A Land-Grant University

Auburn University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097: Telephone number 404-679-4501) to award Bachelor’s, First Professional, Master’s, Educational Specialist and Doctor’s degrees.

Auburn University is an equal opportunity educational institution.
Policy Notes

The statements set forth in this bulletin are for informational purposes only and should not be construed as the basis of a contract between a student and Auburn University.

While the provisions of the bulletin will ordinarily be applied as stated, Auburn University reserves the right to change any provision listed in the bulletin, including but not limited to academic requirements for graduation, without actual notice to individual students. Every effort will be made to keep students advised of any such changes. Information on changes will be available in the Registrar’s Office and/or the dean’s office. It is important that each student be aware of his or her individual responsibility to keep apprised of current graduation requirements for the student’s respective degree program.

Civil Rights Compliance

Auburn University is an equal opportunity educational institution and operates without regard to race, sex, color, age, religion, national origin, disability or veteran status. The University complies with the regulations of Titles VI and VII of the Civil Rights Act of 1964, the Age Discrimination Act, the Age Discrimination in Employment Act, Title IX of the Education Amendments of 1972, Sections 503/504 of the Rehabilitation Act of 1973, the Vietnam Era Veterans Readjustment Assistance Act and the Americans with Disabilities Act of 1990. Anyone wishing to file a complaint covered by the above should go to the Affirmative Action Office in Suite 13 of the Quad Center, or call 844-4794 between 7:45 a.m. and 4:45 p.m., Monday through Friday.

Sexual Harassment

Sexual harassment constitutes a violation of Civil Rights law as a form of sex discrimination and will not be tolerated by the University. It subverts the mission of the University and threatens the careers, educational experience and well-being of students, faculty and staff.

Sexual harassment in academic settings and in the employment area where students are involved is defined as unwelcome sexual advances, requests for sexual favors and other verbal, graphic or physical conduct of a sexual nature when (1) submission to such conduct may be explicitly or implicitly a term or condition of a student’s academic success or employment, (2) submission or rejection of such conduct may be used as the basis for employment or academic decisions affecting the student and the student’s total educational and/or work experience or (3) such conduct has the purpose or effect of substantially interfering with a student’s employment or academic performance or creates an intimidating, hostile or offensive work or educational environment. Students who wish to make a complaint of sexual harassment, or other discriminatory conduct, should contact the Vice President for Student Affairs in Cater Hall, or call 844-4710 between 7:45 a.m. and 4:45 p.m., Monday through Friday.

Smoking

Smoking of tobacco in AU facilities and vehicles is prohibited except where signs are posted indicating otherwise.

Weapons

Auburn University prohibits possession, use and transportation on university properties of any dangerous or potentially dangerous weapons, including fixed-blade knives, shotguns, rifles, handguns, bows and arrows, crossbows, brass knuckles, air guns, swords and fireworks or explosive devices.
Administration

Auburn University is governed by a Board of Trustees consisting of one member from each congressional district, as these districts were constituted on January 1, 1961, one member from Lee County, two at-large members each of whom shall be a resident of the continental United States, the Governor and the State Superintendent of Education, who are ex-officio. The State Superintendent shall serve until leaving office and will be replaced by one additional at-large member. The Governor is the President. Current trustees are appointed by the Governor, by and with the consent of the State Senate, for a term of 12 years except in the case of the two at-large members, one of whom serves a term of four years and the other serves a term of seven years. Subsequent trustees will be appointed by a committee, by and with the consent of the State Senate, for a term of seven years, and may serve no more than two full seven-year terms. A member may continue to serve until a successor is confirmed, but in no case for more than one year after a completion of a term. Members of the board receive no compensation. By executive order of the Governor in 1971, a non-voting student representative selected by the Student Senate serves as a member ex-officio.

Members Ex Officio

BOB RILEY, Governor of Alabama, President .................................. Montgomery
EDWARD R. RICHARDSON, State Superintendent of Education ...... Montgomery
SGA President, non-voting ......................................................... Main Campus
SGA President, non-voting .......................................................... Main Campus

Appointed Members

Terms Ending In 2003
LOWELL R. BARRON, Fyffe ............................................ 5th Congressional District
CHARLES G. GLOVER, Cullman .............................................. 7th Congressional District
JACK B. VENABLE, Talladega .............................................. 4th Congressional District

Term Ending In 2007
ROBERT E. LOWDER, Montgomery ........................................... 2nd Congressional District
PAUL J. SPINA JR., Hoover .................................................... 6th Congressional District
JOHN G. BLACKWELL, Hampton Cove ................................. 8th Congressional District

Term Ending In 2011
WILLIAM JAMES SAMFORD JR., President Pro Tempore
Opelika ...................................................... 3rd Congressional District
BYRON P. FRANKLIN, Hoover ............................................. 9th Congressional District
JOHN C.H. MILLER JR., Mobile ........................................... 1st Congressional District
JAMES W. RANE, Abbeville ............................................. 3rd Congressional District

At-Large Members

GOLDA McDaniel [Term ends in 2005] .................. Columbus, Miss.

A C A D E M I C   O F F I C I E R S

JOHN W. JENSEN, B.S., M.S., Ph.D.
Interim Dean, College of Agriculture

DANIEL BENNETT, B.Arch., M.Arch.
Dean, College of Architecture, Design and Construction

JOHN J. JAHERA, B.S., M.B.A., Ph.D.
Interim Dean, College of Business

FRANCES K. KOCHAN, B.S., M.Ed., Ph.D.
Interim Dean, College of Education

LARRY D. BENEFIELD, B.S.C.E., M.S.C.E., Ph.D.
Dean, College of Engineering

RICHARD W. BRINKER, B.S., M.B.A., Ph.D.
Dean, School of Forestry and Wildlife Sciences

JUNE M. HENTON, B.S., M.S., Ph.D.
Dean, College of Human Sciences

REBEKAH H. PINDZOLA, B.S., M.S., Ph.D.
Interim Dean, College of Liberal Arts

BARBARA S. WITT, B.S.N., M.S.N., Ed.D.
Dean, School of Nursing

R. LEE EVANS, JR., B.S., Ph.D.
Dean, School of Pharmacy

STEWART W. SCHNELLER, B.S., M.S., Ph.D.
Dean, College of Sciences and Mathematics

TIMOTHY R. BOOSINGER, D.V.M., Ph.D.
Dean, College of Veterinary Medicine

STEPHEN L. McFARLAND, B.A., M.A., Ph.D.
Acting Associate Provost for Academic Affairs, and Dean, Graduate School

SHERIDA H. DOWNER, B.S., M.A., L.S.
Interim Dean, Libraries

JOHN MOUTON, B.S., M.S.
Chair, University Faculty and Senate
### Auburn University Calendar 2003-2004

Auburn University reserves the right to make adjustments to this calendar.

#### 2003 FALL TERM

August 19: Pre-Term Preparation  
August 20: Classes begin  
**Sept. 1**: Labor Day (Holiday)  
October 10: Mid Semester (37th Day)  
**Nov. 24-29**: Thanksgiving Holidays  
December 10: Classes End  
December 11: Study/Reading Day  
December 12-13: Final Exam Period  
December 19: Graduation

#### 2004 SPRING TERM

January 12: Pre-Term Preparation  
January 13: Classes begin  
**Jan. 19**: M. L. King Holiday  
March 4: Mid Semester  
March 29-April 3: Spring Break  
May 3: Classes End  
May 4-5: Mid Semester  
May 6-8, 10-11: Final Exam Period  
May 14: Graduation

#### 2004 SUMMER TERM (Full Semester)

May 19: Pre-Term Preparation  
May 20: Classes begin  
**May 31**: Memorial Day (Holiday)  
June 24: Mid Semester  
**July 5**: Independence Day (Holiday)  
July 30: Classes End  
July 31: Graduation  
August 5: Final Exam Period

#### 2004 SUMMER TERM (Mini-Semester I)

May 19: Pre-Term Preparation  
May 20: Classes begin  
**May 31**: Memorial Day (Holiday)  
June 24: Mid Semester  
June 24: Final Exam Period

#### 2004 SUMMER TERM (Mini-Semester II - Extended)

May 19: Pre-Term Preparation  
May 20: Classes begin  
**May 31**: Memorial Day (Holiday)  
July 1: Mid Semester  
July 1: Final Exam Period

#### 2004 SUMMER TERM (Mini-Semester III)

June 25: Classes begin  
**July 5**: Independence Day (Holiday)  
July 30: Classes End  
July 30: Final Exam Period
FALL 2003
Aug. 18 — Orientation for new graduate students (9-11 a.m.)
Aug. 20 — Classes begin
Sept. 1 — Labor Day Holiday
Sept. 26 — Last day for acceptance of approved drafts of doctoral dissertations and last day to apply for foreign language examinations
Oct. 1-10 — Submission of thesis rough drafts for format check
Oct. 2 — Foreign language examinations
Oct. 10 — Mid-semester and last day to drop classes
Nov. 7 — Last day for submission of approved theses to Graduate School in final form and last day for filing Form 9 (report of thesis-option final oral examination)
Nov. 14 — Last day for doctoral and non-thesis master’s final oral examinations
Nov. 24-29 — Thanksgiving holiday
Dec. 5 — Last day for submission of final copies of dissertations to Graduate School
Dec.10 — Classes end for semester
Dec.11 — Study/reading day
Dec. 12-13,15-17 — Final examinations for semester
Dec.19 — Last day for students to request graduation checks in Graduate School for May graduation (students must be registered no later than the fifteenth class day of spring semester to graduate)
Dec. 19 — Graduation

SPRING 2004
Jan. 13 — Classes begin
Jan. 19 — Martin Luther King, Jr. Holiday
Feb. 20 — Last day for acceptance of approved drafts of doctoral dissertations and last day to apply for foreign language examinations
Feb. 26 — Foreign language examinations
March 1-12 — Submission of thesis rough drafts for format check
March 4 — Mid-semester and last day to drop courses
Mar 29-April 3 — Spring Break
April 5 — Last day for submission of approved theses to Graduate School in final form and last day for filing Form 9 (report of thesis-option final oral examination)
April 16 — Last day for doctoral and master’s non-thesis final oral examinations
April 30 — Last day for submission of final copies of dissertations to Graduate School
May 3 — Classes end for semester
May 4-5 — Study/reading days
May 6-8,10-11 — Final examinations for semester
May 14 — Last day for students to request graduation checks in Graduate School for August graduation (students must be registered no later than the fifteenth class day of summer semester to graduate)
May 14 — Graduation

SUMMER 2004
(Summer 2005 will consist of one 10-week semester, two 5-week sessions, and one 6-week session)
May 20 — Classes begin for Term and Sessions I and II
May 31 — Memorial Day Holiday
June 4 — Last day for acceptance of approved drafts of doctoral dissertations and last day to apply for foreign language examinations
June 7-18 — Submission of thesis rough drafts for format check
June 17 — Foreign language examinations
June 23 — Classes end for Session I
June 24 — Mid-10 week term, last day of 5-week Session I
June 25 — Classes begin for Session III
July 1 — Classes end for 6-week Session II
July 5 — Independence Day Holiday
July 9 — Last day for submission of approved theses to Graduate School in final form and last day for filing Form 9 (report of thesis-option final oral examination)
July 19 — Last day for doctoral and non-thesis final oral examinations
July 26 — Last day for submission of final copies of dissertations to Graduate School
July 30 — Classes end for 10-week semester and Session II
July 31,Aug 2-3 — Final examinations for 10-week semester
Aug. 5 — Last day for students to request graduation checks in Graduate School for December graduation (students must be registered no later than the fifteenth class day of fall semester to graduate)
Aug. 5 — Graduation
The University

AUBURN UNIVERSITY, chartered in 1856, is located in Auburn, Alabama, and traces its beginning to the East Alabama Male College, a private liberal arts institution whose doors opened in 1859. From 1861 to 1866 the college was closed because of the Civil War. The college had begun an affiliation with the Methodist Church before the war. Due to financial straits, the church transferred legal control of the institution to the state in 1872, making it the first land-grant college in the South to be established separate from the state university. It thus became the Agricultural and Mechanical College of Alabama.

Women were admitted in 1892, and in 1899 the name again was changed, to the Alabama Polytechnic Institute. In 1960, the school acquired a more appropriate name, Auburn University, a title more in keeping with its location, size and complexity. The institution has experienced its greatest growth since World War II. and today enrolls 21,860 students, the largest on-campus enrollment in the state. The majority are Alabama residents.

Auburn University at Montgomery was established as a separately administered branch campus in 1967. The institution has developed rapidly, especially since moving to a 500-acre campus east of Montgomery in 1971. Current enrollment at AUM is about 5,500.

Statement of Vision And Mission

The following statement of vision and mission was developed by the Task Force on Mission established in 1995 and was approved by the Board of Trustees on March 20, 1997.

Vision

Auburn University will emerge as one of the nation’s preeminent land-grant Universities in the 21st Century. Central to all its functions will be the University’s historic commitment of service to all Alabamians as the State becomes a part of a global society with all of its challenges and opportunities. The University will be widely recognized for the quality of its undergraduate educational programs, the effectiveness of its research and outreach programs, and the broad access to the University provided through the innovative use of information technology. The University will insure the quality of its programs through the careful focusing of its resources in areas of institutional strengths. One constant that will remain unchanged at the University—that intangible quality Auburn men and women call the “Auburn Spirit.”

Mission

Auburn University’s mission is defined by its land-grant traditions of service and access. The University will serve the citizens of the State through its instructional, research, and outreach programs and prepare Alabamians to respond successfully to the challenges of a global economy. The University will provide both traditional and non-traditional students broad access to the institution’s educational resources. In the delivery of educational programs on campus and beyond, the University will draw heavily upon the new instructional and outreach technologies available in the emerging information age.

The University will give highest priority for resource allocation to undergraduate education and for future development of those areas that represent the traditional strengths, quality, reputation, and uniqueness of the institution and that continue to effectively respond to the needs of students and other constituents. Consistent with this commitment, the University will emphasize high quality undergraduate education including a comprehensive general education that imparts the broad knowledge, skills, and values so essential to educated and responsible citizens as well as specialized career preparation for students. In establishing the primacy of undergraduate education to the institutional mission, the University will assure the continued strength of its faculty with the realization that the quality of instruction is directly related to the quality of the University’s faculty and the commitment of the faculty to excellence in undergraduate education. The University will provide graduate programs in areas of need and importance to the State and beyond. Graduate programs offer students opportunities for specialized advanced education in their chosen field and are important components of the services the University provides.

Because research is essential to the mission of a land-grant university, Auburn University will continue development of its research programs. The primary focus of this research will be directed to the solution of problems and the development of knowledge and technology important to the State and Nation and to the quality of life of Alabama citizens. The University’s research programs will make important contributions to instructional programs through the involvement of graduate and undergraduate students and the renewal of the faculty. Research will also provide the knowledge base for outreach programs. In carrying out its research mission, the University will emphasize established areas of strength and will focus available resources in those areas of research and doctoral study that are, or have the potential to develop into nationally and internationally recognized centers of excellence.

Extension and outreach programs are fundamental to the land-grant mission because these programs directly affect the lives of all citizens in the State. The University will maintain the strengths of its traditional outreach programs and will increasingly involve the broader University in outreach programs that respond to the changing needs of the society in which we live. The University will continue to seek new and innovative ways to reach out to the people it serves.

Instruction

Auburn University is committed to excellence in teaching at both the undergraduate and the graduate level. This commitment has long been reflected in the diversity of course offerings and in the variety of instructional approaches that are offered. Increasingly, electronic technology is providing instructors with innovative and creative teaching strategies. The high academic aptitude of the University’s incoming students also makes accelerated learning possible.

The liberal arts and sciences – introduced in the University’s nationally recognized Core Curriculum – are the heart of Auburn’s undergraduate programs. They lay the foundation not only for advanced study and career preparation but also for the development of a more responsible citizenry through students’ personal and intellectual growth. The Core Curriculum provides students with a common set of experiences, develops their powers of analysis and communication, and encourages their understanding of human culture and the natural world. Auburn has won recognition for its high academic quality.

Auburn offers baccalaureate degrees in more than 130 areas across the spectrum of disciplines and provides the state’s only publicly supported programs in many fields, including several in agriculture, architecture, building science, forestry, pharmacy and veterinary medicine. Particularly strong baccalaureate programs can be found in the Colleges of Business, Education, Engineering, Liberal Arts, and Sciences and Mathematics. For many years, ROTC programs at Auburn have also been nationally prominent in providing leadership for the military.

While Auburn has long been widely recognized for the quality and diversity of its undergraduate and first-professional programs, more recently expanding research accomplishments have broadened the scope and the prominence of the University’s graduate programs. Today Auburn supports a comprehensive graduate school, providing master’s level programs in more than 64 areas and awarding the doctorate in more than 40 fields. In many fields it offers the state’s only doctoral program. For many years the University has enjoyed strong graduate programs in agriculture, the biological and physical sciences, education, engineering, forestry, the human sciences, mathematics, pharmacy and veterinary medicine. More recently, excellent graduate programs have also emerged in business, the liberal arts and the social sciences. The University anticipates expanded research activity and graduate instruction, especially in agriculture and the biological sciences, in engineering and the physical sciences, in veterinary and pharmacal sciences, as well as in business and education.

