Prerequisite: graduate standing.

PLSC558V Directed Readings in Political Science (1-3) (FA, SP, SU)
May be repeated for 6 hours. Prerequisite: graduate standing.

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 (1-6) (FA, SP, SU)
Internship in a local, state, regional, or federal agency. Paper required on a significant aspect of internship experience. Prerequisite: graduate standing.

PLSC595V Research Problems in Political Science (1-3) (FA, SP, SU)
May be repeated for 6 hours. Prerequisite: graduate standing.

PLSC5963 Modern Political Thought (FA)
European political thinking since the rise of the nation-state and the relevance of political thought to contemporary politics. Prerequisite: graduate standing.

PLSC5973 Contemporary Normative Political Theory (SP)
Analysis of current normative problems of political theory such as obligation, dissent, justification, sov-
Course Descriptions

demonstrations, slides and videotapes. Prerequisite: MBO 203 and junior standing.
POSC3382 Poultry Judging and Selection (FA, SP) Practice in production judging and flock selection. Laboratory 4 hours per week.
POSC400V Special Problems (1-9) (FA, SP, SU) Special problems in the poultry sciences for advanced students.
POSC401V Internship in Poultry Science (1-6) (FA, SP, SU) Work experience in cooperation with private or government organizations to introduce students to professional areas of work in poultry science. May be repeated for 8 hours. Prerequisite: junior standing.
POSC410V Special Topics in Poultry Science (1-4) (FA, SP, SU) Topics not covered in other courses or for a more intensive study of specific topics in poultry science. May be repeated.
POSC413 Integrated Poultry Management Systems (SP) Major managerial systems in the integrated commercial poultry industry. Development of an understanding of the basic decision making processes of poultry companies and the factors influencing those decisions. Prerequisite: POSC 2353.
POSC4223 Risk Analysis for Biological Systems (FA, Odd years) Principles of risk assessment including exposure assessment and dose response, and risk management. Methods of risk analysis modeling and simulation with computer software. Applications of risk analysis in animal, food and environmental systems. Prerequisite: STAT 2023 or STAT 2033 or BENG 4023.
POSC4314 Egg and Meat Technology (FA) Study of the science and practice of processing poultry meat and egg products; examination of the physical, chemical, functional and nutritional aspects of poultry meats and eggs and their major components. Methods and equipment used in poultry processing, products affecting consumer acceptance and marketing of poultry products and the efficiency of production. Corequisite: POSC 4310L. Prerequisite: CHEM 1123 and CHEM 1121L and BIOL 1541L.
POSC4310L Egg and Meat Technology Laboratory (FA) Hands-on experience and observations in the processing and development of egg and poultry meat products. Understanding of the relationship between product quality and cooked poultry products, including the effects of processing conditions and protein functionality on value-added poultry products. Corequisite: POSC 4314.
POSC4333 Poultry Breeding (FA, Odd years) Application of new developments in poultry breeding for efficient egg and meat production. Lecture 3 hours per week. Prerequisite: POSC 3123 or ANSC 3123 and junior standing.
POSC4343 Poultry Nutrition (SP) Principles of nutrition as applied to the formulation of practical chicken and turkey rations. Lecture 3 hours per week. Prerequisite: CHEM 2613 and CHEM 2611L and junior standing.
POSC4434 Fundamentals of Reproductive Physiology (FA) Principles of avian reproductology physiology with lecture 3 hours, laboratory 3 hours per week. Prerequisite: CHEM 2613 and CHEM 2611L and junior standing.
POSC491 Undergraduate Seminar (SP) Required by all poultry science majors. Prerequisite: junior standing.
POSC500V Special Problems (1-6) (FA, SP, SU) Work in special problems of poultry industry. Prerequisite: graduate standing.
POSC510V Special Topics in Poultry Sciences (1-4) (IR) Topics not covered in other courses or a more intensive study of poultry science. May be repeated. Prerequisite: graduate standing.
POSC5123 Advanced Animal Genetics (FA, Even years) Specialized study of animal genetics. Lecture 3 hours per week. (Same as ANSC 5123) Prerequisite: POSC 3123 or ANSC 3123.
POSC5143 Biochemical Nutrition (FA, Even years) Interrelationship of nutrition and physiological chemistry; structure and metabolism of physiological significant carbohydrates, lipids, and proteins; integration of metabolism with protein, energy, fat and water metabolism. Corequisite: CHEM 3513. (Same as ANSC 5143) Prerequisite: CHEM 3813.
POSC5152 Protein and Amino Acid Nutrition (SP, Even years) Aspects of the basic processes of protein digestion, amino acid absorption, transport, metabolism, and utilization along with how biochemical function of proteins and their dynamic state affect nutritional status and health. Corequisite: CHEM 3813.
POSC5313 Domestic Animal Bacteriology (FA) A study of bacteria pathogenic for domestic animals. Lecture 3 hours per week.
POSC5352L Advanced Immunology (SP) Aspects of innate, cell-mediated, and humoral immunity in mammalian and avian species. Molecular mechanisms underlying the function of the immune system are emphasized. A course in Basic Immunology is recommended but not required. Lecture 3 hours per week.
POSC5352L Immunology in the Laboratory (SP) Laboratory course on immunologic laboratory techniques and uses of antibodies as a research tool. Included are cell isolation and characterization procedures, immunology, flow cytometry, ELISA and cell culture assay systems. Laboratory 4 hours per week. Prerequisite: POSC 5343 or MBO 5343 or MBO 4714.
POSC5743L Advanced Analytical Methods in Animal Sciences Laboratory (FA) Introduction into theory and application of advanced analytical techniques used in animal research. Two 3-hour laboratory periods per week.
POSC5742 Advanced Poultry Diseases (FA) The major poultry diseases and their diagnosis and control are covered in depth and the course will focus on understanding mechanisms of pathogenesis, diagnostic techniques and principles of prevention. Lecture/discussion 2 hours per week (Same as ANSC 5742) Prerequisite: POSC 3223.
POSC5752L Advanced Poultry Diseases Laboratory (SP) This course covers laboratory techniques and microbiology of poultry diseases with a microbial cause. Students will learn diagnostic virology, bacteriology, serology and mycology. Laboratories 3 hours twice weekly and then as needed to complete assignments. Prerequisite: POSC 3223 and POSC 5742.
POSC5853 Advanced Meats Technology (SU, Even years) 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 labeling are covered. Lecture 2 hours, laboratory 2 hours per week. (Same as ANSC 5853) Prerequisite: ANSC 3613 or POSC 4314.
POSC5901 Graduate Seminar (FA, SP) Critical review of the current scientific literature pertaining to the field of poultry production and industry. Reitation 1 hour per week. Prerequisite: senior standing.
POSC5922 Neuroscience (FA) Course covers cellular, neural and systems aspects of behavior of animals. Corequisites: POSC 5921.
POSC5933 Environmental Physiology of Domestic Animals (FA, Odd years) Study of the environment of domestic animals and its effect on physiologically systems that affect maintenance, growth, production, and reproduction. Lecture 3 hours per week. (Same as ANSC 5933) Prerequisite: (ANSC 3032 or POSC 3032) and CHEM 3813.
POSC5932 Cardiovascular Physiology of Domestic Animals (FA) Cardiovascular physiology, including circulatory systems 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 (8 weeks of semester). (Same as ANSC 5932) Prerequisite: CHEM 3813. Corequisite: POSC 5932.

**PSY(PSY) PSYCHOLOGY**

**PSYC2003 General Psychology (FA, SP, SU)** Introduction to basic procedures in the study of behavior and to the elementary principles of learning, motivation, emotion, sensation, and individual differences. Students will be expected to complete a research requirement. UNIVERSITY CORE COURSE

**PSYC3003H Honors General Psychology (FA, SP, SU)** Introduction to basic procedures in the study of behavior and to the elementary principles of learning, motivation, emotion, sensation, and individual differences. Students will be expected to complete a research requirement. UNIVERSITY CORE COURSE

**PSYC2013 Introduction to Statistics for Psychologists (FA, SP, SU)** Introduction to the descriptive and inferential statistical methods used by psychologists. Prerequisite: PSYC 2003.

**PSYC3013 Social Psychology (FA, SP, SU)** Introduction to the problems, theories, and experiments of social psychology. Prerequisite: PSYC 2003.

**PSYC3023 Abnormal Psychology (FA, SP, SU)** Causes and treatment of the major forms of abnormal behavior. Prerequisite: PSYC 2003.

**PSYC3033 Infancy and Early Childhood (FA, SP,
PSYC3073 Psychological Research Methods (FA, SP, SU)
Training in the theory, administration, and interpretation of experiments using the classical experimental designs. Limited enrollment. Prerequisite: PSYC 3073.

PSYC3083 Research in Applied Psychology (SP, Even years) A lecture and laboratory course dealing with the application of psychological research methods to practical problems. Prerequisite: PSYC 3073.

PSYC3103 Cognitive Psychology (SP) Introduction to theories and research in cognition including memory, language, and problem-solving. Prerequisite: PSYC 3073.

PSYC3183 Human Learning (Odd years) A lecture and laboratory course dealing with the simpler forms of human learning. Prerequisite: PSYC 3073.

PSYC3283 Research in Social Psychology (FA, Even years) A lecture and laboratory course dealing with research methods commonly used in social psychology as well as experience involving the design, conduct, analysis, and presentation of research projects related to the processes discussed in lecture. Prerequisite: PSYC 3073.

PSYC3383 Research in Developmental Psychology (FA, Odd years) A lecture and laboratory course dealing with research methods and experimental research methods as well as 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 (SP, Even years) A lecture and laboratory course dealing with techniques for investigating the relationship between brain functions and behavior in both human and animal research. Students should expect to carry out a research project using laboratory rats. Prerequisite: PSYC 3073.

PSYC3583 Research in Personality (SP, Odd years) A lecture course dealing with methodologies for the study of personality. Prerequisite: PSYC 3073.

PSYC3783 Research in Cognition (FA, Even years) A lecture and laboratory course dealing with the design, conduct, and analysis of experiments in the area of memory, language, and other aspects of more complex human information processing. Prerequisite: PSYC 3073.

PSYC399V Honors Course (1-6) (FA, SP, SU)
May be repeated for 12 hours. Prerequisite: junior standing.

PSYC4013 Exceptional Children (IR) Study of children who exhibit atypical patterns, including for example, the mentally deficient, the physically and emotionally handicapped. Prerequisite: PSYC 3003.

PSYC4023 Adulthood and Aging (SP, Even years) Psychology of adulthood ranging from young adulthood through old age. Emphasis on cognitive, personality, physical, and psychological factors. Prerequisite: PSYC 3003.

PSYC4033 Ecological Psychology (IR) Psychological theories and concepts applied to the educational process. Investigates the learner and instructional variables in a wide range of educational settings. Prerequisite: PSYC 4033.

PSYC5003 Advanced Personality Assessment and Clinical Diagnosis (FA and SP) Guidelines for using standardized instruments and structured interviews in the diagnosis and clinical assessment of major psychological disorders. Prerequisite: PSYC 5033.

PSYC5053 Advanced Social Psychology (IR) Theory, methodology, and contemporary research in the major areas of social psychology. Topics include attitude theory and measurement, group processes, social and cultural factors.

PSYC5073 Introduction to Clinical Practice: Core Skills and Ethical Guidelines (FA) An introduction to clinical practice focusing on a) interviewing patients and b) ethical principles and guidelines.

PSYC5113 Theories of Learning (FA) Major concepts in each of the important theories of learning. Prerequisite: PSYC 4033.

PSYC5123 Cognitive Psychology (SP, Even years) Contemporary theories and research on human information processing including topics such as memory, language, thinking, and problem solving.

PSYC5133 Inferential Statistics for Psychology (FA) Inferential statistics, including representative parametric and non-parametric tests; special emphasis on advanced analysis of variance, covariance, and component variance estimators as applied to psychological research. Prerequisite: PSYC 303 or PSYC 503V.

PSYC5143 Advanced Descriptive Statistics for Psychology (SP) Special correlation techniques followed by a survey of representative nonparametric tests of significance. Major emphasis on advanced analysis of variance theory and design. Prerequisite: PSYC 3073.

PSYC5163 Personality: Theory & Disorder (SP) An introduction to empirically based theories of personality and personality disorders with an emphasis on clinical application and intervention.

PSYC523V Research Practicum I (3-6) (FA, SP, SU) Survey, presentation, and discussion of on-going research proposals. Required of all experimental graduate students in the first 2 years of their program.

PSYC5313 Introduction to Clinical Science: Research Design and Ethical Guidelines (FA) Provides guidelines for designing and conducting empirical research in clinical psychology, b) ethical principles that regulate clinical research, and c) supervised opportunities to develop a clinical research proposal.

PSYC560V Master’s Thesis I (1-6) (FA, SP, SU)

PSYC560V Seminar: Teaching Psychology (1-3) (FA, SP) Survey of the literature on teaching of psychology. Includes: planning the course, method, exercising, and advising students. Prerequisite: teaching assistant.

PSYC567V Clinical Practicum III (1-3) (SP) Provides supervised experience in the application of the more complex and lesser known psychodiagnostic techniques and training and experience in psychopharmacological techniques with the more severe functional disorders. Level of responsibility and independence to increase in 600V. Prerequisite: PSYC 507V and PSYC 508V.

PSYC569V Clinical Practicum IV (1-3) (SP) Provides supervised experience in the application of the more complex and lesser known psychodiagnostic techniques and training and experience in psychopharmacological techniques with the more severe functional disorders. Prerequisite: PSYC 507V and PSYC 508V.

PSYC609V Clinical Graduate Seminar I (1-3) (FA, SP) Provides intensive coverage of specialized clinical topics. Open to all graduate students.

PSYC611V Individual Research (1-18) (FA, SP, SU)

PSYC6133 Advanced Physiological Psychology (FA) Examination of the biological basis of behavior, with emphasis on underlying neural mechanisms.

PSYC6163 Psychotherapy (SP) A conceptual overview of psychotherapy, with an emphasis on a) common psychodynamic techniques, and b) cognitive and interpersonal approaches.

PSYC6173 Clinical Child Psychology (SP, Even years) Intensive study of psychopathology, assessment, and treatment of children. Broad coverage of theory, practice, and research from a developmental perspective. Prerequisite: PSYC 5033 and PSYC 5043 and 5053.

PSYC6183 Group Psychotherapy (FA, Even years) Examination of theory, research, and practice in group psychotherapy.

PSYC6203 Marital and Family Psychotherapy (FA, Odd years) Examination of theory, research, and practice in marital and family psychotherapy. Includes supervised clinical experiences.

PSYC6213 Behavior Therapy (FA, Even years) Emphasis on clinical experience and analysis on operant behavior modification technique. Includes also a critical evaluation of theory, research, and issues in the area.

PSYC6223 Diversity Issues in Clinical Psychology (SP) The impact of client diversity on assessment, treatment, and research in clinical psychology. Broad coverage with an emphasis on implications for clinical practice.

PSYC6233 Professional Issues in Clinical Practice (IR) Examination of major issues the professional practice of clinical psychology, including regulations governing licensure, the business of behavioral health care, and the role of clinical psychology in society.

PSYC6323 Seminar in Developmental Psychology (FA, Odd years) Discussion of selected topics in the area of human development. Emphasis will be on a review of current theory and empirical research.
selected for discussion could range from early development (child psychology) to later development (psychology of adulthood and aging-gerontiology), to current attempts to integrate the field (life-span development psychology).

**PSYC6333 Seminar in Learning/Memory/Cognition (SP, Odd years)**

Discussion of topics in learning, memory, or cognition. Emphasis on current theory and empirical research. Topics selected for discussion may be in the areas of learning, memory, problem solving, or language.

**PSYC6373 Seminar in Personality and Social Psychology (FA)**

Discussion of selected topics in social psychology and personality. Current theoretical positions and recent empirical research will be emphasized. Topics selected for discussion will be in areas of intrapersonal processes, inter-personal processes, group processes or any of various areas of personality.

**PSYC6313 Seminar in Physiological Psychology (SP, Odd years)**

Discussion of selected topics in physiologic psychology. Emphasis will be on a review of current theory and empirical research. Each offering of the seminar will examine a different aspect of the specific aspect of behavior, utilizing both animal and human data.

**PSYC698V Field Work (1-3)**

Provides academic credit for field work in multidisciplinary setting, involving current research in assessment and psychotherapy. May be repeated.