Research

Research is the means through which new knowledge is created and new information is developed. As such, research at Auburn University is an essential link in its three-prong mission of instruction, research and outreach. Successes among the varied research activities within each of its 12 schools and colleges continue to bolster Auburn among the nation’s top universities.

Auburn’s role as a land-grant university emphasizes strong research programs in agricultural sciences, natural resources, the biological sci-
ences, engineering and the physical sciences. Strong and expanding research programs exist in education; veterinary medicine; pharmacy; the liberal arts; human sciences; business; architecture, design and construction; and nursing.

Results from Auburn research flow directly into the classroom through instruction and to the public through outreach. Auburn's research thrusts, the essential element in fulfilling its land-grant mission, are many, and all cannot be listed separately in this limited space. Yet, programs underwritten through the various research institutes at Auburn, the Space Research Institute and Center for the Commercial Development of Space; the National Center for Asphalt Technology; the Canine and Detection Research Institute; the Scott-Ritchey Research Center; the Alabama Agricultural Experiment Station; the Engineering Experiment Station and the Peaks of Excellence Research initiatives continue to bring Auburn University to the forefront in research developments and in forming links with the state's business and industry.

Whether in the laboratory, the field or in the classroom, Auburn's research endeavors are diverse and comprehensive, at once focusing upon developing solutions to major problems that confront humankind and expanding the base of knowledge and technologies available to improve our quality of life. Additionally, major efforts to increase the protection and commercialization of intellectual properties is central to Auburn's continual drive for improvements in its research mission.

These efforts mesh to create a research environment that enhances the state's economic, cultural, social and intellectual development and, at the same time, undergirds the university's undergraduate, graduate and outreach programs.

Outreach

Through outreach Auburn University applies its knowledge and skill for the direct benefit of people outside its own walls, thereby supporting the vision of service and broad access. Outreach includes institutional programs, such as continuing professional education, applied research, often in support of Alabama industry, and other forms of direct assistance. In turn, outreach enhances the University's knowledge base, ensuring relevance to the broader society and providing valuable insights and information for teaching and research. Students gain valuable experience through outreach projects like the Rural Studio maintained by the College of Architecture, Design and Construction and the Service Learning Program housed in the College of Education.

Faculty and staff throughout the university participate in outreach as needs and opportunities arise. Those associated with the Alabama Cooperative Extension System (ACES) and the various outreach institutes and centers are most heavily involved. ACES personnel located in each of Alabama's 67 counties are a unique resource. Outreach centers on campus link the University to the needs of Alabama in their respective areas of expertise. These include the Center for Governmental Services, Distance Learning & Outreach Technology, Economic Development Institute, Outreach Information & Marketing, and the Outreach Program Office. Offices affiliated with AU's schools and colleges include the Auburn Technical Assistance Center, Business/Engineering Outreach & Continuing Education, the Center for Arts & Humanities, and the Truman Pierce Institute for the Advancement of Teacher Education. Auburn also participates in regional outreach partnerships, such as the Alabama Technology Network, which perform numerous programs and technical assistance projects statewide.

From this base of organizational and faculty resources, Auburn hosts a diverse range of outreach activities. Annually, the University produces more than 800 conferences, courses and training programs, with an average attendance of 43,000. These programs provide almost 12,000 hours of non-credit continuing professional education to participants. Some 43 percent of these programs are approved to offer continuing education units, awarding more than 27,400 CEUs each year. Among outreach programs for credit, enrollments in undergraduate and graduate courses delivered through distance education technologies have increased more than 60 percent in recent years. The number of active distance degree and certificate programs offered the Graduate Program Office and other academic departments has grown to 14 with several more approved for implementation. Auburn outreach units conduct more than 1,000 field and technical assistance projects annually for clients across the state. Many of these projects are directed toward the economically disadvantaged counties of west Alabama, where Auburn maintains several ongoing initiatives with community-based partners. Throughout Alabama, Auburn supports some 100 outreach facilities and research sites — more than any other educational institution in Alabama -- making AU resources highly accessible to citizens. A comprehensive directory of AU outreach resources and contacts is available at www.auburn.edu/outreach.

Libraries and Archives

The main library on campus is the Ralph Brown Draughon Library, a 377,000 square-foot structure with seating for 2,500 and shelving space for about 4 million volumes. Branch libraries are located in the College of Veterinary Medicine and the College of Architecture, Design and Construction.

Collections include more than 2.7 million volumes, more than 2.5 million items in microformat and 140,000 maps. The Libraries receive more than 23,000, current serials as well as publications issued by U.S. government agencies. It also provides a World Wide Web gateway to the Government Printing Office's GPO Access - a database of federal publications.

Auburn University Libraries' World Wide Web home page provides users with access to the Internet and a number of remote databases. The various periodical databases contain references to selected journal and newspaper articles and research reports covering a spectrum of subject areas, and also include a growing number of full-text documents. AUBIECat lists all books, journals, newspapers and most government publications AU Libraries hold. AUBIECat is available anywhere using the World Wide Web.

The Draughon Library contains carrels for faculty and graduate student use, a room equipped for listening to sound recordings or viewing videos assigned for classroom purposes and two network classrooms. Photocopiers are located on each of the floors and in both branch libraries. Other services available to library users include two Geographic Information System (GIS) workstations, course reserve, electronic document delivery and interlibrary loans, as well as reference service and library use instruction by subject specialist librarians.

Circulation of library materials is automated through use of the online catalog and a barcoded user identification card. Borrowing privileges are extended to enrolled students; members of the administrative, research, instructional and extension staffs of the University; student, faculty, and staff spouses; and active alumni association members.

Office of Information Technology

The Office of Information Technology (OIT) provides a broad spectrum of computing and communications services for the University community.

Internet Connectivity. AU Net, Auburn University's campus network, is the fiber-optic Ethernet backbone linking computers and networks in all buildings on campus to the Internet. The campus is connected to the Alabama Supercomputer Network (ASN) and the Internet through three high-speed fiber optic connections. Auburn University is a participant in the Internet2 initiative. AU Resnet connects computers in campus residence halls directly to AU Net.

Servers. An IBM enterprise server is connected to AU Net. Its academic uses include research, information storage and retrieval, selected instructional uses and special applications. Administrative functions include storage and retrieval of information necessary for daily operations of the University. Solaris, NetWare and NT servers provide campus-wide network services including electronic mail, mailing lists, Web resources, Usenet news, user authentication and printing in computing labs, anonymous FTP and workgroup computing for departmental users.

Computing Access. All currently enrolled AU students have an OIT user ID. This ID and password provide access to University e-mail, network storage, OIT computing labs, network printing, and online class materials. Restricted services. Beginning Fall 2002, students will be responsible for information delivered to their userID@auburn.edu e-mail address. Students also have Web access to OASIS (the online student information system) where they can register for courses, pay Bursar bills and review transcripts online. Access to OASIS requires both a student ID and a six-digit PIN, provided by the Registrar's Office.

Computers for Students. About 1,000 computers in labs across campus are available for use by individuals in specific departments. In addition, OIT maintains 10 computing labs with more than 250 networked multimedia Windows machines. All students can use these computers
Undergraduate Admissions Policies and Procedures

Auburn University, an equal-opportunity educational institution, does not discriminate in its admissions policy on the basis of race, color, sex, creed, handicap, age or national origin. Preference is given to the admission of Alabama residents at the undergraduate level; in considering applications to professional schools or programs with restrictive admissions policies, the length of residency in the state will be a factor.

Applications for resident and non-resident students are accepted for all curricula; however, the number of students admitted is determined by the availability of facilities and faculty.

Application Forms. Application forms for admission to any undergraduate school or curriculum of the University can be obtained from the Admissions Office, 202 Mary Martin Hall, Auburn University, AL 36849-5145. Applicants are encouraged to submit their application electronically by using the document available on the Auburn University web site. This can be reached by going to www.auburn.edu and clicking on the section for prospective students. Application to the Graduate School or the School of Veterinary Medicine must be made to those schools.

Process for Application. Individuals may apply for entrance to any term of a calendar year as early as June 1 of the preceding year. Applicants to Veterinary Medicine and Pharmacy will be admitted in the Fall Semester only. Because of the large number of applications, credentials should be submitted as early as possible. In all cases, complete credentials along with the medical examination report must be filed at least three weeks before the term’s opening. The University reserves the right to establish earlier deadlines should circumstances warrant.

Application Fee. A $25 processing fee (international application processing fee is $50), payable by check, money order or credit card information, must accompany all admission applications and is neither refundable nor applicable to other fees. Responses on the application forms and on related materials must be complete and accurate; entrance may be denied or registration canceled as a result of false or misleading statements.

Applicants may receive provisional acceptance after they submit the application form and current academic documents. However, they must complete and return a medical examination report form provided by the University at least three weeks before the term opens. The University may require additional medical examinations, and it may refuse admission to individuals whose health records indicate that their health or the University community might be adversely affected by their attendance. All applicants must certify that they have registered with the Selective Service Board or that they are not required by law to register.

Applicants may be asked to supply evidence of good character. The University may deny admission to those whose presence is deemed detrimental to the institution or its students.

Admission of Freshmen: Academic Criteria. Favorable consideration for admission will be given to accredited secondary school graduates whose college ability test scores and high school grades give promise of the greatest level of success in college courses.

Secondary school students planning to apply for admission to AU should emphasize the following high school courses: English, mathematics, social studies, sciences and foreign languages.

High school curriculum requirements

<table>
<thead>
<tr>
<th>Subject</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Algebra I and Algebra II</td>
<td>2</td>
</tr>
<tr>
<td>Geometry, Trigonometry, Calculus or Analysis</td>
<td>1</td>
</tr>
<tr>
<td>Science</td>
<td>2</td>
</tr>
<tr>
<td>Biology</td>
<td>1</td>
</tr>
<tr>
<td>Physical Science</td>
<td>1</td>
</tr>
<tr>
<td>Social Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Recommended: one additional Science, one additional Social Studies and one Foreign Language

Applicants are required to present scores from either the American College Test (ACT) or the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board. High school students may secure application forms from their principals or counselors. Scores on these tests are used as a partial basis for admission, for placement in English, chemistry, mathematics and for awarding University scholarships and loans.

Applicants whose native language is not English are required to demonstrate proficiency in English.
Camp War Eagle registration materials based on submission of the freshman class is full. Students will receive housing information and deposit as early as possible. Deposits will only be taken until the required to pay a $200 deposit to confirm the offer of admission. The admission requirements and are offered provisional admission are re-

college work must have earned a cumulative 2.5 GPA in at least 30 quarter hours or 32 semester hours of college credit. All transfer students transferring from colleges with which the University has had little or no experience.

Students enrolled at Auburn may apply to an academic department for a Departmental Proficiency Test if they have demonstrated a reasonable basis of experience or study in the subject area. If they score a satisfactory grade on the examination, they will be eligible for placement in an advanced course and for credit in the subject. Students who have previously enrolled for the subject at Auburn are not eligible for this test in the same subject.

The amount of advanced placement credit granted in each subject area is determined by the recommendation of the academic teaching department with the approval of the student’s academic dean and the Registrar.

Students transferring to Auburn who have received advanced placement credits from another institution may be awarded these credits insofar as Auburn’s requirements for awarding such credits are met. Advanced placement credits may not be substituted for residency requirement.

**Admission Deposit.** Freshmen applicants who meet the university admission requirements and are offered provisional admission are required to pay a $200 deposit to confirm the offer of admission. The deposit is fully refundable until May 1, however, it is suggested students deposit as early as possible. Deposits will only be taken until the freshman class is full. Students will receive housing information and Camp War Eagle registration materials based on submission of the deposit.

**Admission of Transfer Students.** Transfer applicants must provide two copies of official transcripts (not duplicated or faxed copies) from each college attended, including any at which the applicant enrolled while in high school. A satisfactory citizenship record, a minimum 2.5 cumulative GPA on a 4.0 scale on all college work attempted and eligibility to re-enter the institution last attended are required for transfer admission. Transfer applicants who were not eligible for admission to Auburn when they graduated from high school must present a minimum of 48 quarter hours or 32 semester hours of college credit. All transfer students who have attempted 48 quarter hours or 32 semester hours of college work must have earned a cumulative 2.5 GPA in at least 30 quarter hours, or 20 semester hours, of standard academic courses as required in Auburn University’s Core Curriculum, in addition to the overall 2.5 cumulative average. These 30 quarter hours, or 20 semester hours, must include at least one course in each of the following areas: English (college-level composition or literature), History, Mathematics - approved core mathematics for articulation and general studies (or its equivalent from other institutions) and Natural Science with a laboratory.

Transfer students meeting the on- and off-campus admission requirements must have a minimum 2.80 cumulative GPA.

The Department of Consumer Affairs limits admission of transfer students to the Interior Design (INDS) curriculum, based on space available. Students from both on- and off-campus who wish to transfer into INDs must submit a Statement of Intent, resume and transcripts from all schools attended. Both on- and off-campus transfer applicants must have a minimum cumulative GPA of 2.5 (on a 4.0 scale) on all college work attempted. The applicant’s GPA, Statement of Intent, related courses and work experience are criteria which will determine admission status. Applicants for the INDs program are admitted only in the fall term.

Transfer students who wish to major in COMM, JRNL, PRCM, or RTVF in the College of Liberal Arts must apply for admission to the degree program in addition to completing an application to Auburn University. All applicants must have completed 45 hours of course work (including the university core or its equivalents). Please contact the Chair of the Department of Communication and Journalism for further information.

Entrance examinations may be required of applicants transferring from colleges with which the University has had little or no experience.

Transfer Credit. For students transferring from accredited public institutions within the state of Alabama, the amount of credit for freshman and sophomore course work is governed by the Articulation and General Studies agreement. Credit for Core Curriculum English writing courses is allowed only on grades of C or better, as approved by the Discipline Committee of the Articulation and General Studies Agreement. Courses with grades of D are only acceptable for transfer in those degree programs in which grades of D are acceptable for equivalent freshman and sophomore courses taken at Auburn University. The maximum amount of credit allowed for work completed in a junior college will not exceed 64 semester (96 quarter) hours.

For students transferring from other accredited institutions, the amount of transfer credit and advanced standing allowed will be determined by the appropriate dean and the Director of Admissions and Records. Courses with grades of D are only acceptable for transfer in those degree programs in which grades of D are acceptable for equivalent freshman and sophomore courses taken at Auburn University.

Students transferring from courses completed at another institution must include at least one course in each of the following areas: English, History, Mathematics (approved core mathematics for articulation and general studies (or its equivalent from other institutions) and Natural Science with a laboratory. Students who wish to re-enroll must submit a new application. Transient status does not constitute admission or matriculation as a degree candi-
date. The transient is, however, subject to the same fees and regulations as a regular student except for the continuation-in-residence requirements.

**Admission of Unclassified Students.** Admission to most undergraduate programs as an Unclassified Student may be granted on the basis of the bachelor's degree from an accredited college. Unclassified Students in Engineering must also meet the grade-point-average specified for Engineering transfer students. Unclassified students must submit the same credentials as transfer applicants.

**Special Admissions.** Persons who do not meet general admission requirements for freshmen but who are judged to have potential for success may be approved for special admission. An individual interested in special admission should contact the Admissions Office.

**Admission of International Students.** The University welcomes admission inquiries from international students. Because of limited facilities, only those students who are academically strong will be given serious consideration for admission. The international student should be proficient in English. In all cases, English proficiency is determined by satisfactory results on the Test of English as a Foreign Language (TOEFL), offered by the Educational Testing Service, Box 899, Princeton, N.J., 08540, U.S.A. The student must submit satisfactory results on the Scholastic Aptitude Test of the College Entrance Examination Board, also offered by the Educational Testing Service.

International students first should send all of their academic credentials to a professional credentials evaluation agency for evaluation. If they appear qualified and show promise of success in their chosen fields of study, they will be asked to make formal application. The application must be accompanied by an application fee of $50 (not refundable). If the applicants present satisfactory academic credentials, test results, and evidence that they have sufficient funds to meet their college expenses (there is no financial assistance for undergraduate international students), they will then be sent an acceptance and the form I-20, the authorization for a student visa. International students are required to purchase the university student insurance plan or provide evidence of equivalent coverage. This mandatory health insurance may be purchased upon arrival in the U.S. For further information, prospective students should write to the Admissions Office, Auburn University, Alabama 36849-5145, U.S.A.

**Admission of Auditors.** Auditing of courses is restricted, but when faculty and facilities are available, individuals who do not seek admission for course credit may audit a lecture course or the lecture portion of a course upon approval by the Admissions Office, the dean and the head of the department. A formal application must be filed, but the $25 application fee and the medical examination report are not required. Auditors must register and pay appropriate fees. Although listed on class rolls, auditors are not required to take part in classroom discussion, tests, examinations or reports, and they receive no grade or credit; however, students who attend the audited courses rarely or not at all will have non-attendance of the course indicated on their records.

A student enrolled in other courses for credit will be granted permission to audit a course only on the approval of the dean and the head of the department of the course involved.

Students may not change from audit to credit after classes begin, but may change from credit to audit within the first four weeks of classes. No refund of fees will be made except for changes made during the first three weeks of classes in accordance with University policy.

**Admission to Graduate Standing.** Admission to Admission to graduate standing is granted only by the University Graduate School. A $25 application fee is required. A bachelor’s degree or equivalent from an accredited college or university and submission of satisfactory scores on the General Test of the Graduate Record Examinations (GRE) are required for Graduate School admission in all departments except Business. Applicants in Business must submit satisfactory scores on the Graduate Management Admission Test (GMAT). Certain departments require applicants for master’s degree programs to take the GRE Subject Test. Applicants for admission to doctoral programs in some departments must submit GRE Subject Test scores also.

The undergraduate preparation of each applicant must also satisfy the requirements of a screening committee of the school or department in which the student plans to major. A student in good standing in a recognized graduate school who wishes to enroll in summer session, off-campus workshop, or short session, and who plans to return to his or her former college, may be admitted as a graduate transient. For more information, see the Graduate School section in this Bulletin.

**Readmission.** Students who have previously attended Auburn and who wish to re-enter must secure permission to register from the Office of Admissions and Records. Undergraduate students who have not been enrolled at Auburn University for a period of five years or more and who are returning to the same curriculum may be subject to different University, college, school, or departmental requirements than those which existed at the time of their initial entry, as well as those which existed at the program level when continuous enrollment ceased. The University, college, school, or department reserves the right to review a former student’s completed work, and if deemed appropriate, may require any readmitted student to meet graduation requirements as listed in the catalog in effect at the time of re-entry. In addition, each college/school may have more specific requirements for readmitted students. A student seeking readmission who has attended another college since being enrolled at Auburn University must (1) be eligible to re-enter the last institution attended and (2) have a 2.0 average overall in course work attempted at other colleges attended two or more terms. Two official transcripts from each institution attended must be furnished to the Office of Admissions and Records.

**Summer Orientation.** To help entering freshmen adjust to the first semester at the University, including scheduling of courses, Auburn provides a summer orientation program, “Camp War Eagle.” Freshmen entering Fall Semester attend sessions on campus during the summer prior to entrance. In these sessions, students meet faculty members, administrators and student leaders, and plan with their advisers a schedule of their first semester of college work. Other new students, including transfers, may meet with advisers during the regular registration period for the term in which they plan to enroll. Transfers will plan their schedules after their transcripts have been evaluated. A convocation for new students not attending summer orientation is held prior to the beginning of classes.

**Enrollment Registration and Scheduling**

Every student who makes use of the instructional staff and facilities of the University must register and pay fees. This rule also applies to students who are clearing incomplete grades, clearing for graduation, or working on graduate theses. The University Calendar on page 4 lists the dates for registration and late registration/schedule adjustment. Students are urged, and depending on the curriculum, may be required to seek guidance from their advisers before attempting to register for classes, and they are urged to register during their assigned registration period (see Auburn University Schedule of Courses). Students should register for courses during the term preceding the term they plan to attend. A currently enrolled student who fails to register during the assigned registration period will be required to register during the late registration/schedule adjustment period. When registering, the student is responsible for observing the pre-requisites or co-requisites of courses. Any waiver of these requirements must be approved by the department head or, in some cases, the dean. Waiver of the junior standing pre-requisite for courses that may be taken for graduate credit must have the Graduate School dean’s approval. A student’s class load may be reduced by the dean. Students may register for classes after the 1st class day only with the approval of the college, school or department offering the course. No student will be allowed to register after the 15th day of classes without the approval of the Provost.

**Permission To Register.** All students must have an electronic registration permit and a personal access code (PIN number) prior to participating in registration, late registration or schedule adjustment. Consult the Auburn University Schedule of Courses for instructions. All registration holds must be cleared prior to the start of registration to avoid delays in registration.

**Transient Student Form.** An Auburn student in good standing may be approved to take courses at another institution on a transient basis for one term. The Office of Admissions and Records issues a “Transient Student Form” that, when signed and stamped, certifies the student is in good standing and eligible to return to Auburn. The student’s dean’s office adviser then lists courses and credits approved to be taken elsewhere. The completed form is taken or mailed to the intended university prior to course enrollment. Credits earned elsewhere without a fully executed Transient Student Form may not be accepted for credit here.
Concurrent Enrollment. During any given term, students enrolled at Auburn University are expected to take courses only at Auburn. Only under exceptional circumstances, and with prior permission from the dean, may a student receive transfer credit toward the Auburn degree while concurrently enrolled at another college or university.

Classification.
Freshman ............ 30 or fewer semester hours.
Sophomore .......... 31-60 semester hours.
Junior ................. 61-90 semester hours.
Senior ................ 91 or more semester hours.

The codes for identifying the classification of students are as follows: FR, Freshman; SO, Sophomore; JR, Junior; SR, Senior; SY, fifth year; UND, undergraduate non-degree students; UPR, undergraduate provision- nal; MST, master’s; EDS, educational specialist; EDD, Doctor of Educa- tion; PHD, Doctor of Philosophy; GPR, graduate provisional; GND, graduate non-degree; P1, first-year professional; P2, second-year pro- fessional; P3, third-year professional; and P4, fourth-year professional.

A student with a baccalaureate degree who undertakes a program for a second bachelor’s degree will be classified as an undergraduate.

Course Load
The maximum load for students in undergraduate curricula is 18 hours during the semester, 7 semester hours during the 5-week session, and 13 hours during the 10-week session or any combination of summer sessions. An undergraduate must enroll for 12 or more hours to be considered full-time for athletic, financial aid, loan and insurance purposes. With the dean’s approval, students may schedule less than a normal load.

The maximum load may be exceeded under the following circumstances:
On approval of the dean, students may schedule overloads not to exceed 20 hours during the semester or 15 hours during the summer terms or 9 hours during a 5-week session. To be eligible for an over- load, students must have passed all work attempted and earned a GPA of 2.5 or higher during their last residence semester at Auburn University in which they carried 15 or more hours (10 or more in their last summer).

Students who have scheduled fewer than 15 hours during an inter- vening semester (or semesters) will retain the overload privilege if all work carried was passed with a minimum GPA of 2.5 in each interven- ing term. In special cases the dean may make exceptions to the 2.5 requirement, by electronic notice to the Director of Admissions and Records.

Students who register for course work in excess of the approved load may be required by the dean to drop the overload during the Schedule Adjustment period.

Grades
Grade Definitions. Final passing grades are A, superior; B, good; C, acceptable; D, passing; and S, satisfactory. Final failing grades are F, failure; FA, failure for excessive absences; U, unsatisfactory; NR, no grade reported; and WF, officially dropped with permission of the student’s dean but failing at time of withdrawal. (For the definition of W, see the following section on Grade Assignment for Class Withdrawal.)

An NR is assigned systematically when a letter grade is not assigned by the instructor. For undergraduates, an NR is calculated as an F until a letter grade is reported.

A TD, thesis and dissertation research credit, is assigned to courses 7990 Research and Thesis and 8990 Research and Dissertation.

An IN may be assigned at the discretion of the instructor if the stu- dent is passing but has not completed all assigned work or taken all scheduled examinations. For undergraduates, an IN is calculated as an F until it is cleared. Making up a final examination in an undergradu- ate course is allowed at the discretion of the instructor when there is a documented excuse for the absence.

It is the student’s responsibility to meet with the instructor as soon as possible to make arrangements for clearing the IN. If the instructor is no longer a faculty member at Auburn University, then the student should meet with the department head instead. During this meeting, the in- structor should set an appropriate deadline for clearance within the maximum six months allowed. Because an IN will be calculated as an F for undergraduates until it is cleared, it is to the student’s benefit to clear the IN quickly; if not cleared within six months of the date the IN was awarded, regardless of the residence status of the student, the IN will become an F.

These policies apply to all students in undergraduate and graduate courses. A final grade may be changed only by the written request of the instructor, with approval of the department head and dean, submitted to the Director of Admissions and Records.

A grade of F and additional penalties may be assigned for academic dishonesty. See the Student Academic Honesty Code section in the Tiger Cub for further information.

Grade Assignment For Class Withdrawals. A student who withdraws from a course prior to the 15th class day during a semester (or the 5th class day of summer term) will have no grade assignment; how- ever, from the 15th class day during a semester (or the 5th class day of summer term) through mid-semester (mid-term) a W (Withdrawn Pass- ing) grade will be recorded for the course. A course may be dropped with a W after mid-semester only under unusual conditions and only with permission from the student’s dean. When approval for dropping the course under such circumstances is granted, a W may be assigned only when the instructor indicates that the student is clearly passing the course. Otherwise, a grade of WF (Withdrawn Failing) is assigned.

Grade Average and Quality Point Computation. A 4.0 grade scale is used. An A equals 4.0; B, 3.0; C, 2.0; D, 1.0; and F equals 0.0. Only course work attempted at Auburn University is used in determining the grade report average and continuation-in-residence requirements. S and U grades do not enter into grade-point computations.

S-U Grading. Grades of S (Satisfactory) and U (Unsatisfactory) may be assigned only to courses approved to be graded S-U, and courses elected under the S-U option.

A junior or senior with a minimum overall grade average of 2.5 on at least 20 hours of credit earned at Auburn may elect any course to be graded on the S-U option, except for courses required in the Core Cur- riculum or for required courses as defined by the student’s curriculum. A total of 12 credits may be earned at the rate of one course per term. Students will receive credit toward a degree for these courses, pro- vided credit is normally accepted in their curricula for these courses.

An unclassified student may schedule one or more courses on the S-U option with the approval of the dean. Courses completed on the S- U choice by unclassified students may not be applied later to degree requirements should the student become a degree candidate.

A graduate student may enroll in undergraduate courses, except for 6000-level courses taken for graduate credit, under the S-U option on the major professor’s recommendation.

Students are not permitted to change from S-U grading to conven- tional grading or vice versa after the 15th class day of the Fall and Spring terms or the 5th class day of any Summer term.

Grade Reports. Grade information may be obtained from either the Auburn University Student Voice Information System or via OASIS at the Auburn University homepage, www.auburn.edu.

Undergraduate Continuation in Residence Requirements
Auburn University may place an undergraduate student on academic warning or suspension at any time if the student flagrantly neglects academic work or fails to make satisfactory progress toward gradua- tion.

An academically suspended student who has incomplete or other deferred grades which could, when cleared, remove the suspension will be permitted to register conditionally for the next semester. The suspension must be removed within three weeks of the beginning of the semester; otherwise the student will be resigned by the Office of Admissions and Records.

No credit earned at another institution by a student on academic sus- pension from Auburn will be used in clearing a suspension or in meet- ing requirements for an Auburn University degree.

A student who resigns after mid-term may be subject to academic suspension. (See Resignation for further information.)

Academic Warning status is imposed at the end of any term for which the student’s cumulative GPA on Auburn course work is below 2.0.

Academic Suspension. Any student who is on Academic Warning status will be placed on Academic Suspension if both of the following conditions apply: (1) the term GPA is below 2.2 and (2) the cumulative GPA on Auburn course work is below that required for the designated number of hours earned as follows:
Terms of Suspension. A student who incurs a First Academic Suspension may not enroll in the University for a minimum of one semester. Summer term does not count as a semester for terms of suspension. A student returning from academic suspension will be on Academic Warning status. A student who incurs a Second Academic Suspension will be on Academic Suspension. A student returning from academic suspension will be on Academic Warning status. A student who incurs a Third Academic Suspension will be expelled from the University.

Suspension for Resigning Students. The academic dean will review all grades for the semester in which a student who is on Academic Warning resigns after mid-semester (or term). If the student’s GPA in that term’s course work results in the student’s cumulative GPA being below the minimum cumulative GPA required, the student will incur Academic Suspension.

School of Pharmacy. A student enrolled in the School of Pharmacy who is placed on academic suspension and who wishes to re-enter the School must, in addition to complying with other University readmission requirements, be approved for re-admission by the Pharmacy Admissions Committee and, when applicable, by the University Admissions Committee.

College of Veterinary Medicine. Any student who earns less than a 2.25 GPA for any term will be placed on academic probation. A student who fails to earn a 2.25 GPA for any two terms in the same academic or calendar year may be dropped from the College of Veterinary Medicine for scholastic deficiency. In addition, a student who does not have an overall average of 2.25 for an academic year or who does not have a veterinary school cumulative average of 2.25 at the end of any academic year may be required to withdraw from the College of Veterinary Medicine.

A student who makes a grade of F in any course may be dropped from the College of Veterinary Medicine until such time as the course is offered again. Such students may be required to repeat certain other courses in the curriculum for the term in which a grade of F was earned. Students who are dropped under the above provisions are eligible for admission to other curricula provided they meet the general scholastic requirements for continuance in the University. Scholastic penalties incurred during enrollment in the College of Veterinary Medicine will become part of the student’s record.

Policies on Repeated Courses, Course Withdrawals, Resignation and Appeals, and Grade Adjustment

Grade Adjustment. All regularly admitted undergraduate students, who were enrolled during Fall 2000 or after, may delete a maximum of three (3) course grades of D or F (including FA or U) associated with their undergraduate degree program from the computation of their cumulative grade-point average. Deletion of grades from the computation of the cumulative grade-point average is not available to professional students in pharmacy and veterinary medicine. Grades and credit considered as transfer credit, courses earned in a previously awarded baccalaureate degree, or grades that have been assigned as a result of academic misconduct are excluded from this policy.

This policy does not offer exemption from academic requirements for Auburn University degrees; adjustment only applies to grades in individual courses. All core and major requirements must be met for graduation. Students should be aware that D or F/FA/U grades in required courses may be deleted from the computation of the cumulative GPA prior to a repeat, but the required course must be repeated at Auburn University before graduation. Where a specific course is required for the core or a major, that course must be repeated to replace the deleted grade. Courses covered by this policy and needed to meet core area requirements or elective courses within a major may, subject to the approval of the academic dean, be replaced by any course accepted for that requirement, where applicable.

All courses for which a grade is awarded at Auburn University will remain on the transcript. Courses for which a grade has been deleted from the cumulative GPA will have the grade recorded and a notation on the transcript that the grade has been excluded from the earned hours and the cumulative GPA. Students may submit a written request for grade deletion to their academic dean’s office at any time prior to graduation. Once a request for deletion of a grade has been granted and that grade has been removed from the calculation of the cumulative GPA, the grade and credit cannot be restored.

Students should follow guidelines for the repeat of courses in which grades of A, B, or C have been awarded (See the following section on Other Policies on Repeat of Courses). However, all grades will be used for determining all academic honors.

All Auburn University transcripts will include two GPAs: a semester GPA, and a cumulative GPA. The transcript will carry an appropriate notation that the cumulative GPA may not include grades for all courses attempted.

Other Policies on Repeat of Courses. No student may repeat a course for credit in which the student has previously earned a grade of A, B, or C without written permission by the student’s academic dean. Courses specifically designated as repeatable in the Auburn University Bulletin are exempt from this regulation. Students may repeat courses in which they earn a grade of D or F. Grades and hours for both attempts will be included in the calculation of the GPA unless the grade adjustment policy has been invoked for the first attempt. (See the previous section for limitations and procedures). If the grade adjustment policy is not invoked in the case of the repeat of a D grade, then the course credit hours may count only once toward graduation unless the course is designated as repeatable.

Withdrawal from a course. No grade penalty is assigned for dropping a course on or before mid-term. A student who withdraws from a course prior to the 15th class day will have no grade assignment; however, after the first 15 days a W (Withdrawn Passing) grade will be recorded for the course. For the summer terms, all withdrawals with grade assignment must be processed prior to the 5th class day. A course may be dropped with a W after midterm only under unusual conditions such as serious illness of the student, serious illness or death of a member of the student’s immediate family. When approval for dropping the course under such circumstances is granted by the student’s dean, a W may be assigned only when the instructor indicates that the student is clearly passing the course. Otherwise, a grade of WF (Withdrawn Failing) is assigned.

Resignation from all courses. Students who wish to resign from all courses for a term should contact their deans. To avoid complications with student financial aid and other matters, resignations should not be done through the telephone registration system. Students may withdraw without penalty of failure if they resign no later than midterm, a date specified in the University calendar.

After this date, the dean may obtain a transcript from the student’s instructors and/or the student’s scholastic standing at the time of resignation, and report it to the Office of Admissions and Records. If the student is failing in over half of the work, the number of hours reported as failing will be counted as credit hours attempted and will be included in academic eligibility calculations and grade point computation. Those hours reported as passing will be dropped and will not be counted in the grade-point computation. Furthermore, if a student has been placed on academic suspension at the end of the last term in residence prior to the resignation, the grades will be reviewed by the dean to determine whether the student will be placed on further academic suspension.