**PSYC699V Clinical Psychology Internship (1-3)**

Supervised experience in a multidisciplinary setting. Students are assigned to assist in community based projects. May be repeated.

**PTSC700V Doctoral Dissertation (1-18)**

Prerequisite: candidacy.

**PTSC**

**PLANT SCIENCE**

**PTSC2433 Seed Physiology (SP)**

Current theoretical positions and recent empirical research will be emphasized. Topics selected for discussion will be in areas of intrapersonal processes, inter-personal processes, group processes or any of various areas of personality.

**PTSC2471 Laboratory Instrumentation in Plant Science Laboratory (SP, Odd years)**

Provides academic credit for laboratory work in plant science. May be repeated.

**PTSC2460L Laboratory Instrumentation in Plant Science Laboratory (SP, Odd years)**

Provides academic credit for laboratory work in plant science. May be repeated.

**PTSC700V Doctoral Dissertation (1-18)**

Prerequisite: graduate standing.
sound, practical philosophy of therapeutic recreation. The ulti-
mate goal is to prepare the student to enter the profession
confident in his or her ability to provide exemplary services.
Prerequisite: REC 4093.

RECR580V Workshop (1-3) (IR)
RECR584十七 Principles of Recreation (SU)
RECR5813 Principles of Recreation (SU)
RECR5823 Outreach Recreation Program (IR)
RECR5833 Recreation for Special Populations (SP, SU)
RECR5843 Tourism (FA)
RECR5883 Recreation Services Promotion (SP, SU)
RECR5893 Field Work in Recreation (FA, SP, SU)
RECRE5833 Recreation for Special Populations (SP, SU)
RECRE5843 Tourism (FA)
RECRE5883 Recreation Services Promotion (SP, SU)
RECRE5893 Field Work in Recreation (FA, SP, SU)

(REHAB) REHABILITATION EDUCATION

RHAB5333 Counseling Persons Who Are Deaf or Hard of Hearing (FA, SP)
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.

RHAB534V Supervised Rehabilitation Counseling Practicum (1-3) (FA, SP, SU)
Gives the student practice in counseling under supervision with rehabilitation clients in selected settings and agencies.

RHAB5355 Hearing Impairment and Human Behavior (FA, SP)
Focuses on an interdisciplinary study of the interplay between hearing loss on the educational, psychological, social, and vocational functioning of persons who are deaf or hard of hearing.

RHAB580V Supervised Rehab. Couns. Practicum (FA, SP, SU)
Students address the placement needs of rehabilitation agencies and their clients by implementing the RehabMark approach to employer development. Prerequisite: RHAB 580V.

RHAB5837 Multicultural/Gender Issues in Rehab (SU)
This course examines multicultural and gender issues of importance to rehabilitation practice and research, including study of women and men with disabilities within different minority cultures. The course uses a power analysis and a minority model to understand the relationship between disability, gender, race and ethnicity.

RHAB5403 Rehabilitation Counseling (FA)
Counseling theories and techniques applied to the rehabilitation counseling setting. Includes an experiential component with critical analysis.

RHAB5413 Group Counseling in a Rehabilitation Setting (SU)
This course combines theoretical and experiential components of group counseling in setting up and implementing the practice of rehabilitation counseling. Prerequisite: Rehabilitation counseling or counseling theory.

RHAB5423 Vocational Rehabilitation Foundations (FA)
Survey of the philosophy of vocational rehabilitation, including history and legislation.

RHAB5433 Medical Aspects of Disability (SP)
Oriented to medical and medically related aspects of various disabling conditions 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 atypical physique and prolonged handicapping condition.

RHAB5463 Independent Living and Community Adjustment (FA, SP)
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)
An examination of the theory and practice as they apply to people who experience disabilities. Special attention is given to RehabMark approach.

RHAB5483 Rehabilitation Counseling Research (FA, SP, SU)
An in-depth examination of rehabilitation research methodology and issues to prepare students to critically evaluate and use rehabilitation counseling research in their professional practice.

RHAB5493 Vocational Evaluation and Adjustment (SP)
The course examines the relationship between rehabilitation counseling and vocational rehabilitation. Prerequisite: RHAB 5493 or equivalent.

RHAB550V Seminar (1-3) (FA, SP, SU)
Discussion of select topics and review of current literature in the rehabilitation field. Prerequisite: advanced graduate standing.

RHAB5827 Administration & Supervision in Rehabilitation Settings (FA, Odd years)
An examination of the basic knowledge and skills required to perform supervisory and administrative functions in rehabilitation settings. Includes a review of applicable laws, management theory, issues in human resource development, burnout, and exposure to organizational stress. Prerequisite: master's or doctoral standing.

RHAB675V Internship (1-8) (FA, SP, SU)
Advanced supervisory practice in rehabilitation setting.

RHAB689V Seminar (1-8) (FA, SP, SU)
Discussion of pertinent topics and issues in the rehabilitation field. May be repeated for 18 hours. Prerequisite: advanced graduate standing.

RHAB700V Doctoral Dissertation (1-8) (FA, SP, SU)
Prerequisite: candidacy.

(RSOP) RURAL SOCIOLOGY

RSOC2603 Rural Sociology (SP)
Meaning of sociology and sociological concepts with reference to rural society; interdependence of rural and urban populations in ecological areas; institutions; social change and adjustment. UNIVERSITY CORE COURSE

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 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.

RSOC4623 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: RSOC 2663 or SOC 2013.

RSOC500V Special Problems (1-6) (FA, SP)
Gives experience in executing research and in analyzing a sociological problem of agriculture. Prerequisite: graduate standing.

RSOC5163 Agricultural and Rural Development (SU)
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 2233)

RSOS543 Research Methodology in the Social Sciences (SP, Odd years)
Basic logic and method of science. Basic elements of research design, observation, measurement, analytic method, interpretation, verification, presentation of findings. Emphasis in economic or sociological problems of agriculture and Human Environmental Sciences. Prerequisite: graduate standing.

RSOC5623 Advanced Community Development (SP)
Examination of the theories and applications of community development. Course is operated as a seminar, and covers a wide variety of community development applications. Prerequisite: RSOC 3613 or RSOC 4603 or equivalent.

RSOC600V Master's Thesis (1-6) (FA, SP, SU)
Prerequisite: graduate standing.

RSOC700V Doctoral Dissertation (1-9) (FA, SP, SU)

(RUS) RUSSIAN STUDIES

RSST4003 Russian Studies Colloquium (SP)
An interdepartmental colloquium with an annual change in subject of investigation, required of all students in the Russian Studies program. May be repeated for 6 hours. Prerequisite: sophomore standing for Russian studies major and honors students.

RSST4003H Honors Russian Studies Colloquium (SP)

(RUS) RUSSIAN

RUSS1003 Elementary Russian I (FA)

RUSS1013 Elementary Russian II (SP)
Elementary
SCWK3213 Introduction to Social Work (FA, SP, SU) Introduction to social work as a profession and to social work values. Emphasis on the perspective of the generalist, entry level social worker. Empowerment and function of social work.

SCWK3163 On Death and Dying (FA, SP, SU) The role and responsibilities of nurses in end-of-life care. The concepts of death and dying and their impact on family and friends. Palliative care and hospice care.

SCWK3183 Elderly Citizen (SP, SU) Study of elderly issues, including aging, health, and social services for the elderly. The role of the elderly in society and the impact of societal changes on the elderly.

SCWK3163 On Death and Dying (FA, SP, SU) The role and responsibilities of nurses in end-of-life care. The concepts of death and dying and their impact on family and friends. Palliative care and hospice care.