When a student through illness or physical disability is forced to resign after midterm, and when this condition has been the main factor in causing scholastic deficiencies, discretionary power in waiving the scholastic penalty will rest with the student’s dean. A student who is resigned for disciplinary reasons will retain the academic status achieved immediately prior to the disciplinary action.

Appeals of Suspension. Students who incur Academic Suspension under the rules detailed in this Bulletin may appeal the decision to the Admissions Committee if they believe extraordinary circumstances merit an exception to the rules. Any student on indefinite suspension must appeal to the Admissions Committee for readmission to the University. These requirements are University requirements. Individual colleges and schools may have higher requirements.
Integration is accomplished through interdisciplinary courses. To achieve these goals, Auburn University’s Core Curriculum provides a shared learning experience to all Auburn undergraduates based on the principles of coherence and integration. Coherence is achieved by course sequences and by providing connections among courses. The general purpose of the Auburn University Core Curriculum is to foster the development of educated citizens. This purpose leads to three goals:

- First, the Core Curriculum seeks to assure that all graduates of Auburn University are competent in critical reading, writing, mathematics, and information literacy.
- Second, the Core Curriculum seeks to assure that all graduates of Auburn University develop analytical skills that allow them to discern significant issues and events, ask appropriate questions, approach problems, gather, synthesize and interpret information, critically analyze established positions, and use knowledge creatively for the enhancement of society.
- Finally, the Core Curriculum seeks to assure that all graduates of Auburn University possess an educated appreciation of the natural world, of human life, and of the interaction between them, especially through technology. Emphasis falls on human behavior, history and social organization, encouraging students to understand and appreciate both their own cultural traditions and the great diversity of other human cultures and experiences. The Core Curriculum also encourages inquiry into moral and aesthetic values and into ideas and their consequences.

To accomplish these goals, Auburn University’s Core Curriculum provides a shared learning experience to all Auburn undergraduates based on the principles of coherence and integration. Coherence is achieved by course sequences and by providing connections among courses. Integration is accomplished through interdisciplinary courses.

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To accomplish these goals, Auburn University’s Core Curriculum provides a shared learning experience to all Auburn undergraduates based on the principles of coherence and integration. Coherence is achieved by course sequences and by providing connections among courses. Integration is accomplished through interdisciplinary courses.

### Bachelor’s Degree Requirements

To earn the bachelor’s degree from Auburn University students must complete the requirements of the University Core Curriculum, and they must choose a curriculum and complete its requirements and those of the college or school with at least a 2.0 average in all Auburn courses attempted, at least a 2.0 average on transfer credits accepted for their degree program, and a 2.0 average in all course work in the major. These requirements are University requirements. Individual colleges, schools, and departments may have higher requirements. Credits required for graduation are at least 120 hours. The student’s dean clears subject and non-course requirements in the curriculum; the Registrar, together with the dean’s office, clears total hours, GPA, and freshman English. A list of specific courses identified as major courses in each curriculum is available in the appropriate dean’s office.

### FINE ARTS (3 semester hours):
- Appreciation of Architecture ........................................... ARCH 2600
- Introduction to Art History I .......................................... ARTS 1710
- Introduction to Art History II ......................................... ARTS 1720
- Introduction to Art History III ......................................... ARTS 1730
- Appreciation of Music ..................................................... MUSI 2730
- Honors Appreciation of Music ......................................... MUSI 2737
- Introduction to Theatre ................................................... THEA 2010
- Honors Introduction to the Theatre .................................... THEA 2017

### MATHEMATICS (3 semester hours):
- Finite Mathematics & Applications .................................. MATH 1100
- Pre-Calculus Algebra ...................................................... MATH 1120
- Pre-Calculus Trigonometry .............................................. MATH 1130
- Pre-Calculus Algebra & Trigonometry ............................... MATH 1150
- Calculus I ........................................................................ MATH 1610
- Honors Calculus I .......................................................... MATH 1617
- Calculus with Business Applications I ............................... MATH 1680
- Calculus for Engineering & Science I ................................. MATH 1710

### SCIENCE (8 semester hours in a sequence):
- Introductory to Biology* ................................................. BIOL 1000
- A Survey of Life ............................................................. BIOL 1010
- Principles of Biology .......................................................... BIOL 1020
- Principles of Biology Honors* ........................................ BIOL 1027
- Organismal Biology ........................................................ BIOL 1030
- Organismal Biology Honors .............................................. BIOL 1037
- Survey of Chemistry I .................................................... CHEM 1010
- Survey of Chemistry I Laboratory ................................ CHEM 1011
- Survey of Chemistry II ................................................... CHEM 1020
- Survey of Chemistry II Laboratory ................................ CHEM 1021
- Fundamentals of Chemistry I ......................................... CHEM 1030
- Fundamentals of Chemistry I Laboratory ........................ CHEM 1031
- Fundamentals of Chemistry II Laboratory ........................ CHEM 1040
- General Chemistry I ....................................................... CHEM 1110
- General Chemistry I Laboratory ....................................... CHEM 1111
- Honors General Chemistry I .......................................... CHEM 1117
- Honors General Chemistry I Laboratory ........................ CHEM 1118
- General Chemistry II ...................................................... CHEM 1120
- General Chemistry II Laboratory ...................................... CHEM 1121
- Honors General Chemistry II ........................................ CHEM 1127
- Honors General Chemistry II Laboratory ........................ CHEM 1128
- Physical Geology ........................................................... GEOL 1100
- Historical Geology .......................................................... GEOL 1110
- Foundations of Physics .................................................. PHYS 1000
- Astronomy ................................................................. PHYS 1150
- General Physics I ........................................................... PHYS 1500
- General Physics II .......................................................... PHYS 1510
- Engineering Physics I .................................................... PHYS 1600
- Honors Physics I ............................................................. PHYS 1607
- Engineering Physics II ................................................... PHYS 1610
- Engineering Physics II Laboratory ................................ PHYS 1611
- Honors Physics II ............................................................ PHYS 1617
- Concepts of Science* ..................................................... SCMH 1010

### HISTORY (6 semester hours in a sequence):
- World History I ............................................................. HIST 1010
- Honors World History I ................................................ HIST 1017
- World History II ............................................................. HIST 1020
- Honors World History II ................................................ HIST 1027
- Technology & Civilization I ........................................... HIST 1210
- Honors Technology & Civilization I ................................ HIST 1217
- Technology & Civilization II .......................................... HIST 1220
- Honors Technology & Civilization II ............................... HIST 1227
- Human Odyssey I .......................................................... UNIV 2710
- Human Odyssey I Honors ............................................. UNIV 2717
- Human Odyssey II ........................................................ UNIV 2720
- Human Odyssey II Honors ............................................. UNIV 2727

### SOCIAL SCIENCE (6 semester hours):
- Introduction to Anthropology: A 4-Field Approach ....... ANTH 1000
- Global Geography ........................................................... GEOG 1010
- Introduction to Psychology ............................................. PSYC 2010
- Sociology: Global Perspectives ....................................... SOCY 1000
- Honors Sociology: Global Perspectives .......................... SOCY 1007
**Academic Policies**

**English Composition Requirements.** The following covers a number of possible situations for students who enroll at Auburn University as freshmen and for students who are transferring from another institution into Auburn. Different requirements are based on when the student began collegiate study. If a student's particular situation is not covered in the explanations below, or if a student has questions about his or her status, then the student should contact the Coordinator of Composition by calling the English Department at 334-844-4620. Students may also contact the English Department via email at english@auburn.edu.

Students beginning collegiate study at Auburn as freshmen in Fall 2000 or later must complete ENGL 1100-1120, English Composition I-II, with a grade of C or better in each course. (Students in the Honors College must complete ENGL 1107-1127, Honors Writing Seminar I-II, with a grade of C or better in each course.) The grades of C or better are required by the Articulation and General Studies agreement. Students cannot take ENGL 1120 (or 1127) unless they earn a C or better in ENGL 1100 (or 1107), and they must earn a C or better in ENGL 1120 (or 1127) to be eligible to take ENGL 2200-2210, Great Books I-II.

Students who began collegiate study at Auburn between Summer 1998 and Summer 2000 have met the freshman composition requirement if they have completed ENGL 0110-0112 (or the Honors equivalents, ENGL 0118-0120) with a grade of C or better in each. (ENGL 0110-0112 and ENGL 0118-0120 were the course numbers in use between 1998 and 2000.) If they have completed only the first course in the composition sequence, they must complete ENGL 1120 (or 1127) with a grade of C or better. If they have not taken either course in the sequence, they must take ENGL 1100-1120 (or 1107-1127) and pass with a grade of C or better in each.

Students who began collegiate study at Auburn between Fall 1991 and Spring 1998 have met the English composition requirements if they have completed ENGL 0110 (or ENGL 0118). Only one freshman composition course was required at the time. Moreover, students in this group graduating after Summer 1998 have not been required to meet the core junior-level writing requirement which had earlier been in place. That requirement was waived by the Provost. Students in this group should, however, consult with an adviser in their major course of study to see if that major requires an additional writing course beyond English Composition I.

Transfer students beginning collegiate study at another institution in Fall 2000 or later must meet Auburn’s six semester-hour freshman composition requirement. They may do so in one of two ways: (1) take freshman composition I and II at another institution, provided these courses are comparable in scope and coverage to ENGL 1100-1120, and earn a grade of C or better in each, or (2) take ENGL 1100-1120 (or 1107-1127) at Auburn, if they did not take composition at the other institution, and earn a grade of C or better in each. NOTE: transfer students will also meet the Auburn freshman composition requirement if they take two five-quarter-hour courses and pass with grades of C or better in both.

Transfer students who have earned a grade of C or better in freshman composition I, and earned three semester hours or five quarter hours, at another institution will be required to take ENGL 1120 (or 1127) at Auburn. Students may also fulfill the requirement for ENGL 1120 (or 1127) by taking a freshman composition II course at another institution, provided the course is similar in scope and coverage to ENGL 1120 (or 1127) and they earn a grade of C or better.

Transfer students who have earned eight or more quarter hours or six semester hours, and have thereby met the freshman composition requirement of another institution, will be given credit for ENGL 1100-1120. Two conditions must be met for credit to be given: the minimum of eight quarter hours or six semester hours involves no duplication, and the student has earned a grade of C or better in each freshman composition course.

Transfer students who began collegiate study at another institution between Summer 1998 and Summer 2000 must meet Auburn’s six-semester-hour English composition requirement. They may do so in the ways explained in the preceding paragraph.

Transfer students who began collegiate study at another institution between Fall 1991 and Spring 1998 must meet the same requirements as students who began college at Auburn during the same period (see paragraph 4 above). They may meet this requirement by transferring a writing course taken at another institution, provided this course is comparable in scope and coverage to freshman composition I as offered at Auburn during this period, or by taking ENGL 1100 (or 1107).

Transfer students who have been exempted, on the basis of standardized test scores, from freshman composition I carrying five quarter hours or three semester hours at another institution, and who have earned a grade of C or better in a subsequent freshman composition course at the same institution carrying the same amount of credit, will have fulfilled Auburn’s freshman composition requirement. Transfer students who have been exempted with credit will have both the exemption credit and course credit accepted at Auburn. Transfer students who have been exempted without credit will be given the course credit and, in addition, will be awarded sufficient advanced standing credit to fulfill Auburn’s freshman composition requirement.

Transfer students who have been exempted from freshman composition I at another institution but have had no subsequent freshman composition course there or have not earned a grade of C or better in the subsequent course must still complete Auburn’s six semester-hour freshman composition requirement. However, if they meet any of Auburn’s criteria for exemption from ENGL 1100 (or 1107), they will receive three semester hours of credit for ENGL 1100 (or 1107) at Auburn and will be required to take ENGL 1120 (or 1127) at Auburn.

All transfer students should confer with their major academic adviser concerning the composition requirement as soon as possible after enrolling at Auburn.

Students who enter an undergraduate program at Auburn after receiving a bachelor’s degree from an accredited institute are exempt from meeting the above requirements.

All students may be eligible to exempt ENGL 1100 (or 1107) with credit on the basis of their score in one of the following standardized tests: the English portion of the ACT; the verbal portion of the SAT; the International Baccalaureate English A1 exam; or the CEEB Advanced Placement Exam in English. The exemption scores for each test are reviewed each year and are available in the Auburn University Advanced Placement Program, which is distributed by the Office of Admissions and Records.

Students who get a grade of F in a freshman composition course at Auburn must repeat that course at Auburn University’s main campus. Students who get a grade of D in a freshman composition course at Auburn must repeat that course, but they may do so at another institution, unless they have previously used the grade adjustment policy to exclude the grade of D.

**Literature Requirements.** All Auburn students must fulfill the Core Curriculum literature requirements by taking ENGL 2200-2210, Great Books I-II, or ENGL 2207-2217, Honors Great Books I-II. Completion of the freshman composition requirement is a pre-requisite for ENGL 2200-2210; ENGL 2200 is a pre-requisite for ENGL 2210.

Literature courses taken at another institution may fulfill the Core literature requirement with the following provisions:

1. As courses similar to ENGL 2200-2210, students may transfer sophomore-level literature surveys, defined by their coverage of a designated and reasonably broad historical period.
2. Students may receive Core literature credit for any combination of historical surveys, whether or not the surveys are in the same sequence.
3. Students transferring a single literature course may receive credit for ENGL 2200 only if it is the first course in a World Literature sequence. Any other single literature survey will transfer as credit for ENGL 2210; students making such a transfer must take ENGL 2200.
4. Literature courses based on genres (poetry, the short story, the novel), themes, or narrowly defined historical periods will not fulfill the Core literature requirements but are eligible for transfer as electives.
5. Freshman-level literature courses will not fulfill the Core literature requirements but are eligible for transfer as electives.

Students or advisers with special questions about placement or credit for the Core literature requirements may call the Coordinator of Great Books at (334) 844-4620.

**History Requirements.** One of the purposes of the University’s Core Curriculum is to give students an understanding of their culture and its
backgrounds. Course sequences designed especially for this purpose are those in world history, technology and civilization and the Human Odyssey, an interdisciplinary science-humanities sequence of courses focusing on significant cultural shifts caused by discovery or invention. Native students must earn six hours of credit in one of these sequences.

Credit in history earned at another institution may be allowed on transfer as shown below in meeting this particular requirement.

1. If transfer students have three hours in the first course of a broad, introductory two-course sequence in world history or western civilization or technology and civilization or U.S. history, they must complete HIST 1020 (for world history and western civilization), HIST 1220 (for tech. and civ.) or HIST 2020 (for U.S. history). A transfer student who has taken the last course in a similar two course sequence would take HIST 1010 or HIST 1210 or HIST 2010.

2. Students entering an undergraduate program at Auburn, after earning bachelors’ degrees from other accredited universities, may be exempted from the history requirements unless their curricula specify one of the three sequences described in this section.

3. Students with no credit hours in history may also elect to take Human Odyssey, UNIV 2710 and UNIV 2720, to fulfill the Core Curriculum history requirement.

Oral Communication Requirement. All Auburn University bachelor’s degree programs provide components to ensure competence in oral communication skills. Program information documenting oral communication components is maintained in the Office of the Provost/Vice President for Academic Affairs. Appropriate accommodations will be made to enable individuals with disabilities to satisfy this requirement.

Academic Programs and Curricula

An academic program is an organized plan of study which, when successfully completed, is recognized by the awarding of a degree. It includes all courses and related activities required by the University and those required by a school, college, department or interdisciplinary program. At Auburn University, the minimum number of semester hours in an undergraduate academic program is 120, including the 40 semester hours of the Core Curriculum. The academic program must include the University Core Curriculum and the major. It may also include a school or college core curriculum, a minor, and supporting course work. For undergraduates, it is the most general term describing the formal course of their baccalaureate education. Students who do not complete an approved academic program do not qualify for baccalaureate degrees. Students who are completing an academic program may take courses in addition to those required by it including a minor or free electives beyond those required for graduation by their academic program.

A program option is a formal modification of an academic program by the offering department in order to meet objectives that are integrated with the basic program but may be more specifically focused. Some programs exist only in several program options, there being no unmodified program. As a formal variant of an academic program, a program option differs from a less formal grouping of course work within an academic program. These looser groupings often carry titles like specialization, concentration, focus, track, or emphasis, and these may or may not be standardized by the University. At Auburn University, all program options, like all academic programs, must include the Core Curriculum. Moreover, a program option must preserve the integrity of the academic program of which it is a variant by requiring at least half of the specific course work required by the program above and beyond the Core Curriculum. Specified groups of courses within an academic program that do not meet the definition of a program option must carry another name.