SCWK333 Social Work Practice I (FA, SP, SU) This is the first in the sequence of practice courses introducing students to the generalist approach to micro social work. This course focuses on developing a solid foundation for practice with individuals, including learning basic communication and helping skills, values, principles, and the connection to theory to practice. Pre- or Corequisite: SCWK 4332

SCWK4342 Field Seminar II (FA, SP, SU) An integrative seminar to assist students in comparing their practice experiences, integrating knowledge acquired in the classroom, and expanding knowledge beyond the scope of the practicum setting. Corequisite: SCWK 4444 (social work majors only).}

SCWK4433 Social Work Internship I (FA, SP, SU) Arranged in connection with social service agencies. Credit is based on completion of all course objectives, including a minimum of 250 hours of field work under the supervision of a licensed social worker. Corequisites: SCWK 4442 (social work majors only)

SCWK4433 Social Work Internship II (FA, SP, SU) Arranged in connection with social service agencies. Credit is based on completion of all course objectives, including a minimum of 250 hours of field work under the supervision of a licensed social worker. Corequisites: SCWK 4442 (social work majors only)

SCWK4433 Social Work Internship III (FA, SP, SU) Arranged in connection with social service agencies. Credit is based on completion of all course objectives, including a minimum of 250 hours of field work under the supervision of a licensed social worker. Corequisites: SCWK 4442 (social work majors only)

SCWK4433 Social Work Internship IV (FA, SP, SU) Arranged in connection with social service agencies. Credit is based on completion of all course objectives, including a minimum of 250 hours of field work under the supervision of a licensed social worker. Corequisites: SCWK 4442 (social work majors only)

SCWK4433 Social Work Internship V (FA, SP, SU) Arranged in connection with social service agencies. Credit is based on completion of all course objectives, including a minimum of 250 hours of field work under the supervision of a licensed social worker. Corequisites: SCWK 4442 (social work majors only)

SCWK4433 Social Work Internship VI (FA, SP, SU) Arranged in connection with social service agencies. Credit is based on completion of all course objectives, including a minimum of 250 hours of field work under the supervision of a licensed social worker. Corequisites: SCWK 4442 (social work majors only)
Course Descriptions

Sociology

Soci2013 General Sociology (FA, SP, SU)

Sociology, the study of human societies and social behavior. An introduction to the sociological analysis of social organization, deviance, social inequality, social change, and social development. (Same as ANTH 2213, CMJS 2083, and ENSY 2083.)

Soci2014 Race, Class, and Gender in America (FA)

Sociology and social change in America, with reference to other models such as gender, nation, class, race, and ethnicity, with emphasis on sociological measurement and design.

Soci2304 Contemporary Caribbean (SP)

Current major social issues in the Caribbean today, with emphasis on the social, economic, political, and cultural diversity of Caribbean societies.

Soci3013 Population and Society (SP, Odd years)

The size, distribution, and composition of populations; problems of migration, urbanization, and family patterns.

Soci3023 Criminology (FA, SP, SU)

An overview of the development of the field of criminology, including its philosophical, historical, and methodological foundations.

Soci3033 American Minorities (FA)

Introduction to the study of American minorities, including social and historical perspectives on gender, race, and ethnicity.

Sociology of Health Care

Soci3303 Health Care (FA)

An introduction to the sociology of health care, including the organization and delivery of health care services, the impact of health care on individuals and society, and the role of the sociologist in health care research.

Sociology of Work

Soci3333 Work (FA, SP)

The sociology of work, including an examination of the relationship between work and society, the nature of work, and the role of the worker.

Sociology of Aging

Soci3413 Aging (FA)

A sociological analysis of the processes of aging, including the social, economic, and health dimensions of the aging experience.

Sociology of Family

Soci3423 Marriage and the Family (FA)

An examination of the social, cultural, and historical factors that influence family formation and development.

Sociology of Social Institutions

Soci3633 Social Institutions (SP)

An examination of the social institutions that shape human behavior, including the family, the economy, and government.

Sociology of Social Problems

Soci4033 Social Problems (SP, Odd years)

An examination of social problems and their causes, including poverty, inequality, crime, and drug addiction.

Sociology of Social Policy

Soci4103 Social Policy (SP)

An examination of the role of social policy in shaping human behavior, including the design and implementation of social policies.

Sociology of Social Research

Soci4203 Social Research (SP)

An introduction to the methods of social research, including qualitative and quantitative approaches.

Sociology of the Family

Soci4503 The Family (FR, Spring only)

An examination of the family as a social institution, including family structure, family processes, and family change.

Sociology of Work and Labor

Soci4603 Work and Labor (FA, SP)

The sociology of work, including an examination of the relationship between work and society, the nature of work, and the role of the worker.

Sociology of the Community

Soci5003 Community (SP)

An examination of the structure and functions of communities, including community organization, social control, and community development.

Sociology of Education

Soci5103 Education (SP)

An examination of the social and political influences on the educational system, including school organization, curriculum, and student learning.

Sociology of Health

Soci5203 Health (SP)

An examination of the social and political influences on health care, including the determinants of health and the role of the health care system.

Sociology of Technology

Soci5303 Technology (SP)

An examination of the social and political influences on technology, including the role of technology in shaping society and the environment.

Sociology of Social Movements

Soci5403 Social Movements (SP)

An examination of the social and political influences on social movements, including the role of social movements in shaping society.

Sociology of Social Change

Soci5503 Social Change (SP)

An examination of the social and political influences on social change, including the role of social change in shaping society.

Sociology of Social Problems

Soci5603 Social Problems (SP)

An examination of the social and political influences on social problems, including the role of social problems in shaping society.

Sociology of Social Institutions

Soci5703 Social Institutions (SP)

An examination of the social and political influences on social institutions, including the role of social institutions in shaping society.

Sociology of Social Policy

Soci5803 Social Policy (SP)

An examination of the social and political influences on social policy, including the role of social policy in shaping society.

Sociology of Social Research

Soci5903 Social Research (SP)

An examination of the social and political influences on social research, including the role of social research in shaping society.

Sociology of the Family

Soci6003 Family (SP)

An examination of the social and political influences on the family, including the role of the family in shaping society.

Sociology of Work and Labor

Soci6103 Work and Labor (SP)

An examination of the social and political influences on work and labor, including the role of work and labor in shaping society.

Sociology of the Community

Soci6203 Community (SP)

An examination of the social and political influences on the community, including the role of the community in shaping society.

Sociology of Education

Soci6303 Education (SP)

An examination of the social and political influences on education, including the role of education in shaping society.

Sociology of Health

Soci6403 Health (SP)

An examination of the social and political influences on health, including the role of health in shaping society.

Sociology of Technology

Soci6503 Technology (SP)

An examination of the social and political influences on technology, including the role of technology in shaping society.

Sociology of Social Movements

Soci6603 Social Movements (SP)

An examination of the social and political influences on social movements, including the role of social movements in shaping society.

Sociology of Social Change

Soci6703 Social Change (SP)

An examination of the social and political influences on social change, including the role of social change in shaping society.

Sociology of Social Problems

Soci6803 Social Problems (SP)

An examination of the social and political influences on social problems, including the role of social problems in shaping society.

Sociology of Social Institutions

Soci6903 Social Institutions (SP)

An examination of the social and political influences on social institutions, including the role of social institutions in shaping society.

Sociology of Social Policy

Soci7003 Social Policy (SP)

An examination of the social and political influences on social policy, including the role of social policy in shaping society.

Sociology of Social Research

Soci7103 Social Research (SP)

An examination of the social and political influences on social research, including the role of social research in shaping society.
behaviors such as vagrancy, alcoholism, violence, and sexual deviancy which deviate from social norms. 
SOCIO3923H Honors Colloquium (IR) Covers a spe-
cial topic or issue, offered as part of the honors program. May be repeated. Prerequisite: honors candidacy (not restricted to sociology majors). 
SOCIO399VH Honors Course (1-6) (FA, SP) May be repeated for 12 hours. Prerequisite: junior standing. 
SOCIO4003 Internship in Sociology (FA, SP, SU) Supervised experience in regular governmental, municipal, county, or state agen-
cies, or other agencies which are approved by the instructor. Prerequisite: SOCI 2013. 
SOCIO4001 Seminar in Sociology (IR) Forum for students and faculty to present and discuss research inter-
est. 
SOCIO41V Special Topics in Sociology (1-6) (SP) Designed to cover specialized topics not usually presented inde-
pth in regular courses. May be repeated for 6 hours. Prerequisite: SOCI 2013. 
SOCIO4203 Social Theory (FA) Nineteenth and twentieth century sociological theory. Present-day currents in sociology are studied and related to political, philosophical, and psy-
chological contemporary thought. Prerequisite: SOCI 2013 and junior standing. 
SOCIO43V Individual Study in Sociology (1-3) (FA, SP, SU) A directed reading course on special topics in sociology for advanced students. 
SOCIO443 Seminar in Sociology (SP) Prerequisite: senior standing. 
SOCIO463 Sociological Organizations in Society (FA) An intro-
duction to the study of organizations; provides a broad overview of issues and problems related to organizations in society. Prerequisite: SOCI 2013. 
SOCIO472 The Black Community in Africa and 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 and junior standing. 
SOCIO4123 Black Ghetto (SP) The origin, continu-
ity, problems, and personalities, of the Black American com-
munity and its contributions to national and international life. Prerequisite: SOCI 2013. 
SOCIO4113 The Family (SP) A 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 3033. 
SOCIO4163 Extremism (SP) Descriptions of, explana-
tions for, religious cults and extremist political groups in America, including question(s) of appropriate response to them. Prerequisite: junior standing. 
SOCIO421 Seminar in Violence (IR) Explanations for, conse-
quences of, and possible responses to individual, col-
lective, and institutional violence; comparisons between social values and the forms of violence. Prerequisite: junior standing. 
SOCIO431 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 purpos-
es, this course makes reference to studies in American lan-
guage and culture. Proficiency in Japanese not required. 
SOCIO4603 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 framework(s) for analyzing environmental issues, considers the role of humans in environmental issues, and enhances understanding of the complicity of the relationship between society and environmental change. 
SOCIO500V Advanced Problems in Sociology (1-6) (FA, SP, SU) Individual research on problems or problem areas. Prerequisite: graduate standing. 
SOCIO501 Advanced Social Research (FA) Supervised field experience and other projects in social research. Prerequisite: SOCI 2013 and SOCI 3001L, and SOCI 3001P. Prerequisite: SOCI 3001. 
SOCIO5023 Sociology of Education (IR) Sociological theory and research relevant to education, the school as a social system, professionalization and career patterns of teachers, value conflicts, social stratification, role relation-
ships, other social status issues. Prerequisite: graduate standing. 
SOCIO5033 Advanced General Social Theory (SP) Advanced survey of the discipline and profession of sociolo-
gy, including designation of the subject matter of sociology and relation to other disciplines, modes of society and peo-
ple, social units and social processes, methods, and sociolo-
gy as a professional discipline. 
SOCIO5083 Methods of Field Research (SP) An introduction to research strategies including intensive inter-
viewing, participant observational fieldwork, content analysis, hist
torical research, and comparative research. Emphasizes the practical aspects of designing and executing research involving multiple methods of data gathering and analysis. Prerequisite: graduate standing. 
SOCIO5113 Seminar in Social Inequality (FA) Major theories of stratification; types of stratification systems, com-
parisons of modern and traditional systems; emergent trends. Prerequisite: SOCI 4023 or SOCI 5053. 
SOCIO5133 The Community (SP, Even years) A sociological analysis of the theory, methods and materials used in the study of the community. Prerequisite: graduate standing. 
SOCIO5153 Sociological Perspective on Social Psychology (FA) 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, interpersonal competence, organization-
al and leadership development, social dislocation, and stress. Prerequisite: graduate standing. 
SOCIO5225 Advanced Research (FA, Even years) A survey of major theories-classical, developmental, ecological, func
tionalist, conflict, subcultural, control, and phenome-
ological-explaining morally condemned differences in socie-
ty. Particular emphasis is on the underlying assumptions of each theoretical perspective for policy and social control. Prerequisite: gradu-
ate standing. 
SOCIO5253 Classical Social Theory (FA) A survey of major sociological theories from ancient to modern times. Prerequisite: SOCI 4023 or SOCI 5053. 
SOCIO5313 Applied Data Analysis (SP) Covers basic concepts and techniques of general linear models to a vari-
ty of sociological research issues and problems. Also provides an introduction to binary dependent and multivariate catego-
rical data analysis for sociological research. Prerequisite: SOCI 3033 or an equivalent course in statistics. Familiarity with statistical computer programs is assumed. 
SOCIO531L Applied Data Analysis Laboratory (SP) Provides instruction for data transformations required for advanced statistical procedures used in the Statistical Package for the Social Sciences (SPSS). Also provides instruction in the use of advanced statistical procedures cov-
ered in SOCI 5313. Corequisite: SOCI 5313. Prerequisite: SOCI 5310. 
SOCIO5403 Survey Methods (IR) Introduction to tech-
niques of social survey research. Focuses on the develop-
ment of survey research instruments and their construction. Mea-
surement techniques are examined including issues of reliability and validity, scaling, and index construction. 
Elementary sampling considerations are discussed in the applied context of research. Techniques of life generation and manipulation relative to survey research are examined. Prerequisite: SOCI 3033 or equivalent. 
SOCIO5506 Research Internship (FA, SP) Supervised research experience in field setting. Prerequisite: graduate standing. 
SOCIO600V Master's Thesis (1-6) (FA, SP, SU) Supervised Public Policy, Children and Families (IR) The study of the impact of public policy on children and families, and the ways in which policies are created, modi-
fied, and changed. Includes the history of public policy con-
cerning children and families. 

(SPA) SPANISH 

SPAN1003 Elementary Spanish I (FA, SP) 
SPAN1016 Intensive Elementary Spanish (FA) 
Equivalent to 1000 and 1013. Stresses aural comprehen-
sion and practical speaking ability. Reading, writing, and grammar in support of communication skills. 
SPAN1013 Elementary Spanish II (FA, SP) 
Elementary courses stress pronunciation, aural comprehen-
sion, and speaking ability, and textual review of basic grammar and limited reading ability. Prerequisite: SPAN 1003 or equivalent. 
SPAN2003 Intermediate Spanish I (FA, SP) Intermediate courses lead to basic facility in spoken lan-
guage and to more advanced reading skills. Prerequisite: SPAN 1013 or equivalent. UNIVERSITY CORE COURSE 
SPAN2016 Intensive Intermediate Spanish (SP) 
SPAN2013 Intermediate Spanish II (FA, SP) Continuation of basic speaking comprehension and {
language and writing skills and intensive development of reading skills. Prerequisite: SPAN 2003 or equivalent. 
SPAN3003 Honors Intermediate Spanish II (FA, SP) 
SPAN399VH Honors Spanish Course (1-6) (FA, SP) May be repeated for 12 hours. Prerequisite: junior standing. 
SPAN4003 Advanced Grammar (SP) For majors and advanced students covering the problematic areas of Spanish syntax and usage. Prerequisite: SPAN 3003 and \nSPAN 3103. 
SPAN4003 Advanced Conversation (SP) Three hours per week of conversation practice for the advanced undergraduates. Prerequisite: SPAN 3003 and SPAN 4003. 
SPAN4053 Applied Linguistics: Phonetics and Phonology (SP) Prerequisite: SPAN 3003. 
SPAN4103 Monuments of Spanish Literature (FA) Survey of the major works of Spanish literature from El Cid through the 20th century. Prerequisite: SPAN 3113. 
SPAN4133 Survey of Spanish-American Literature (SP) Monuments of Spanish-American litera-
ture from the Colonial period to the present. Prerequisite: SPAN 3113 or equivalent. 
SPAN4113 Survey of Spanish-American Literature (SP) Monuments of Spanish-American litera-
ture from the Colonial period to the present. Prerequisite: SPAN 3113 or equivalent. 
SPAN4213 Spanish Civilization (SP) A wide-ranging exploration of Spanish history and culture from the Middle Ages to the present. Prerequisite: SPAN 3113. 
SPAN4223 Latin American Civilization (FA) Prerequisite: SPAN 3113. 
SPAN4233 Modern Mexico: Culture & Society (FA, SP, SU) A wide-ranging exploration of culture and society in Mexico today, its unity and diversity, as tradition confrts 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. 
SPAN4243 Literature and Culture in the Hispanic United States (FA, SP, SU) An exploration of the histo-
ry and culture, art and politics of the major Hispanic groups in the United States. Focus on contemporary attitudes and 
isues. Prerequisite: SPAN 3113. 
SPAN4253 Latin American Cinema and Society (IR) This course examines key issues in Latin American cul-
ure and history through films, documentaries, and literary and cultural texts. Topics included are: Human Rights, Gender, and Violence. Prerequisite: SPAN 3113. 
SPAN4333 Business Spanish I (SP) Enhances abili-
ty 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, banking and accounting, capital investment, personnel and office systems, production of goods and services, marketing, finance, and import-export. Prerequisite: SPAN 3003.