A curriculum model is the schematic organization of an academic program that is listed in this Bulletin. At Auburn University, all undergraduate academic programs and program options must be represented by a curriculum model in the Auburn University Bulletin. A major is that part of an academic program which differentiates it from other programs and is usually the largest part. The term designates that portion of the program which consists of a specified group of courses offered by a particular academic department or interdepartmental program. The major may include lower-division courses and always includes specified upper-division courses or choices among courses offered by the department or interdepartmental program. The major may include course work from other departments. The major does not include the other parts of the academic program: the Core Curriculum, a school or college curriculum (if any), a required minor (if any), supporting course work (if any), or free electives. At Auburn University, all majors must represent substantial academic concentration in a well-defined discipline or interdisciplinary field. While no minimum number of semester hours is set, the typical major will require not fewer than 30 hours of course work in the discipline or in a closely allied field. Of these hours, a minimum of 20 must be taken in upper-division courses in the subject field. Departments may require students to have course work in one or more of the departments before requiring their courses in a major.

A minor is an organized sequence or cluster of courses, including both lower- and upper-division courses, offered by a department or interdepartmental program. It is more restricted in scope than the major but may also have a somewhat different focus and objective that make it appropriate for students whose principal concentration is in another discipline. Not all departments or interdepartmental programs offer a minor. At Auburn University, the term minor designates those sequences or clusters of courses that have been formally proposed as minors by departments or interdepartmental programs and approved by the University Senate Curriculum Committee. The minimum number of semester hours in a minor is 15. Of these, six hours may be lower-division courses. The remaining semester hours in the minor (a minimum of 9 hrs.) must be courses numbered 3000 or above. In fulfilling a minor, students may use any free electives or supporting course work required by their academic programs and additional course work above and beyond that required for graduation in their academic programs. Courses a student has taken in fulfillment of the University Core Curriculum, the school/college core curriculum (if any) or the major may not be included in a minor. Some academic programs may require students to earn a minor. Students whose academic programs do not require a minor are free to earn one, though in such cases they should recognize that fulfilling the requirements for a minor may delay their graduation. No academic program is required to allow for a minor in its curriculum model. Students must follow announced University procedures and deadlines for declaring a minor. Students may not earn more than two minors or major and minor in the same subject. No course taken under the S/U option may be counted toward a minor. Students must earn a minimum overall grade average of C (2.0) on all course work in the minor. Individual colleges, schools and departments may have higher requirements.

The phrase “supporting course work” designates courses that are required for the completion of a specific academic program but not included in the University Core Curriculum, the major, the school or college core curriculum (if any), the minor (if required), and free electives. At Auburn University, academic programs may require courses that are not specific to the major but that support the general education and preparation of students in the program. But courses are usually outside the department of the major area of study, departments must have approval of the departments offering the courses they designate as required supporting course work. Supporting course work may be used in satisfying the requirements for a minor.

Second baccalaureate. To earn a second bachelor’s degree, a student must complete all the additional requirements for the second degree (including course work in the major field, college/school core requirements and courses in support of a major). These additional requirements must total a minimum of 30 semester hours beyond the total of the first degree. Students who are completing a second degree must comply with all the same grade point requirements and residency requirements as other students. Students should consult with their adviser concerning eligibility for a second degree.

Double major. To earn a double major, a student must complete all the course work in the major (courses bolded in the curriculum model) and meet all the requirements for both majors (field of study) such as grade point requirements. The student will designate which major is the first field of study and which is the second field. Students should consult with their adviser concerning this option prior to graduation.

Residence Policy. A minimum of 25 percent of the total semester hours required for the bachelor’s degree must be earned in residence at Auburn University. As a general rule, these hours must be taken in the final year and in the school/college curriculum of graduation. The student’s dean may waive the final year’s residence and may also allow course credit to be earned at another institution during the final year. However, the 25 percent of course work in residence at Auburn University is a firm requirement.
Credit for Independent (Asynchronous) Distance Education. A student may earn a maximum of 25 percent of the total credits required for the baccalaureate degree by independent (asynchronous) distance education courses; however, only 12 hours of the final year’s work may be earned thus. An individual with fewer than two semesters in residence prior to the last academic year may earn only 10 hours by independent (asynchronous) distance education.

A student in residence may not enroll in an independent (asynchronous) distance education course if the course or a suitable substitute can be scheduled. The resident student may not exceed the maximum class hour load by adding an independent (asynchronous) distance education course. A student must have prior approval of his or her Auburn dean if the credits are to be applied toward an Auburn degree.

Upon registering for an independent (asynchronous) distance education course, Auburn students must determine whether they want to pursue the graded or extended option. If the student selects the graded option, the course work must be completed within one semester and all current University policies related to enrollment, grading, and withdrawal from courses applies. The student’s grade appears on the transcript and is calculated into the GPA. If Auburn students select the extended option, nine months are allowed for course completion except in the case that the credit counts toward graduation. In this case, independent (asynchronous) distance education courses must be completed by midterm prior to graduation. Credit but no grade will be entered on the student’s record for the extended option. Information on available courses may be obtained from Distance Learning and Outreach Technology, Petrie Annex, Auburn University, Auburn, AL 36849, (334) 844-5103.

Credit For Military Science and Physical Education. A student may be allowed a maximum of 6 credits in military science courses toward graduation. A student may be allowed four credits on physical education activity courses toward graduation. A student who has served in the Armed Forces may receive physical education credits as follows: for less than six months of service, no credit; for six months to less than a year, two hours of credit for Physical Education; for one year or more in the service, three hours of credit. Credits may also be allowed for military service courses. Application for credit for military experience should be submitted to the Office of Admissions and Records. The student’s academic dean must approve credit into the student’s curriculum.

Change of Major or Curriculum

Students must have their dean’s approval to change to another major within the same College or School. To change Colleges or Schools within the University, students must complete a Change of College/School Form.

Curriculum Model Change

When the University changes a curriculum model, students in the altered curriculum may be required to complete the subjects and hours placed above the level to which they have progressed. They will not, however, be required to complete additional subjects placed in the curriculum below the level they have achieved. Courses shifted from one class level to another are exempt from this latter provision. Students’ deans will determine the revised subject requirements, and the Director of Admissions and Records will determine the revised total hour and grade-point requirements. In no case for students who are continuously enrolled, however, will the changed curriculum compel them to accumulate additional hours and grade points to graduate. In other words, students must complete the University core requirements in place during the term that they first enroll, and in general they must complete the school, college or major requirements in place when they declare a major. Undergraduate students who have not been enrolled at Auburn University for a period of five years or more and who are returning to the same curriculum may be subject to different University, college, school or departmental requirements than those which existed at the time of their initial entry, as well as those which existed at the program level when continuous enrollment ceased.

Academic Program Assessment

Auburn University is committed to fostering the academic achievement and personal development of its students. To carry out that commitment, the University continuously gathers information about the effectiveness of its academic programs, about the progress of its students toward educational and personal goals, and about the achievements and perspectives of its alumni. This information is used to monitor program effectiveness, to recognize educational trends and opportunities, and to develop a sound, factual basis for academic planning.

Each Auburn student is expected to participate in the University’s assessment efforts. Academic programs use various means to gather assessment information, including portfolios, performances, achievement tests, comprehensive examinations, surveys, interviews, focus groups, evaluation forms, and other methods. While enrolled, a typical student can expect to take part in one or more of these assessment activities. The total time spent on assessment activities is not likely to exceed 15 hours over the course of four years of enrollment. Participation in these activities may be a completion requirement for some degree programs.

Satisfactory Progress

Student Athletes. In addition to meeting the general academic requirements of the University, student athletes must meet all academic requirements, including those relating to satisfactory progress toward a degree, set forth in the legislation of the Southeastern Conference (SEC) and of the National Collegiate Athletic Association (NCAA).

Student Financial Aid Recipients. In addition to meeting the general academic requirements of the University, applicants for student financial aid funds must maintain Satisfactory Academic Progress to receive, or to continue to receive, assistance through federal, state and institutional student aid programs. Descriptions of these Satisfactory Academic Progress requirements for distinct classifications of Auburn students are available from the Office of Student Financial Aid.

Veterans. All VA eligible (Chapters 30, 31, 32, 35 and 106), in addition to meeting the general academic requirements set forth by the University, must maintain satisfactory academic progress as approved by the State Approving Agency of the State of Alabama, Department of Education. Such standards are as follows: Any undergraduate VA eligible must have a 2.0 GPA after the student has earned 120 hours at Auburn University. This would be checked at each term’s end and, the VA benefits of any VA eligible not meeting this requirement would be terminated. Separate standards of progress apply to graduate students as outlined in the Graduate School section.

Dean’s List

The name of every eligible student who meets certain scholastic requirements for a given semester is placed on a list prepared for the dean of the student’s College or School. This honor is also noted in the student’s permanent record.

To meet Auburn University’s requirements for inclusion on the dean’s list, the student must be enrolled for 12 or more credit hours exclusive of any S-U option courses, pass all courses attempted for the semester, have no D or D+ grades that term, and earn a GPA of at least 3.4 (on the 4.0 system). Furthermore, the dean of each College or School has established specific criteria governing inclusion on the list. All grades, including those excluded by the grade adjustment/course repeat policy, are used for determining academic honors. The special requirements, applied in addition to the University regulations, are listed as follows:

College of Agriculture: 3.70 average; 14-hour minimum total.
College of Architecture, Design and Construction: 3.70 average; 14-hour minimum total.
College of Business: 3.80 average; 14-hour minimum total.
College of Education: 3.80 average.
College of Engineering: 3.70 average; 14-hour minimum total.
College of Forestry and Wildlife Sciences: 3.70 average.
College of Human Sciences: 3.80 average; 14 hour minimum total.
College of Liberal Arts: 3.60 average.
College of Nursing: 3.75 average, only if S-U graded courses are required in the student’s curriculum may it be included in the 15-hour minimum total.
College of Pharmacy: 3.75; 15-hour minimum total.
College of Sciences and Mathematics: 3.75 average; 14-hour minimum total.
College of Veterinary Medicine: grades in the upper five percent of the enrollment of each class.

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Class Attendance

Students are expected to attend all their scheduled classes. College work requires regular class attendance as well as careful preparation. Specific policies regarding class attendance are the prerogative of individual faculty members. Faculty shall inform each class in writing at the beginning of the course regarding the effect of absences on the determination of grades.

The student is expected to carry out all assigned work and to take examinations at the class period designated by the instructor. Failure to carry out these assignments or to take examinations at the designated times may result in an appropriate reduction in grade, except as provided in paragraph 4 below.

Instructors shall determine the policy regarding grading which they feel is best for the course. This policy shall be presented to the class, in writing, at the beginning of the term and will govern the actions of the instructor in the course.

Arrangement to make up missed major examinations (e.g., hour exams, midterm exams) due to properly authorized excused absences (as defined by the Tiger Cub) shall be initiated by the student within one week from the end of the period of the excused absence. Normally, a make-up exam shall occur within two weeks from the time that the student initiates arrangements for it. Instructors are encouraged to refrain from giving make-up examinations during the last three days prior to the first day of final examinations. The format of make-up exams and opportunities for students to make up work other than major examinations are at the discretion of the instructor whose make-up policies should be stated in writing at the beginning of the term. Instructors are expected to excuse absences for:

a) Illness of the student or serious illness of a member of the student’s immediate family. The instructor may request appropriate verification.

b) The death of a member of the student’s immediate family. The instructor may request appropriate verification.

c) Trips for members of the student organizations sponsored by an academic unit, trips for University classes, and trips for participation in intercollegiate athletic events. When feasible, the student must notify the instructor prior to such absences, but in no case more than one week after the absence. Instructors may request formal notification from appropriate University personnel to document the student’s participation in such trips.

d) Religious holidays. Students are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays.

e) Subpoena for court appearance.

f) Any other reason the instructor deems appropriate.

If the instructor does not appear within 20 minutes after the designated class hour, it may be assumed the class is canceled.

It is University policy that all classes will meet as scheduled on the last day before and the first day after holiday periods designated by the University.

Unresolved problems regarding class attendance or procedures should be referred to the University Student Grievance Committee.

Examinations

Examinations are classified as (1) final examinations at the end of each term; (2) special examinations; and (3) other course examinations as determined by the instructor.

Announced tests in undergraduate courses will be administered at a regularly scheduled meeting of the course. Exceptions to this regulation may arise in specialized courses requiring performance or oral tests, and in multiple-sectioned laboratory classes requiring practical laboratory tests. Faculty having sound reasons for scheduling tests at times other than regularly scheduled meeting times are to obtain approval from the department head prior to the beginning of the term, and are to present a written schedule of these changes to the class during the first few days of the term. Rescheduled tests are not to interfere with other scheduled academic endeavors of the students involved, and an appropriate reduction in regularly scheduled class time is to be given to compensate for the rescheduled test period.

Final Examinations. A final examination is a desirable means of evaluation in most undergraduate courses. In unusual circumstances, performance tests, term papers, research projects or other forms of evaluation appropriate to the objectives of the course may be substituted for a final examination with the approval of the department head, who will report such action to the dean and Provost. Faculty not giving a final examination are to present to the class at the beginning of the term a written description of the forms of evaluation to be used and the means of determining final grades. The professor teaching a 7000-level course shall determine whether a formal final examination is appropriate.

Final examinations are to be given as scheduled in the term examination schedule. Exceptions to this policy require prior approval by the Provost. Rescheduled examinations must not interfere with scheduled academic activities of the students involved.

Student Academic Grievance Policy

The Student Academic Grievance policy, which appears in full in the student handbook, Tiger Cub, is designed to resolve academic grievances of students which result from actions of faculty or administrators.

Graduation

To earn a bachelor’s degree a student must earn a 2.0 GPA on all courses attempted at Auburn, a 2.0 GPA on all transfer courses which apply to degree requirements and a 2.0 GPA on all work in the student’s major. These are University requirements. Individual colleges and schools may have higher requirements. Identification of the specific courses counted as courses in the major in an academic program is available in the dean’s office.

Clearing for Graduation. Seniors should register for UNIV 4990 in the term before they graduate in order to arrange for a graduation check through their dean’s office; they must also clear any required grades by the 15th day of the graduation term for courses to be used toward degree requirements. Independent (Asynchronous) Distance Education courses must be completed by mid-term prior to graduation.

A student must be registered in the term in which degree requirements are completed. Students who have completed all course requirements but who lack other requirements (non-thesis final exam, internship, etc.) must register for the term in which those requirements are completed. The student also must register in any semester during which the student’s course or the facilities of the university are used for work on a thesis or dissertation, for the taking of oral examinations, or for removal of an “incomplete” grade. Undergraduates who have completed all courses should register for UNIV0000. Students who have in a previous term completed all requirements for the degree, upon receipt of a “Certificate of Completion” in the Office of Admissions and Records (undergraduate) or the Graduate School (graduate), will not be required to register in a future term if their graduation is delayed or postponed.

A graduation fee is payable to the Cashier’s Office at the beginning of the term of graduation. A student who is a candidate for a degree in a term in which no credit work is taken is required to register in such term as a pre-requisite to graduation. (For members of the faculty and staff the charge is reduced to $5.00.) The graduation fee is in addition to the charge. See “Fees and Charges” in this Bulletin for details. If a student is in default on any payments due the University, the diploma and academic record will not be issued until the matter is cleared. Degrees are conferred each term. Commencement exercises are held after fall and spring semesters and summer term. If a student does not plan to attend the exercises, arrangements should be made with the dean or the Director of Admissions and Records to receive the degree in absentia.

Graduation Honors

Students with a minimum overall grade average of 3.4 are graduated Cum Laude; a 3.6 magna Cum Laude; and a 3.8 summa Cum Laude. This distinction of high academic achievement is placed on the student’s diploma and on his or her permanent record.

The grade average for graduation honors must be achieved on Auburn University course work. At least 60 hours in residence at Auburn University are required for graduation honors. All grades, including those excluded by the grade adjustment/course repeat policy, are used for determining academic honors. Grades of S or U and non-credit courses are not used in the calculations. Students earning a second baccalaureate degree must earn the minimum overall grade average required for honor distinction on the additional hours completed for the second degree. Those additional hours must total at least 60 credit hours.

Students meeting all of the requirements of the University Honors College graduate as University Honors Scholars.
Student Records
Confidentiality of Student Records

The University recognizes that the maintenance of student information and educational records is necessary and vital to assist the student’s education and development and to provide opportunities for University research and policy formulation. The University recognizes its obligations to exercise discretion in recording and disseminating information about students to ensure that their rights of privacy are maintained.

The University will furnish annual notification to students of their right to inspect and review their educational records; the right to request amendment of educational records considered by them to be inaccurate or misleading or that violate privacy or other rights; and of their right to a hearing should the University decline to amend such records. This annual notice will be published in the Auburn University Bulletin.

The following guidelines have been developed to ensure the privacy rights of students. For the purposes of this policy statement a student is defined as an individual who has been admitted and has been in attendance in a component unit of the University. Classification as a student in one component unit of the University (e.g., an undergraduate program) does not imply that the person has been accorded the rights outlined below in other component units (i.e., graduate school, professional schools, branch campus).

Student Access to Records

Students have the right to be provided a list of the type of educational records maintained by the University which are directly related to the student; the right to inspect and review the contents of these records; the right to obtain copies of these records; the right to a response from the University to reasonable requests for explanation and interpretation of these records; the right to an opportunity for a hearing to challenge the content of these records; and if any material or document in the educational record of a student includes information on more than one student, the right to inspect and review only the part of such material or document as relates to the student.