SPAN4433 Spanish Literature II (SP) Reinforces concepts and vocabulary covered in SPAN 4433 and further enhances ability to function in a Spanish-speaking environment by providing instruction in the preparation of written documents such as form letters, communications, letters of credit, contracts, memoranda, letters of recommendation, dossiers, and order forms. Prerequisite: SPAN 4333.

SPAN470V Special Topics (1-3) (IR) May be offered in a topic not specifically covered by courses otherwise listed. May be repeated for 6 hours.

SPAN475V Special Investigations (1-6) (FA, SP) May be repeated.

SPAN5013 Advanced Stylistics and Composition (IR) Systematic review of principles of Spanish grammar and syntax and development of writing skills. Focus on methods of teaching Spanish grammar.

SPAN5203 Medieval Spanish Literature (IR) From the ‘Jarchas’ to the Celestina.

SPAN5243 Golden Age Poetry and Drama (IR) History and development of those genres in the 16th and 17th centuries, with close reading of major works.

SPAN5253 Colonial Literature and Culture (FA, SP, SU) An introductory course to the history, culture and literature of the different Spanish colonies from 1492 until 1810. The course will cover 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.

SPAN5273 Nineteenth Century Survey (IR) From Neoclassicism through Naturalism.

SPAN5283 Nineteenth Century Drama and Poetry (IR) From Realism to the Generation of 1898.

SPAN5343 Advanced Survey of Spanish Literature Since 1898 (IR) intensive survey of the literature of Spain from the Generation of 1898 to the present. Prerequisite: graduate standing.

SPAN5363 Spanish American Literature (1492-1900) (IR) Representative works of Spanish American prose and poetry, including selections from indigenous literatures, the chronicles, and colonial literature up to the movement of modernismo.

SPAN5383 Twentieth Century Spanish American Poetry (IR) From the development of modernism to the present.

SPAN5393 19th Century Spanish American Literature (FA, SP, SU) Study of representative literary works from Independence (1810) to 1900s. The course covers Neo-classicism, Realism, and Modernism and the role of literature in the nation-building process. The course will be taught in Spanish.

SPAN5403 Spanish American Theatre (FA, SP, SU) Historical examination of the theatre in Spanish America, with close analysis particularly of representative works and movements in the 20th century.

SPAN5433 Cervantes: (Don Quixote) (IR) A close reading of Spain’s greatest literary masterpiece.

SPAN5453 Cinema and Literature (IR) This course examines several Latin American and Spanish texts and their film adaptations as well as the main film making traditions in the Hispanic world.

SPAN5463 20th Century Spanish American Literature (FA, SP, SU) Critical survey of major movements and outstanding representative works in 20th century Spanish American literature. Mexican Revolution and the avant-garde to the contemporary boom and post-boom.

SPAN5533 Mexican Literature (FA, SP, SU) An exploration of the special features and particular qualities of Mexican literature, as one of the most representative and complex of the Latin American national literatures. Includes an historical survey, but each class will focus on selected topics and issues especially in modern Mexican literature and culture.

SPAN5603 History of the Spanish Language (IR) Spanish from its origins to the present; relations between Spanish and the other romance languages (IR) May be offered in a subject not specifically covered by the courses otherwise listed. May be repeated for 6 hours.

SPAN5703 Special Topics (IR) May be offered in a subject not specifically covered by the courses otherwise listed. May be repeated for 6 hours.

SPAN575V Special Investigations (1-6) (IR) May be repeated.

SPAN5803 Seminar (1-6) (FA, SP) May be repeated.

SPAN5901 History of the Spanish Language (IR) Improvement of language proficiency in areas of listening and speaking. Includes a review of grammar, phonetics, and vocabulary (with cultural enrichment) as needed, with stress on oral drill and practice. Prerequisite: adequate functional use of the language.

SPAN5913 Advanced Stylistics and Composition (IR) Systematic review of principles of Spanish grammar and syntax and development of writing skills. Focus on methods of teaching Spanish grammar.

STAT2023 Biostatistics (SP) An introductory course in biostatistics emphasizing methods for collecting, graphing, and understanding data. Special emphasis is placed upon available methods for both exploratory and confirmatory data analysis. Particular attention is given to statistical methods for data sets with discrete variables. Pre-requisite: CORE 2554. Corequisite: STAT 2020L.


STAT2303 Principles of Statistics (SP) A problem-oriented course with applications from many fields. Emphasis on understanding the nature of statistical orderliness implied by probability laws. Statistical analysis is treated as a means of decision making in the face of uncertainty.

STAT3013 Introduction to Probability and Statistics (FA, SP, SU) A calculus-based introduction to the foundations of probability. Emphasis is placed upon understanding elementary properties of probabilities, events, statistical densities and distributions, properties of random variables, law of large numbers, and their role in relation to sampling and statistical inference. Prerequisite: MATH 2564.

STAT4003 Statistical Methods (FA, SP) Concepts of probability, sampling, regression, and experimental design. Corequisite: STAT 4001L. Prerequisite: MATH 2554.

STAT401L Statistics Methods Laboratory (FA, SP) Emphasis on use of integrated statistical packages to complement statistical methodology being covered concurrently. Corequisite: STAT 4003.

STAT4033 Nonparametric Statistical Methods (FA, SP, SU) Chi square tests. Kolmogorov-Smirnov goodness-of-fit tests, the Mann-Whitney and Wilcoxon 2-sampling tests, and various tests of association. Prerequisite: MATH 2103 and junior standing.

STAT4043 Sampling Techniques (FA, SP, SU) Emphasis on use of integrated statistical packages to complement statistical methodology being covered concurrently. Corequisite: STAT 4003.

STAT4043 Nonparametric Statistical Methods (FA, SP, SU) Chi square tests. Kolmogorov-Smirnov goodness-of-fit tests, the Mann-Whitney and Wilcoxon 2-sampling tests, and various tests of association. Prerequisite: MATH 2103 and junior standing.

STAT4043 Nonparametric Statistical Methods (SP) Emphasis on use of integrated statistical packages to complement statistical methodology being covered concurrently. Corequisite: STAT 4003.

STAT4043 Nonparametric Statistical Methods (SP) Topics in the design and analysis of planned experiments, including randomized block, Latin square, split plot, and BIB designs. Use of fractional factorial replication, and repeated measures. Prerequisite: STAT 4003.

STAT5033 Theory of Statistics (FA) Fundamentals of probability, distribution theory, and random variables; expectation, moments, and generating functions; classic para-meter families of distributions, inverse distributions, and scale and shape families. May be repeated.

STAT5013 Statistical Inference (SP) Statistical theory of estimation and testing hypothesis. Prerequisite: STAT 5103.

STAT5103 Regression Analysis I (SP) Focus on linear regression, formulation of least squares and multiple regression models. Estimability and use of the generalized inverse in analysis of variance and covariance models of less than full rank. Corollational aspects are emphasized.

STAT5322 Statistical Packages (FA, SP) Emphasis on use of digital computer to perform statistical data analysis through the use of integrated statistical packages. Instruction includes use of the SAS, SPSS, and BMDP packages. Data management operations as well as formal statistical procedures such as ANOVA and regression are considered. Prerequisite: 3 hours of statistics.

STAT5333 Analysis of Categorical Responses (SP) A modern treatment, including extensions of classical probit analysis, multivariate logistic models, GLM model, log-linear models in analysis of multiflavor contingency tables, and nonmetric multidimensional scaling. Prerequisite: STAT 5013.


STAT5393 Analysis of Categorical Responses II (SP) Hotelling’s T2 procedures, multivariate analysis of variance, discriminant function analysis and problems of classification, multidimensional scaling, and cluster analysis. Prerequisite: STAT 5333.

STAT5383 Time Series Analysis (FA, SP, SU) Identification, estimation and forecasting of time series. Spectral analysis including the last Fourier transform computational aspects are emphasized. Prerequisite: STAT 5343.

STAT5413 Spatial Statistics (FA) Applied spatial statistics, covering univariate spatial modeling (kriging), multivariate spatial modeling (cokriging), methods of estimation and inference, and spatial sampling. Importance of spatial relevance to remote sensing. Prerequisite: STAT 5313.

STAT5610 Research in Statistics (1-4) (IR) Prerequisite: graduate standing.

STAT569V Topics in Statistics (1-3) (IR) Current state of the art on methodology in one of the topics: multivariate analysis, time series analysis, sequential analysis, factor analysis, or biostatistics. May be repeated.