Students do not have access to financial records of their parents; confidential letters and statements of recommendation which were placed in the educational record prior to January 1, 1975, provided such letters or statements were solicited or designated as confidential and are not used for purposes other than those for which they were specifically intended; confidential recommendations, if the student signed a waiver of the right of access, respecting admission, application for employment, and the receipt of an honor or honorary recognition.

Students do not have access to instructional, supervisory or administrative personnel records which are not accessible or revealed to any other individual except a substitute; Campus Security records which are maintained apart from educational records, which are used solely for law enforcement purposes, and which are not disclosed to individuals other than law enforcement officials of the same jurisdiction; employment records except when such employment requires that the person be a student; and the Alumni Office records.

Students do not have access to physical or mental health records created by a physician, psychiatrist, psychologist or other recognized professional acting in his or her capacity or to records created in connection with the treatment of the student under these conditions which are not disclosed to anyone other than individuals providing treatment. These records may be reviewed by a physician or appropriate professional of the student’s choice.

Procedures for Access

The Office of Admissions and Records has a complete list of educational records maintained by the University which students may obtain. Students should contact the appropriate office to inspect and review their records. An office may require that a University official be present when a student inspects and reviews his or her educational records. Any questions concerning a student’s access to records should be directed to the Director of Admissions and Records.

Amending Educational Records

Students may request that any information contained in their educational records which they consider to be inaccurate, misleading, or in violation of their privacy or other rights be amended or deleted from the records. (A grade or other academic scores may not be amended, except that the accuracy of recording the information may be challenged.)

Students who request that information in their records be amended should first direct their request to the official with primary responsibility for the information on the record. If the matter is not resolved to their satisfaction, students should direct their requests to the official’s dean or division head. If the matter is not resolved to their satisfaction, they may request a formal hearing.

Right to a Formal Hearing and Procedures for Decision

Students may request formal hearings to challenge information contained in their educational records. The hearing will be held in a reasonable time (not to exceed 45 days) and in a reasonable place. Students may be assisted or represented by persons of their choice, including an attorney, at the expense of the student, and shall be afforded a full and fair opportunity to present evidence relevant to the issue(s).

Students or their representative should request the hearing in writing and should specifically identify the information they seek to have amended. The request should be directed to the Associate Provost and Vice President for Student Affairs.

The Associate Provost and Vice President for Student Affairs will conduct the hearing and render a decision within a reasonable period of time after the conclusion of the hearing and the decision shall be based solely upon the evidence presented at the hearing. The student shall be notified in writing of the reason(s) for the decision and given a summary of the evidence.

If the decision is that the information in the student’s educational records is inaccurate, misleading or in violation of his rights and privacy, the statement(s) will be corrected or expunged from the student records.

If the decision is that the information is not inaccurate, misleading, or in violation of the privacy or other rights of the student and that the information or parts thereof are to remain in the student’s educational records, the student shall be notified and given the right to enter a statement in the records setting forth any reason for disagreeing with the decision of the Vice President for Student Affairs. This statement shall be maintained in the records as long as the record or contested portion thereof is maintained, and if the contested educational record or contested portion thereof is disclosed by Auburn University to any party, the student’s explanation shall also be disclosed to that party.

The Secretary of Education has established a review board to receive complaints regarding violation of student’s rights. Students wishing to file a complaint directly to the review board should write to the Family Policy and Regulations Office, Department of Education, Washington, D.C. 20202. Detailed procedures for this complaint procedure are listed under section 99.63 of the regulations issued by the Secretary and will be furnished upon request by the Registrar, Auburn University.

This policy is adopted pursuant to the Family Educational Rights and Privacy Act, (34 CFR Part 99), and is not intended to impose any restrictions or grant any rights not specifically required by this Act.

Release of Directory Information

Directory information may be released by the University without the student’s written consent. Directory information consists of student’s complete name; local address and associated telephone number; parent/spouse name, address and associated telephone number; mailing address and associated telephone number; E-mail address; photographs, video or other electronic image; participation in recognized activities and sports; weight and height of members of athletic teams; dates of attendance; degrees and awards received; and most recent previous educational agency or institution attended.

A student may deny the release of directory information by completing an address change/information restriction request form available in the Office of Admissions and Records, 100 Mary Martin Hall. To deny the release of information regarding participation in recognized activities the student must notify the Assistant Vice President for Student Life and the student’s Academic Dean in writing. To deny the release of athletic information the student must notify the Director of Athletics in writing. A former student, one who is not in attendance, must contact the appropriate offices to deny the release of information.

Release of Educational Records

The University will release a student’s educational record(s) upon the student’s written request. The student must:

1. Specify the records to be disclosed.
The student shall, upon request, receive a copy of the record that is to be disclosed. It is University policy to furnish single copies of a student’s record at no charge except for the standard transcript fee, if applicable.

The University may release student’s educational records to the following without prior written consent:

1. University officials who have a legitimate educational interest in the records. University officials are defined as teachers, administrative personnel and other employees except personnel of the security or law enforcement unit of Auburn University who in the performance of their normal duties require access to student records. If University officials are required in the performance of their duties to review the educational records of a student, this will be considered to be a legitimate educational interest.

2. Officials of another school in which the student intends to enroll upon request of the transfer school.

3. Government representatives of the Comptroller General of the United States, the Secretary of Education, the U.S. Commissioner of Education, the Director of the National Institute of Education, the Assistant Secretary for Education, State educational authorities, and State officials to whom such information is specifically required to be reported or disclosed by State law adopted prior to November 19, 1974.

4. Appropriate authorities in connection with financial aid with the understanding that only the necessary records will be released.

5. Organizations conducting studies for, or on behalf of, the University or its agencies for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction and student life provided that the studies will not permit the personal identification of students and their parents by individuals other than representatives of the organization and provided that the personally identifiable information furnished will be destroyed when no longer needed for the purposes for which the study was conducted.

6. Accrediting organizations to carry out their accrediting functions.

7. Parents of a dependent student as defined in section 152 of the Internal Revenue Code of 1954. University officials may release educational records to parents on the basis of a written certification from the parent that the student is a dependent as defined under the Code.

8. A court of law to comply with a judicial order or lawfully issued subpoena with the understanding that the student will be notified in advance as far as possible.

9. Appropriate parties to protect the health and safety of the student or other individuals in emergencies with the understanding that only information essential to the emergency situation will be released, that information will be released only to a party who would be in a position to deal with the emergency, and that the student will be notified, insofar as possible of the information released, the purpose for the release, and to whom the information was released.

No personal information on a student will be released without a statement from the University to the party receiving the information that no third party is to have access to such information without the written consent of the student.

Each office with educational records will maintain a record of each request and disclosure of personally identifiable information from the educational records of a student except for information requested in writing by the student, information released to the student or the student’s parents, directory information, and information released to University officials and teachers who have a legitimate educational interest in the records. The student may inspect the record of requests, disclosures and the legitimate interests of parties requesting or obtaining information in the appropriate University office.

Special Academic Opportunities

The University Honors College

The Auburn University Honors College offers a select group of students a unique academic experience, designed to provide many of the advantages of a small college, in addition to the myriad opportunities available at a large, diverse university. These advantages include small classes taught by professorial faculty and the opportunity to live with other highly-motivated students in one of the four Honors dorms.

Eligibility. Entering freshmen and currently enrolled students who demonstrate the potential for outstanding academic achievement are eligible for admission into the Honors College. Selection of approximately 200 incoming freshmen is based on ACT/SAT scores (29/1280 minimum), high school GPA (3.5 minimum), and a record of leadership and service. Students already enrolled at Auburn who have a 3.4 unadjusted GPA may also be considered for admission.

Curriculum. The Honors Curriculum has two components, the Junior Honors Program and the Senior Honors Program.

The Junior Honors Program has been developed to provide Honors students an opportunity for broad enriching educational experiences based on Auburn’s Core Curriculum. Students who complete it receive the Junior Honors Certificate. To complete the program, students must:

1. maintain an unadjusted 3.2 GPA,
2. attend two of the Honors Convocations each year,
3. complete the Honors Writing Seminars I & II, and
d. complete a minimum of 18 additional hours of Honors Core courses.

The Senior Honors Program offers Honors students the choice of completing the Thesis Option or the Contract Option. The Contract Option requires a specified number of contract courses, which are upper-level courses related to the student’s major with an added Honors component. Students selecting the thesis option take reading/thesis courses under the direction of a faculty member in the student’s major and write a thesis. Completing an undergraduate thesis is a significant achievement that is noted by admission committees for graduate and professional schools.

Thesis Option. To receive the Senior Honors Certificate under the Thesis Option, the student must:

1. maintain an unadjusted 3.2 overall GPA,
2. complete at least 3 hours in the Honors Readings course or in contract courses in the major curriculum (3000-level or above), and
3. complete the Honors Thesis course. (Some curricula require a senior project or thesis, which may form the basis for the Honors Thesis.)

Contract Option. For the Contract Option, the student must:

1. maintain an unadjusted 3.2 overall GPA and
2. complete 4 contract courses (at least 12 hours) in the major curriculum (3000-level or above).

University Honors Scholar and Senior Honors Scholar. To graduate as a University Honors Scholar student must complete all requirements for the Junior and Senior Honors Certificates, the requirements for their discipline, and have a minimum cumulative unadjusted GPA of 3.4.

To graduate as a Senior Honors Scholar, students must complete the requirements for the Senior Honors Program and have a minimum cumulative unadjusted GPA of 3.2.

All distinction are noted on the student’s diploma and transcript.

Cooperative Education Program

The Cooperative Education program provides opportunities for students to alternate terms of academic study with work experiences in industry, business and government agencies.

Coordination of study and work combines theory and practice. As a result students find increased meaning in and motivation for their studies. This experience helps to develop a sense of responsibility, judgment, and maturity. Students also benefit financially, since they are paid for their work.

In four-year undergraduate curricula, the Cooperative Education Program is a five-year plan. A student must complete at least two terms of the freshman year with an above-average scholastic record before being placed with an employer. Cooperative Education is offered in all curricula of the colleges of Agriculture; Architecture, Design and Construction; Business; Education; Engineering; Human Sciences; Liberal Arts; Sciences and Mathematics and in all curricula of the School of Forestry and Wildlife Sciences.

A graduate Co-op Program is arranged for certain students in the master’s and doctoral programs where employers can provide professional experiences which relate directly to the student’s specialized field of study.

For additional information, contact: Cooperative Education (Co-Op) Program, 101 Lowder Building, Auburn University, AL, 36849-5123. Telephone: (334) 844-5410. Website: www.auburn.edu/co-op.

Independent Learning

The Independent Learning program provides asynchronous credit and non-credit correspondence instruction, designed primarily for persons unable to attend college on a regular basis. Courses are also open to enrolled students with their dean’s permission. The credit
courses parallel those given in the University, award college credit, and are taught by instructors approved by the relevant academic department. Any person is eligible for enrollment, although enrollment is not equivalent to admission to the University.

Independent learning courses use a number of delivery modes—print, cassettes, CDROM, and computer. Upon registration the student receives a course manual and instructions. The student will be required to do assigned reading, submit written assignments, and possibly do supplemental work. A supervised final examination is given upon completion of all course assignments. Any on-campus student trying to satisfy graduation requirements by independent learning must complete all course work and final examinations by mid-term prior to graduation.

Persons typically enroll in an independent learning course (1) when job or family responsibilities prevent on-campus study; (2) when classroom schedules conflict or a course is unavailable during the term it is needed; (3) when a person has been away from formal study for some time and wishes to get back in stride; (4) when a person is away from campus during the summer or while participating in a cooperative education program.

Courses are available from the following fields: film, geography, health, horticulture, physical education and recreation, nutrition and foods, political science, law enforcement, psychology.

Fees for independent learning courses are listed under Fees and Charges. Application forms and a course bulletin are available from Distance Learning, 305 O.D. Smith Hall, Auburn University, AL 36849-5611, Telephone: (334) 844-5103.

International Academic Opportunities

Access to international opportunities is provided throughout many colleges, schools, departments and other student support units. However, there are several units on campus that provide specialized services for English language study, study abroad and international students attending Auburn University.

English as a Second Language Program

The ESL Program is housed in the Office of the Associate Provost for Academic Affairs and operates in cooperation with the Department of English. The English as a Second Language (ESL) Program offers English language instruction for international students and visiting scholars. The program offers instruction in writing, reading and conversational skills for Auburn University undergraduate and graduate students, as well as international research associates and scholars visiting Auburn. It also offers special intensive English programs for students from other schools and organizations abroad. In addition, the ESL program provides training in the development of teaching skills to international GTA’s. For additional information, contact: 108A Wallace Building, 334-844-2122; email: blfick@auburn.edu or web: www.auburn.edu/esl/.

Office of International Education

The Office of International Education (OIE) is a unit of the AU Division of Academic Affairs. Its mission is to support the educational activities of the colleges, schools and departments by providing support to all students who are interested in an international experience and to all students from around the world who attend Auburn University. For additional information, contact: 201 Hargis Hall, 334-844-5766; email: intlfd@auburn.edu or web: www.auburn.edu/aub-ie. See page p. 28 for additional information on International Student Services.

OIE International Student and Scholar Services

The OIE International Student and Scholar Services unit provides international students and scholars on non-immigrant visas with technical and logistical assistance for coming to Auburn as well as after their arrival through their academic and/or degree activities. Certificates of eligibility for study in the United States, work authorizations, and other government documents required for international students are issued by this office. Joint orientation programs are conducted with the Office of International Student Life and other units of the university to assist students with adapting to the AU community. Currently there are approximately 750 international students at Auburn University representing 90 countries.

OIE Study Abroad Services

The OIE Study Abroad unit was established to develop and expand study opportunities outside of the United States. Currently Auburn University offers study abroad opportunities in most countries of the world. Each year over 300 Auburn students study outside of the United States. Programs are available for most core, major, and elective courses and although many programs may require prior knowledge of a foreign language, there are many that do not. Programs range in length from one month to a full academic year and are available for all semesters including summer. By participating in an approved program, students may retain official Auburn student status, apply for financial aid and arrange for a pre-estimation of overseas credits. With some planning study abroad can be fully integrated with Auburn University degrees. Freshmen are encouraged to begin planning their study abroad upon arrival on the AU campus. The Study Abroad staff also provides information about voluntary service projects, internships and short-term overseas employment. Scholarship information is available on AU scholarships for specific disciplines, the US Fulbright Awards for graduating seniors and the National Security Education Programs for Undergraduates and Graduates. Students are encouraged to visit the OIE Study Abroad office in 201 Hargis to talk with staff and search through the SA Resource Area which houses information on hundreds of opportunities abroad.

National Honor Societies

The following members of the Association of College Honor Societies have established chapters at Auburn: Alpha Delta Delta (Social Work), Alpha Epsilon Sigma (Agricultural Engineering), Alpha Epsilon Delta (Pre-Medicine), Alpha Kappa Delta (Sociology), Alpha Lambda Delta (Freshman Scholarship), Alpha Pi Sigma (Criminal Justice), Alpha Pi Mu (Industrial Engineering), Alpha Sigma Mu (Metallurgical & Materials Engineering), Beta Alpha Psi (Accounting), Beta Gamma Sigma (Business), Cardinal Key (Junior Leadership), Chi Epsilon (Civil Engineering), Eta Kappa Nu (Electrical and Computer Engineering), Kappa Delta Pi (Education), Lambda Sigma (Sophomore Leadership), Mortar Board (Student Leadership), Omega Chi Epsilon (Chemical Engineering), Omicron Delta Kappa (Student Leadership), Omicron Nu (Home Economics), Phi Alpha Theta (History), Phi Beta Kappa (Arts and Sciences), Phi Eta Sigma (Freshman Scholarship), Phi Kappa Phi (Senior Scholarship), Pi Delta Phi (French), Pi Lambda Sigma (Pre-Law), Pi Sigma Alpha (Political Science), Pi Tau Sigma (Mechanical Engineering), Psi Chi (Psychology), Rho Chi (Pharmacy), Sigma Delta Pi (Spanish), Sigma Gamma Tau (Aerospace Engineering), Sigma Pi Sigma (Physics), Sigma Tau Delta (English), Tau Beta Pi (Engineering), Tau Sigma Delta (Architecture & Allied Arts), Xi Sigma Pi (Forestry).

National Recognition Societies

The following national societies have chapters established at Auburn: Alpha Epsilon Lambda (Graduate), Alpha Eta Rho (Aviation), Alpha Kappa Psi (Business), Alpha Phi Omega (Service), Alpha Psi Omega (Theatre), Alpha Tau Alpha (Agricultural Education), Angel Flight (Air Force ROTC Auxiliary), Arnold Air Society (Air Force ROTC), Beta Beta Beta (Biology), Block and Bridge (Animal Husbandry), Delta Nu Alpha (Transportation), Delta Omicron (Music), Delta Sigma Pi (Commerce & Business Administration), Gamma Sigma Delta (Agriculture), Golden Key National Honor Society, Kappa Kappa Psi (Band), Kappa Psi (Pharmacy), Lambda Tau (Medical Technology), National Student Speech, Language, Hearing Association (Communication Disorders), Omicron Delta Epsilon (Economics), Omicron Kappa Pi (Architecture), Order of Omega (Greek Leadership), Phi Delta Kappa (Education), Phi Delta Chi (Pharmacy), Phi Lambda Sigma (Pharmacy), Phi Lambda Upsilon (Chemistry), Phi Mu Alpha (Music), Phi Psi (Textiles), Phi Zeta (Veterinary Medicine), Pi Alpha Xi (Horticulture), Pi Lambda Theta (Education), Pi Mu Epsilon (Mathematics), Pi Sigma Epsilon (Marketing), Scabbard and Blade (Military), Semper Fidelis (Marine Corps ROTC), Sigma Delta Chi (Journalism), Sigma Gamma Epsilon (Earth Sciences), Sigma Lambda Chi (Building Construction), Sigma Theta Tau (Nursing), Sigma Xi (Scientific Research), Society for Technical Communication (Liberal Arts), Steerage (Navy ROTC), Tau Beta Sigma (Band), Upsilon Pi Epsilon (Computer Science).
Financial Information

Auburn University’s fees have remained somewhat lower than those charged by similar institutions in the Southeast and in other sections of the country. As institutional costs have risen, small increases in fees have been authorized from time to time by the Board of Trustees. Every effort is made, however, to hold fees and charges at a minimum.

The following fees and charges are in effect at this time. However, since the catalog must be published well in advance of the next school year, it is not always possible to anticipate changes. Thus the fee schedule may have to be revised. Every effort will be made to publicize changes as far in advance as possible.

Basic Charges (revised June 2, 2003)

Students should be prepared to complete registration by payment of fees and charges, upon notice, before the beginning of the term.

<table>
<thead>
<tr>
<th>FEES PER SEMESTER</th>
<th>(GRADUATE AND UNDERGRADUATE)</th>
<th>Resident</th>
<th>Non-Resident</th>
<th>Non-Resident Student*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. University Fee - 10 to 15 Credit Hours (a)</td>
<td>$2,115.00</td>
<td>$6,345.00</td>
<td></td>
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</tr>
<tr>
<td>2. University Fee - College of Veterinary Medicine ** (a)</td>
<td>4,055.00</td>
<td>**12,165.00</td>
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</tr>
<tr>
<td>3. University Fee - School of Pharmacy **(a)</td>
<td>5,415.00</td>
<td>10,305.00</td>
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<tr>
<td>4. University Fee - College of Architecture, Design, &amp; Const. ** (a)</td>
<td>3,422.00</td>
<td>8,958.00</td>
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<tr>
<td>5. Additional Credit Hour Fee (More than 15 hours)</td>
<td>67.00</td>
<td>201.00</td>
<td></td>
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<tr>
<td>6. College Course Fees (Per Credit Hour)</td>
<td>8.00</td>
<td>8.00</td>
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<tr>
<td>7. Student Fees</td>
<td>98.00</td>
<td>98.00</td>
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<tr>
<td>8. International Student and Scholar Fee</td>
<td>75.00</td>
<td>75.00</td>
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<tr>
<td>9. Registration Fee (Less than 10 hours) (b)</td>
<td>365.00</td>
<td>1,095.00</td>
<td></td>
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<tr>
<td>10. Credit Hour Fee (Less than 10 hours)</td>
<td>175.00</td>
<td>525.00</td>
<td></td>
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</tr>
<tr>
<td>11. Credit Hour Fee College of Veterinary Medicine</td>
<td>369.00</td>
<td>1,107.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Credit Hour Fee School of Pharmacy **</td>
<td>505.00</td>
<td>921.00</td>
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</tr>
<tr>
<td>13. Credit Hour Fee College of Architecture, Design, &amp; Const.</td>
<td>175.00</td>
<td>525.00</td>
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<tr>
<td>14. Auditing Fee (per course) (c)</td>
<td>175.00</td>
<td>525.00</td>
<td></td>
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<tr>
<td>15. clearing Graduation Fee (d)</td>
<td>216.00</td>
<td>216.00</td>
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<tr>
<td>16. Music Fee (full hour lessons) (e)</td>
<td>166.00</td>
<td>166.00</td>
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<tr>
<td>17. Music Fee (half-hour lessons) (e)</td>
<td>83.00</td>
<td>83.00</td>
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<td>18. Flowering Arranging Fee (HORT 2250)</td>
<td>179.00</td>
<td>179.00</td>
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<tr>
<td>19. Auburn Abroad Fee (f)</td>
<td>365.00</td>
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<tr>
<td>20. Independent (Asynchronous) Distance Education Course Fee (g) a. Service Fee</td>
<td>42.00</td>
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<tr>
<td>* Add. Fee Per Credit Hour</td>
<td>101.00</td>
<td>101.00</td>
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<tr>
<td>* Graduation Fee</td>
<td>20.00</td>
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<tr>
<td>* Equivalency Examination Fee (GED) (each)</td>
<td>20.00</td>
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<tr>
<td>* Doctoral Dissertation Microfilming Fee</td>
<td>55.00</td>
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<tr>
<td>* Duplicate Diploma Fee</td>
<td>20.00</td>
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<tr>
<td>* Thesis and Dissertation Binding Fee (per copy)</td>
<td>7.00</td>
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</tbody>
</table>

Graduation Fee (each degree) | $20.00 |

Payment of graduation fee is due by the due date of bill on which it is charged.

One-half Tuition Internships: College of Liberal Arts: ARTS 3920, CMDS 7940, COMM 4920, CRIM 4920, HADM 4920, HIST 7920, POLI 4920, POLI 7920, PRCM 7940, RTVF 7940, SOWO 4920, THEA 4920; College of Business: MNGT 4920, School of Human Sciences: CAH 4940, CAHS 4940, HDFS 4920, HDFS 4940. Fees will be one-half the full University Fee or one-half of the non-Alabama University fee, if applicable, provided students are not enrolled in other courses. Total course load not to exceed nine credit hours.

Rent for Student Housing, (see “Housing and Residence Life”)

Meal Plans (See “Dining Services” under Student Services.)

Registration fees for sponsor billing:

To Trust Funds, companies, or other sponsors | 5.00

Charge for returned check | 20.00

Notice: All checks are accepted subject to collection.

Special Service Fees:

Cooperative Education Program | 45.00

Cooperative Education ID Fee (Applicable to co-op students who order athletic tickets at the student rate) | 37.00

Internship Fee (Veterinary Medicine) | 15.00

Transcript Fee | 3.00

Resignations and Refunds

Students officially resigning prior to the start of a term will not be held liable for fees (other than non-refundable fees). Students resigning during the first 15 class days of the fall and spring semesters and the first 5 class days of the summer term and/or session will be charged a $100 Resignation Fee.

The liability for fees will not be excused for resignations effective after the 15th class day of fall and spring semesters and the 5th class day of summer term and/or session except in cases of resignation caused by personal illness (physicians statement required) or call into military service (copy of activation orders required, excluding temporary training assignments). A pro-rata reduction will be made in cases of personal illness and a full reduction for military service activation. Students having made prior payment will be refunded the amount paid less their liability after the resignation. Students suspended for disciplinary reasons are not eligible for refunds or reductions in liability. Resigning students receiving refunds will first have their refunds applied to any outstanding obligations and to any scholarship, grant or loan which they had received for the term.

Students reducing course loads on or prior to the 15th day of classes of fall and spring semesters and the 5th class day of summer term and/or session may be eligible for a partial refund or reduction in liability of tuition and fees. To be eligible, the adjustment must be completed on or before the 15th day of classes of fall and spring semesters and the 5th class day of summer term and/or session. In such cases, fees will be reassessed based on the adjusted schedule.

Any Federal Title IV financial aid recipients who resign will be liable for any unearned funds received as determined by the Federal Return
of Funds Policy. These amounts will be charged back to the student’s Bursar account.

Students who believe that extenuating circumstances warrant an exception to the refund policy must submit an appeal in writing to the Director, Office of Bursar, Quad Center. Acceptance or rejection of the appeal will be mailed within 10 business days.

Payment of University Obligations

The Auburn University Billing/Receivable System will bill students by mail for the majority of their charges due AU. Among the charges included within this system are those for tuition/fees, Tiger Club, housing and parking. Other charges will be included in the system as deemed appropriate. Charges not included within this system will be billed by the department which generated the charge. Any questions concerning a charge should be directed to the department responsible for that particular charge.

AU Billing/Receivable statements will be mailed at approximate monthly intervals corresponding to the University’s semester schedule. The first installment for tuition and fees will be billed and due prior to the beginning of each semester. The final installment will be billed approximately one week prior to the beginning of the semester and due on the bill due date. Additional charges will be billed as incurred. All charges appearing on a billing statement must be cleared by the due date for that statement or late payment charges will be assessed. Late payment charges may be waived for tuition resulting from University registration and housing charges when financial aid is processed through the University and evidence of such aid is recorded on the statement. AU Billing/Receivable statements will be mailed to the student’s mailing address (as maintained by the Registrar’s office) unless the student directs otherwise. Students may request that all billing correspondence be sent to a specified address by contacting the Bursar’s Office.

Students are expected to meet all financial obligations when they fall due. The University reserves the right to deny admission, dis-enroll, prevent participation in graduation and withhold transcripts, cap, gown and diploma of any student who fails to meet promptly their financial obligations to the University. It is each student’s responsibility to be informed of all payment due dates, deadlines, and other requirements by referring to official sources of University information such as this catalog, official calendar of events, announcements printed in the Plainsman, or that disseminated by other means from time to time. Students owing charges for prior terms will not be allowed to register for future terms until all charges are paid.

University registration or other requests for class assignment create a liability for the payment of tuition and fees resulting from assigned classes. Such liability can only be excused when students withdraw or resign in accordance with University procedures.

Checks: Checks given in payment of any University obligation are accepted subject to final collection. If the bank on which the check is drawn does not honor the demand for payment and returns the check unpaid, the student will pay a returned check fee of $20 and any applicable late payment charges. If payment is not cleared promptly, the student’s registration may be canceled. The University has the right but not the obligation to redeposit any insufficient check without notice to the student or maker.

Collection costs or charges along with all attorney fees necessary for the collection of any debt to the University will be charged to and paid by the debtor.

Veterans: All veterans (Chapters 30 and 32), reservists and guard members (Chapter 106) and veterans’ dependents (Chapter 35) are responsible for paying fees and charges on the same basis as other students. Veterans under the Vocational Rehabilitation program (Chapter 31) and students receiving the Alabama GI Bill should make arrangements for their tuition, fees and books to be paid prior to their first payment due date.

Foreign Students Under Contract: A special administration management/program fee will be negotiated for foreign students who come to the University under a contractual arrangement that requires special administrative and programming arrangements beyond those of the regular academic program of the University.

Alabama and Non-Alabama Student Policy

Students enrolled prior to June 1, 1996 should consult with the Office of the Registrar for changes in residency status.

Policy for Students Enrolled for the First Time June 1, 1996, and Thereafter

For the purpose of assessing fees, applicants shall be classified as Alabama or non-Alabama students. Non-Alabama students are required to pay the non-resident tuition fee.

An Alabama student is a person which shall be a citizen of the United States, or a resident alien, and who shall have resided and had habitation, home and permanent abode in the State of Alabama for at least 12 months immediately preceding current registration. In applying this regulation, “applicant” shall mean a person applying for admission to the institution, if applicant is married or 19 years of age, and financially independent. Otherwise, it shall mean parents, parent or legal guardian of his/her person. If the parents are divorced, residence will be determined by the residency of the parent to whom the court has granted custody.

A person who establishes a guardianship for purpose of avoiding non-Alabama fees will be subject to non-resident tuition.

No person who moves to Alabama for the primary purpose of attending college shall be considered to have demonstrated intent to establish domicile in the State of Alabama, and will generally not be considered eligible for classification as a resident student. Clear and convincing evidence to the contrary must be presented to overcome this presumption.

In determining Alabama student status for purposes of assessing fees, the burden of proof is on the applicant.

Additional Persons Eligible for Resident Tuition

1. Military personnel on active duty stationed in Alabama, their spouses and dependent children (as defined by Internal Revenue Codes), as well as military personnel whose “Home of Record” is Alabama, who have continuously filed Alabama income tax returns for the duration of their service, and their spouses and dependent children.

2. Non-resident graduate students who have been awarded full academic, athletic or other similar performance tuition scholarships by Auburn University and graduate students appointed on assistantships of at least 1/4-time.

3. Full-time employees of a State of Alabama agency or institution, their spouses and dependent children.

4. Spouse and dependent children of a non-resident, provided the non-resident has been employed in Alabama full-time for at least 12 consecutive months prior to registration, has filed an Alabama Income Tax Return for the tax year prior to the year in which the student is admitted, and did not claim a credit on the Alabama return for income taxes paid to another state.

5. Non-resident students enrolled in programs included in the Southern Regional Education Board Academic Common Market, provided the student does not change to another program not included, is enrolled in 12 hours per term and earns a 3.0 each term. In such cases of change, reduction in course load or failure to meet the GPA, the student will be classified as a non-resident for tuition purposes.

6. Persons whose spouses by legal marriage are bona fide Alabama residents.

7. Spouses and dependent children of persons who establish domicile within the State of Alabama, provided that the person who establishes domicile is employed full-time in a permanent position in Alabama.

8. Non-resident persons enrolled in programs of Auburn University not funded by tax revenues of the State of Alabama.

9. Students enrolled in the College of Veterinary Medicine professional D.V.M. program admitted under contract with the Southern Regional Education Board.

Initial Determination of Eligibility

In order to be initially classified as eligible for resident tuition, students must demonstrate that they or their parent, guardian or spouse qualify for one of the eligibility categories prior to the first day of class. A signed statement is required that qualification for the eligibility category claimed has been met prior to registration.

Change in Eligibility for Resident Tuition

Students determined to be eligible for resident tuition will maintain that eligibility upon re-enrollment within 12 months of their most recent enrollment, unless there is evidence that the student subsequently has abandoned resident status (e.g., registering to vote in another state.) Students failing to re-enroll within 12 months must establish eligibility upon re-enrollment.
Students initially classified as ineligible for resident tuition will retain that classification for tuition purposes until they provide clear and convincing evidence that they have established permanent domicile in Alabama. The burden of proof of change in eligibility rests on those requesting change. Evidence relevant to an initial determination of eligibility is also relevant to establishing a change in eligibility.

Non-resident students who carry an academic load considered normal (10 or more hours per term) for students at Auburn University will be presumed to be residents of the state of residence if they use the state of residence as the purpose of gaining an education and, thus, have not demonstrated the intent to establish a true domicile in Alabama. Clear and convincing proof may overcome this presumption, but again, the burden of proof rests on those requesting change in eligibility. Any change in resident tuition eligibility occurring during an academic term will not become effective until the registration for the succeeding term.

The following types of evidence may contain data to establish twelve 12-month residency in the State of Alabama. In all cases, the person must be at least 18 years of age or married, and financially independent. Otherwise, the person’s residency will be based on that of the parent or guardian.

1. Ownership of rental or residential property in the State of Alabama and continuous occupation thereof on an extended term of not less than twelve consecutive months.
2. Full-time permanent employment in the State of Alabama.
3. Possession of State of Alabama License(s) required to do business in the State of Alabama.
4. Legal marriage to a bona fide Alabama resident.
5. Registration to vote in the State of Alabama.
6. Filing of Alabama resident income tax returns.
7. Holding a current Alabama drivers license.
8. Registration of vehicle in Alabama, and payment of property taxes, thereon.
9. Evidence of local banking activity within the State of Alabama for 12 consecutive months prior to making application for residency change.

The Director of Admissions and Records at Auburn University and the Director of Admissions and Records/Admissions Director shall be subject to review by the Residency Committee (at Auburn) or the Chancellor (at AUM) or the designated representative of each, upon written request of the applicant.

Academic Common Market

The Academic Common Market is an agreement among 14 Southern Regional Education Board states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia). According to the agreement, if one of these states does not offer a particular degree program in its state-supported universities, a resident of that state may enroll in that degree program at a university in one of the other states without having to pay out-of-state tuition. Each state specifies which programs offered at out-of-state universities it will allow its residents to attend as common market students. The states of Florida, North Carolina and Texas do not participate in the Academic Common Market. To be eligible for consideration for the Common Market at Auburn, students must be enrolled in degree programs agreed to by their home states, be classified as a junior or senior at Auburn, have a 3.0 for all college-level course work attempted, including transfer work, and be certified as a resident of one of the other states. Auburn students who enter as common market students and do not complete 12 hours per term, do not maintain a 3.0 or who later change to a degree program not certified as eligible by their home states, lose the waiver of out-of-state tuition. Since out-of-state residence is a requirement for being a common market student, students may not use the time spent as common market students to qualify them as residents of Alabama. For additional information about the Academic Common Market, contact the Provost’s Office, 209 Samford Hall (334) 844-5779. Application materials are due by March 15 for the following year. If space remains, applications for spring semester received by October 15 will be considered.