TLOG4433 Principles of Transportation (SP, SU) Examines forms of transportation and transportation factors that influence transportation decisions; regulation, public policy, other governmental variables reviewed in detail. An introduction to physical distribution's interaction with transportation explored. Prerequisite: ECON 2013 and ECON 2023 or ECON 2143.

TLOG3613 Business Logistics (FA, SP, SU) Management of logistics functions in the firm including physical supply and distribution and transportation, storage facility location, inventory control, materials handling, warehousing, and organization. Prerequisite: ECON 2013 and ECON 2023 or ECON 2143.

TLOG3523 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: TLOG 3613.

TLOG410V Special Topics in Logistics (1-3) (IR) 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 if offered. May be repeated for 6 hours. Prerequisite: TLOG 3613.

TLOG4632 Transportation Carrier Management (FA) Reviews special management techniques and analytical framework available for solving problems associated with transportation companies. Prerequisite: TLOG 3443.

TLOG410V Special Topics in Logistics (1-3) (IR) 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 if offered. May be repeated for 6 hours. Prerequisite: TLOG 3613.

TLOG4632 Transportation Carrier Management (FA) Reviews special management techniques and analytical framework available for solving problems associated with transportation companies. Prerequisite: TLOG 3443.
Course Descriptions

VAED6303 Program Planning and Evaluation in Vocational and Adult Education (FA, SP, SU) 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 for analyzing the programming process in agency, program, or adult education organization.

VAED6403 Special Topics in Human Resource Development (FA, SP, SU) 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.

VAED6413 Developing Human Resources (FA, SP, SU) Practical and innovative strategies for making the optimum use of all employees in both private and public vocational settings.

VAED6423 Foundations of Human Resource Development (FA, SP, SU) 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, application of organizational learning theories, career development theories and methods, and application of organizational learning theories.

VAED6433 Facilitating Learning in the Workplace (FA, SP, SU) Facilitation of learning and performance improvement in the workplace. Focus on the role of organizational learning and the impact of technology and training interventions.

VAED6443 Program Evaluation in Human Resource Development (SP, Even years) This course is a doctoral 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 (FA, SP, SU) An introduction to and survey of current theories and practices in training in the workplace. Students are expected to explore selected interdisciplinary topics in areas such as adult education, vocational education, human resource development, organizational behavior, instructional technology, and economics as they relate to training in the workplace.

VAED660V Workshop (FA, SP, SU) May be repeated for 6 hours. Prerequisite: advanced graduate standing.

VAED667V Internship (1-18) (IR) Prerequisite: advanced graduate standing.

VAED680V Educational Specialist Project (1-6) (IR) 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 (1-18) (IR) Teaching and supervision in secondary or post-secondary schools or work in business or industry under guidance. For students who desire or need directed experience.

VAED699V Seminar (1-18) (IR)
jobs in a specific vocation.

VOED3114 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 being an effective adviser.

VOED380V Supervised Work Experience (1-9)
Supervision in business and industry under guidance. Designed for students who desire or need directed occupational experience. May be repeated for 6 hours. No credit for certification.

VOED391V Performance Based Teacher Education (3-12)(FA, SP, SU)
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.

VOED393V Performance Based Internship (3-6)
Prerequisite: completion of 12 credit hours of VOED 391 and 392V. Provided by PBTE modules and University resource person. Enrollment before VOED 391V and 392V. Prerequisite: employed in service vocational-technical education field based instructor.

VOED5004V Work Experience III (1-6)(FA, SP, SU)
Advanced mathematical skills, communication skills for a specific vocation, evaluation in business and industry, job skills, and related information at the Journeyman level.

VOED5005 Cohort Directed Field Experience (FA, SP, SU)
A consideration of special problems relating to technical vocation.

VOED5006 Cohort Directed Field Experience (1-6)(FA, SP, SU)
A minimum of 8 weeks will be spent in an off-campus school, at which time the intern will have an opportunity to observe 6 classroom teachers and to teach under supervision. Prerequisite: cohort year status.

VOED5103 Teaching Strategies in Vocational Education (FA, SP, SU)
Methods and techniques in teaching vocational business, home economics, and industrial technology education. Designed for students who desire or need directed occupational experience in vocational business, home economics, and industrial technology education.

VOED5123 Current Design and Evaluation in Vocational Education (FA, SP, SU)
Prerequisites: Methods and techniques in developing, organizing, implementing, and evaluating programs in vocational education.

VOED5191 Applied Research (FA, SP, SU)
Interpretation and evaluation of research in education for classroom utilization.

VOED5203 School-To-Workforce (FA, SP, SU)
This course is designed to provide information on the role of the student in workforce development and to introduce a teacher to the skills desired in a seamless educational curriculum model.

VOED5253 Career Orientation Programs (FA, SP, SU)
Prerequisites: completion of VOED 391 and 392V. Provided by PBTE modules and University resource person. Enrollment before VOED 391V and 392V. Prerequisite: employed in service vocational-technical education field based instructor.

VOED5263 Applications in Career Orientation (FA, SP, SU)
Prerequisite: completion of 12 credit hours of VOED 390 and employee inservice-vocational-technical education field based instructor.

VOED5274 Career Planning (FA, SP, SU)
Prerequisite: completion of 12 credit hours of VOED 390 and employee inservice-vocational-technical education field based instructor.

VOED599V Seminar (1-18)(FA, SP, SU)
Prerequisite: candidacy.

(WCIV) WESTERN CIVILIZATION

WCV1003 Institutions and Ideas of Western Civilization (FA, SP, SU)
Survey of major themes of Western history from the Ancient Near East through an examination of their contribution to contemporary life and culture. UNIVERSITY CORE COURSE

WCV1103 Institutions and Ideas of Western Civilization II (FA, SP, SU)
Examines major themes of Western history since the Reformation and an evaluation of their contribution to contemporary life and culture. UNIVERSITY CORE COURSE

(WCOW) WALTON COLLEGE OF BUSINESS

WCOB1012 Legal Environmental of Business (FA, SP, SU)
Introduction to the legal and ethical environment in which businesses operate. Topics covered in this course include: foundations of the American legal system, regulatory environment, torts, criminal law, laws affecting contracts and property, employment law, and forms of doing business.

WCOB1012H Honors Legal Environmental of Business (FA, SP, SU)
Introduction to the legal and ethical environment in which businesses operate. Topics covered in this course include: foundations of the American legal system, regulatory environment, torts, criminal law, laws affecting contracts and property, employment law, and forms of doing business.

WCOB2023 Production and Delivery of Goods and Services (FA, SP, SU)
This course is designed to provide students with a broad understanding of the production and delivery of goods/services. The course focuses on concepts and methodologies for managing the flow of material and information throughout the production and delivery of goods/services. Prerequisite: WCOB 1023, WCOB 1033, ECON 2023, and WCOB 1012—each with a grade of “C” or better.

WCOB2023H Honors Production and Delivery of Goods and Services (FA, SP, SU)
This course is designed to provide students with a broad understanding of the production and delivery of goods/services. The course focuses on concepts and methodologies for managing the flow of material and information throughout the production and delivery of goods/services. Prerequisite: WCOB 1023, WCOB 1033, ECON 2023, and WCOB 1012—each with a grade of “C” or better.

WCOB2033 Acquiring and Managing Human Resources (FA, SP, SU)
Prerequisite: the study of the process of acquir-
ing and managing human resources, focusing on the organi-
zational, humanistic, and technical issues con-
cerned with business decisions about acquiring, motivating, and
retaining employees; emphasis given to the develop-
ment, implementation, and assessment of policies and prac-
tices concerning human resource, human, and en-
vironmental dynamics. Prerequisite: WCOB 1023, WCOB 1033, ECON
2023, and WCOB 1012—each with a grade of “C” or better.

WCOB203H Honors Acquiring and Managing Human
Resources (FA, SP, SU) Study of the process of
acquiring and managing human resources, focusing on the
organizational behavior, legal, economic, and technical
issues concerned with business decisions about acquiring, motivating, and retaining employees; emphasis given to the
development, implementation, and assessment of policies and practices consistent with legal, social, and envi-
rionmental dynamics. Prerequisite: WCOB 1023, WCOB 1033, ECON 2023, and WCOB 1012—each with a grade of “C” or better.

WCOB2043 Acquiring and Managing Financial
Resources (FA, SP, SU) Key decisions in business
processes related to the acquisition and management of cap-
ital resources, including decisions regarding what to acquire,
how to finance the acquisition, and issues related to the accounting for those capital resources. The identification of key decisions leads to decision models and the identification of information needs. Prerequisite: WCOB 1023, WCOB 1033, ECON 2023, and WCOB 1012—each with a grade of “C” or better.

WCOB2043H Honors Acquiring and Managing
Financial Resources (FA, SP, SU) Key decisions in business
processes related to the acquisition and management of capital resources, including decisions regarding what to acquire, how to finance the acquisition, and issues related to the accounting for those capital resources. The identification of key decisions leads to decision models and the identification of information needs. Prerequisite: WCOB 1023, WCOB 1033, ECON 2023, and WCOB 1012—each with a grade of “C” or better.

WCOB3010 Business Strategy and Planning
(FA, SP, SU) An interdisciplinary course exploring events, concepts, and/or new developments in the field of business administration. May be repeated for 6 hours. Prerequisite: Junior or sen-
ier standing.

WCOB300V Study Abroad (1-15) (FA, SP, SU)
Open to undergraduate students studying abroad in officially sanctioned programs. May be repeated for 24 hours.

WCOB3016 Business Strategy and Planning
(FA, SP, SU) Integrative study of the managerial decisions; intro-
duces students to an understanding of strategic competitive-
ness and the way in which business strategy is formulated and implemented. Includes the development 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 3013, WCOB 2033, WCOB 2043 and WCOB 2043 must each be completed with a grade of “C” or better. This course is designed for business college students.

WCOB310H Honors Business Strategy and
Planning (FA, SP, SU) Integrative study of the managerial decisions; introduces students to an understanding of strate-
gic competitiveness and the way in which business strategy is formulated and implemented; uses a combination of theo-
retical 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.

WCOB3101 Cooperative Education (1-3) (FA, SP, SU) 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:
1) junior standing in the college, 2) completion of the pre-business core and 3) the prescribed GPA. See cata-
log for details. May be repeated for 6 hours. Prerequisite: jun-
ier standing in the pre-business core.

WCOB410V Special Topics in Business (1-3) (IR) Special business topics of an interdisciplinary nature. May be repeated for 12 hours. Prerequisite: WCOB 6111 or equivalent, WCOB 6121 suggested.

WCOB410V Special Topics in Business (1-3) (IR) Special business topics of an interdisciplinary nature. May be repeated for 12 hours. Prerequisite: WCOB 6111 or equivalent, WCOB 6121 suggested.

WCOB4213 ERP Fundamentals (SP) An introduction to enterprise resource planning systems. Students should gain an understanding of the scope of these integrated systems that reach across organizational boundaries and be able to change how a company does business and implementation issues are covered, including the importance of change management. Prerequisite: WCOB455V Service Learning Practicum (1-2) (FA, SP, SU) Through participation in this practicum, student learn while providing services that benefit the commu-
nity. The course focuses on service learning; the process, principles and practices of field supervision. May be repeated 6 hours.

WCOB4213 Special Topics in Business (1-3) (IR) Special business topics of an interdisciplinary nature. May be repeated for 6 hours.

WCOB499V Honors Thesis (2-3) (SP) Provides Honors Students with an opportunity to explore a business topic in depth through course work. Prerequisite: good standing in the Walton College Honors Program.

WCOB500V Study Abroad (1-12) (FA, SP, SU)
Open to graduate students studying abroad in officially sanctioned programs. May be repeated for 6 hours. Prerequisite: a business student must complete the pre-business requirements before enrolling for this course. WCOB 2043 must each be completed with a grade of “C” or better.

WCOB6111 Seminar in Business Administration
Teaching I (FA) This course in college level teaching is designed for graduate students and new college teachers with specific emphasis on the Business Administration learning and implementing classroom management. The purpose of this course is to intro-
duce graduate students to principles of teaching and learning and to prepare these future teachers to lifelong learners in the classroom. Corequisite: WCOB 6111 Seminar in Business Administration Teaching II (SP, SU) Given that the student has suc-
cessfully completed Seminar in Business Administration Teaching I (FA), this course is suggested as the second course in the sequence. It is designed to ‘hands on’ teaching course. Students will be assigned a class to teach by the respective department and will be supervised. In addition, all students in the class will have the opportunity to discuss once per month. Prerequisite: WCOB 6111 or equivalent.

WCOB6131 Seminar in Business Administration
Teaching II (FA, SP, SU) This is an advanced course in college level teaching. It 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 enhance graduate students’ knowledge of teaching pedagogy 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.
For More Information

http://www.advancement.uark.edu/catalogofstudies

Admissions
Office of Admissions (undergraduate)
200 Silas H. Hunt Hall 575-5346
School of Law, 110 Waterman Hall 575-3102
Graduate School, 119 Ozark Hall 575-6246

Campus Tours & Visits
Office of Admissions
200 Silas H. Hunt Hall 575-5346

Correspondence Courses
Independent Study
Center for Continuing Education 575-3647
Toll-free 1-800-638-1217

Deans' Offices
Honors College 575-7678
418 ADMN
Dale Bumpers College of Agricultural, Food
and Life Sciences
Dean’s Office AFLS Bldg. 575-4446
School of Architecture
120 Vol Walker Hall 575-4945
J. William Fulbright College of Arts & Sciences
525 Old Main 575-4804
Sam M. Walton College of Business
328 Business Building 575-5949
College of Education and Health Professions
324 Graduate Education Bldg. 575-3208
College of Engineering
4183 Bell Engineering Center 575-3051
Graduate School
119 Ozark Hall 575-4401
School of Law
110 Waterman Hall 575-5601

Fee Payments
Student Accounts
101 Silas H. Hunt Hall 575-5651

Financial Aid and Scholarships
Office of Financial Aid and Scholarships
114 Silas H. Hunt Hall 575-3806

Greek Life
ARKU A687 575-5001

Honors Programs
Honors College 575-7678
418 ADMN
Dale Bumpers College of Agricultural, Food
and Life Sciences
Dean’s Office AFLS Bldg. 575-4446
College of Education and Health Professions
Peabody Hall 8 575-4203
Fulbright College of Arts & Sciences
Old Main 517 575-2509
Walton College of Business
WCOB 328 575-4622
School of Architecture
Walker Hall 120 575-4945
College of Engineering
BELL 4183 575-3053

Housing
University Housing
900 Hotz Hall 575-3951

International Students
International Admissions
215 Silas H. Hunt Hall 575-6246
International Programs
104 Holcombe Hall 575-5003

New Student Orientation
ARKU A676 575-4200

Registration
Office of the Registrar
146 Silas H. Hunt Hall 575-5451

ROTC
Air Force ROTC
319 Memorial Hall 575-3651
Army ROTC
207 Military Science Building 575-4251

Student Affairs
Vice Chancellor for Student Affairs
418 Administration Building 575-5007
Dean of Students
325 ADMN 575-5004

Testing (ACT, CLEP, LSAT, GRE, etc.)
Testing Services
730 Hotz Hall 575-3948

Toll-Free Number 1-800-377-8632
The following offices may be reached by dialing this toll-free
number between 8 a.m. and 4:30 p.m. each weekday:
Office of Admissions (undergraduate)
Office of Scholarships and Financial Aid
University Housing
New Student Orientation

Transcripts, Academic Records
Office of the Registrar
146 Silas H. Hunt Hall 575-5451

University Switchboard 575-2000

University of Arkansas
Mailing Address:
Use an office and building address above, plus:
1 University of Arkansas
Fayetteville, AR 72701
Telephone Area Code: 479

Veterans Affairs
Veterans Certification Officer
146 Silas H. Hunt Hall 575-5454

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The Office of Affirmative Action, 221 Administration Building, has been designated to coordinate efforts to comply with the provisions of Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, and the Civil Rights Act of 1991.
Map of Fayetteville Campus

1. Administration Building
2. Agricultural, Food and Life Sciences Building
3. Arkansas Union
4. Bell Engineering Center
5. Business Building
6. Graduate Education Building
7. Silas H. Hunt Hall
8. Mullins Library
9. Old Main
10. Ozark Hall
11. University Housing
12. Visitor Parking
13. Vol Walker Hall