Financial Aid

The Office of Student Financial Aid at Auburn University provides financial assistance to students who need aid in order to attend the University. Students seeking assistance are required to file an applica-
Auburn University Scholarships

Presidential Scholars

- Presidential Opportunity
  - Athletics
  - Thomas W. Price
  - Richmond Area Auburn Club
  - St. Louis Missouri Auburn Club
  - Carol Wagner Segaren Endowment
  - Jim Scogin
  - Southern Illinois University
  - Hall, Jerry M.
  - Holland M. Smith
  - Mount Auburn Club
  - South Talladega County Auburn Club
  - Sandra Kan
  - Auburn University
  - Auburn University Alumni Association
  - Employees of Children
  - Asa Alaqua
  - Ronnie Ruchester Memorial
  - Ann Barr-Harner
  - Elizabeth Beazemore Memorial
  - Franklin Whitney Bedwell Scholarship
  - Thomas W. Bennett, Jr. and William W. Bennett
  - Birmingham-Jefferson County Auburn Club
  - Preston C. and Ernesto M. Blakney Endowment
  - Roy A. Boles and Wynona Bobo McDonald
  - Birl R. Boshell
  - Terry Boardman
  - James Seaborn Boyd
  - Butler County Auburn Club
  - Calhoun-Cleburne County Auburn Club
  - Elmore County Auburn Club
  - Tallassee-Coushatta County Auburn Club
  - Wa. Lewis

Dallas-Ft. Worth Auburn Club

- Patsy O. Luther Club Endowment
- Thomas & Rosa Drake Dubose Endowment

Dudley University

- Academic
- Academic Excellence
- Robert W. F. Brown, Jr.
- Anderson

- Joseph T. Dennis

- Wm. R. and V. Jean Cummack in Poultry Science

- William Edward Campbell & Margaret Williamson

- Irene and William Gill Endowment

- Sadie Edwards Roberts Miss Auburn

- Ben T. Lanham Jr. Memorial

- Robert Dana Bartlett Memorial in ROTC

- James Cooper Memorial

- Frank Selman & Margaret McNeal Arant Endowment

- Alabama Crop Management Association

- Farming

- John Winfield Scott Scholarship Fund, Inc.

- Dixie Bibb Graves UDC

- Myrtle R. Plant UDC

- Brian Alexander Payne UDC

- North Baldwin County Chapter No. 2167 UDC

- W.E. McClain Memorial UDC

- John Martin Lee UDC

- Mary Darnell Johnson UDC

- Myrtle R. Plant UDC

- Birmingham-Jefferson County Auburn Club

- Thomas Goode Jones

- Jacksonville Florida Area Auburn Club

- AUB Alumni Academic Endowment

- Fred Damrey, Jr.

- Atlantic County Auburn Club

- Bruce N. Anderson

- Henry P. Bronson

- Presbyterian Home

- Presidential Academic
Housing and Residence Life

Auburn University offers a variety of on-campus housing accommodations for students. There are 23 residence halls and 348 apartments to house single undergraduate students and 157 apartments for graduate students and students with families. All facilities are air-conditioned and convenient to academic buildings, libraries, cafeterias, laundries, mail rooms and recreational areas.

Single Undergraduate Housing

The residence halls, with the exception of Noble Hall, located on W. Magnolia Ave., are clustered in two communities. Ten residence halls comprise the Quad community and 12 are located in the Hill community. The Quad houses men and women in single-sex and coed arrangements while the Hill with the exception of one coed hall houses women only. Each Quad and Hill residence hall contains suites consisting of two double rooms (two rooms with two students sharing each room) with connecting bath. A limited number of single rooms with private or semi-private bath are also available. Rental rates for the Hill and Quad residence halls are as follows: Quad - $1,150 (double) and $1,450 (single) per student per semester. Hill - $1,110 (double) and $1,410 (single) per student per semester.

Noble Hall offers a coed housing arrangement consisting of single rooms with a central bath(s) on each floor. A common lobby area joins men’s and women’s wing. Rent is $1025 per semester.

The Extension (CDV Extension Apartments) provides accommodations for men and women in two-bedroom, two-person (same sex) apartments. Rent is $1,360 per student.

The Village (CDV) houses men and women in one- (single occupancy) and two-bedroom (double occupancy) apartments. Semester rent is $1,110-$1,170 for a one-bedroom unit and $1,080 per student for a two-bedroom unit.

All single undergraduate housing units (rooms and apartments) are furnished with beds, desks, chairs and chest of drawers. Most residence halls have community kitchens and all have common lobby/lounging areas. The apartments also contain living and/or dining furniture and kitchen furnishings are furnished with stove, oven and refrigerator (a limited number contain microwave ovens). Students bring their own linens and other furnishings to personalize their rooms or apartments. All utilities except telephone (and electricity in the one-bedroom Village apartments) are included in the rent. Basic cable service is also included in the rent. Telephone and data connection (direct internet access) jacks are located in each room/apartment and, for a monthly fee, either service can be activated through the University’s Division of Telecommunications and ETV.

Housing for students with disabilities is available in the Quad, Hill and Extension communities. Four residence halls in the Quad house Honors students (intermingled with non-Honors students) and an Honors Center is located in one of these halls. Students accepted into the Honors College must specifically request the Honors halls on the housing application if they wish to be considered for assignment to one of these halls.

Families and Graduate Students

In addition to housing single undergraduates, the Village also accommodates graduate students and students with families. Offering the same one- and two-bedroom arrangements, rental rates are as follows: one-bedroom (semester rent) - $1,110 unfurnished; $1,160 furnished. Two-bedroom (monthly rent) - $320 - $325 unfurnished; $330 - $335 furnished. Rates include all utilities (including basic cable service) except telephone and electricity (heat is included in the rent).

All University Housing rental rates listed above are subject to change. Any rate increase will be announced prior to the cancellation date for the semester the Housing agreement is to begin. Rent for apartments in the Village and Extension includes holidays and semester breaks. The residence halls do not remain open during Thanksgiving, Spring and semester breaks.

Admission to Auburn University does not automatically include a room or apartment reservation in University Housing. Students may apply for University Housing when they are accepted to the University and when they have submitted the Admission prepayment. Priority for housing is generally based upon the date the housing application is received (entering Summer applicants have priority over entering Fall applicants). A $100 refundable deposit and a $20 non-refundable application fee is required with the application.

Residential Staff

The residence halls and the Extension are staffed with graduate-level Hall Directors and undergraduate Resident Assistants (RAs). The staff undergoes an extensive training program and are responsible for offering cultural, recreational and educational activities. They also enforce University Housing regulations. The Village is staffed with an Apartments Manager and community assistants who provide services for those residents.

Residence Life Involvement

Living on campus provides an "open door" to involvement in campus life. Through participation in Hall Council, RHA (Residence Hall Association) and other residence life activities, students encounter opportunities that can contribute to their personal and academic growth. All they need do is take advantage of all that residence life has to offer.

Off-Campus Housing

Housing accommodations, such as apartments, duplexes, mobile homes, fraternity houses and privately-owned dormitories are available in the greater Auburn-Opelika community. The University neither inspects nor approves any off-campus housing. A listing of off-campus housing facilities can be obtained at various on-campus locations including the Housing and Residence Life office.

Auburn University Dining Services

Sodexho Campus Services and Auburn University are in partnership to deliver the best possible dining services to students, faculty, staff and visitors to the AU campus.

AU Dining has more than six dining locations on campus. War Eagle Food Court in Foy Student Union offers Godfather’s Pizza, Chick-Fil-A, Sub Connection, and a variety of other options including salads and homestyle cooking. Terrell Dining Hall is located in the center of the “Hill” area of campus and serves as the location for meal plans at “The Marketplace”. Terrell also offers deli sandwiches at “The Hill Deli” and other items at Chick-fil-A. Lupton Deli, located in Lupton Hall in “The Quad”, offers signature sandwiches, Godfather’s Pizza, and some convenience store items. Village Kitchen, located in the CDV Extension apartment village, is a convenience store that offers specialty sandwiches and other fast food items. Sewell Dining Hall is available for the residents of Sewell Hall and any other students who wish to purchase a meal plan. Sewell serves a buffet-style breakfast, lunch and dinner. Haley’s Frozen Refreshment Center, located on the first floor of Haley Center, not only serves signature deli sandwiches but also frozen fruit smoothies. Stack’s Cafe is the newest addition to the library and is open to students who want a cup of Starbucks’ coffee or cappuccino while studying. Stack’s Cafe also serves deli sandwiches at Haley’s Crossing and bakery items. The Training Room is located in the Student Activities Center and offers Freshen’s Smoothies and nutritious sandwiches and salads. All of these dining facilities offer a variety of foods for students living on or off campus.

All dining locations accept Dining Dollars, cash, Visa, MasterCard, or the TigerCard. TigerCard accounts are available in either the declining balance plan, or the ascending balance plan. The TigerCard office is located in downstairs Foy Student Union. The Auburn Dining administrative offices are located at 151 S. Donahue Drive. In addition to the dining services, Sodexho Campus Services also has a catering department on campus, Creative Gourmet. For more information about the catering services, call (334)-844-1234.

Tiger Card/Tiger Club Accounts

A Tiger Club Account provides a convenient means of making purchases on campus and at selected off-campus locations using the student’s TigerCard (ID card). It can be used at bookstores, dining facilities, laundry and vending locations, the Campus Mall, copy centers, and other student services. As members of Tiger Club Accounts, students can choose between a descending balance plan or an ascending balance plan.
The ascending balance plan is billed monthly through the Bursar’s Office. Students who are under 19 years of age must have parental approval in order to have an ascending account. Students who have an ascending balance account need to be aware that charges can accumulate rapidly and all charges must be paid on a monthly basis. However, students soon learn that, with common sense and discretion, having an ascending account can be both convenient and educational.

The declining balance account allows the student to make a deposit in excess of the estimated amount. Additional deposits or credits may be made as needed by cash, check, or debit/credit cards (VISA/MasterCard only).

Itemized statements are available for viewing and printing on OASIS - Online Auburn Student Information System - on the World Wide Web. There is a membership fee charged for each semester the student uses the account - excluding summer sessions. Additional information regarding Tiger Club Accounts may be obtained by contacting the TigerCard/Tiger Club Accounts Office, located in the Foy Union Building, Auburn University, AL 36849. Telephone: (334) 844-1220 or 1-877-345-2058.

Student Health Services

Auburn University Medical Clinic is committed to providing a full range of primary care services for Auburn students including diagnostic services for illnesses and injuries, immediate and follow-up assessment and treatment for illnesses and preventative care services, including immunizations and women’s health services. Services are provided on an appointment basis. Walk-ins will be evaluated and given appointments or seen immediately based on the urgency of the problem or condition. The facility includes laboratory, X-ray, pharmacy, therapy/rehabilitation center and a vision/optical center. The clinical staff consists of fully licensed and Board certified physicians, nurse practitioners, registered nurses, technicians and other support staff. Services are provided on a fee-for-service basis with on-site billing services provided to students to facilitate insurance reimbursement. Major credit cards and Tiger Club are accepted and payment plans, including the Tiger Care Plan, are available. Services are available to all Auburn students, spouses and dependents, faculty, staff, guests and visitors.

Student Insurance - The Student Government Association (SGA) sponsors an Accident and Sickness Insurance Plan, available to registered undergraduate and graduate students, spouses and dependents. The plan provides good coverage at reasonable premium rates. Coverage is provided for services at the Auburn University Medical Clinic, including physician visits, laboratory and X-ray services. An Insurance plan or its equivalent is required for all international students and recommended for all students. For information or issues regarding claims, call 334/749-5585.

Hours of Operation - Monday 8 a.m.- 6 p.m.; Tuesday, Wednesday, Friday 8 a.m.- 5 p.m.; Thursday 9 a.m.- 6 p.m.; Saturday 8 a.m.- 12 p.m. (Hours are subject to change). To make an appointment, call 334/844-4416.

Student Success Center

The Student Success Center consists of four program areas that follow students from orientation as incoming freshmen to placement in a job upon graduation, with many developmental activities in between. The objective is to provide programs and activities that promote the academic, personal and career success of students that lead to higher retention and graduation rates of AU students.

Freshman Year Experience and Students in Transition provides programs to help the new student make the transition into Auburn University life. These programs promote intellectual and social development leading to personal and academic success. Camp War Eagle is Auburn’s summer orientation experience for incoming freshmen and their parents. Successfully Orienting Students (SOS) is held for all new and transfer students who do not attend Camp War Eagle during the summer. For assistance, call 334/844-4501.

Academic Support Services help AU students successfully achieve their academic goals. The Study Partners Program offers free tutoring services to AU students enrolled in selected undergraduate subjects. Supplemental Instruction provides peer-facilitated academic assistance in specific courses. Individual and group instruction are provided to students experiencing academic difficulty and to those who desire to improve their study skills. Two academic courses, UNIV1000, The Auburn Experience, and UNIV1050, Success Strategies, acquaint students with resources and strategies for successful academic and personal learning experiences. Study Smart, a non-credit study strategies course, is also available. Testing services are available for students, including such national tests as the ACT, LSAT, and MCAT. For assistance, call 334/844-5972.

Student Counseling Services provides short-term individual and on-going group counseling to address the emotional/developmental concerns of Auburn students. Educational workshops are offered to the campus community. The Safe Harbor Women's Center provides sexual assault/violence prevention programming, as well as counseling services for victims of sexual assault/violence. The Plains Truth/Reform the Norm campaign promotes healthy/proactive student norms and risk-reduction strategies to reduce alcohol use and impaired driving among college age students. Students needing long-term psychotherapy or 24-hour crisis management are provided an appropriate referral. For assistance, call 334/844-5123.

Career Development Services offers career counseling and job search assistance to students at various stages of their college experience. Career counselors administer and interpret interest and personality inventories, review and edit resumes, conduct mock interviews and provide information/assistance to students through a career library, classes, seminars and Internet job resources. A comprehensive placement office coordinates internship and full-time employment interviews on-campus and maintains an on-line resume referral database. Career fairs and other special events are hosted annually to offer students the opportunity to explore work and other career options. For assistance, call 334/447-4744 or visit the CDS website at www.auburn.edu/career.

Student Life

Student Communications - The following media are subject to supervision by the Board of Student Communications: The Auburn Circle, a general interest magazine; Glomerata, the yearbook issued each spring; The Auburn Plainsman, the weekly student newspaper; Tiger Cub, annual student handbook; WEGL-FM, the student operated campus radio station.

The Foy Student Union - The focal point for co-curricular student activities and other campus programs. Housed within the confines are The Auburn Plainsman, Glomerata, WEGL-FM (91.1), SGA, Greek Life Office (Interfraternity Council, National Pan-Hellenic Council, Panhellenic Council), University Program Council, Eagle Eye (TV), Black Student Union, International Student Organization, Tiger Cub, The Auburn Circle, IMPACT, War Eagle Food Court, Multi-Cultural Student Services, Center for Diversity and Race Relationships, Tiger Card Center, The Connection, Tiger Stop, game room, 24-hour computer lab, Copy Cat, exhibit gallery, lost and found service, automated teller machine, several lounge areas with TVs, as well as an assortment of meeting and banquet facilities. A University-wide information center is maintained by the Union staff.

Langdon Hall - This auditorium is located next to historic Samford Hall. This is the site of the weekly UPC free movie. It may be reserved for University-related events by contacting the Reservations Coordinator in Foy Student Union at 844-1303.

The University Chapel - Located on the corner of South College Street and Thach Avenue, the Chapel is open on weekdays for students, faculty, and staff. It is used for prayer and meditation. The Chapel may be reserved for weddings, religious and certain other University events by contacting Foy Student Union at 844-1300.

The University Program Council - Serves as a clearing house for campus programs as well as providing a wide range of programs and entertainment through the following committees: Fine Arts, Major Entertainment, Horizons, Special Projects, Outdoor Recreation, Films, Publications, Technical Productions, Volunteerism, Eagle Eye, Public Relations, and Media Technology. The experience acquired in planning and executing these programs offers students the opportunity to enhance their personal growth and leadership development.

Recreation Services - The University offers a well-rounded program providing students, faculty and staff with recreational, health and fitness opportunities through intramural sports, informal recreation (free play), sports clubs and fitness programming. The mission of Recreation Services is to assist the University community in developing a lifestyle that encourages development of lifetime patterns for healthful living.
Music, Theatre and Lectures - Classical concerts, touring play productions, lectures by political figures, news commentators, specialists and prominent scholars, traveling and local shows at the art galleries, opera, ballet and films are among the special events of the year at the University. Many of these activities are free.

The University Concert Choir, the Gospel Choir, Men’s Chorus, University Singers, Women’s Chorus, the Marching and Concert Bands, the University Symphony Orchestra, the Vocal Chamber Ensemble and other specialized ensembles offer opportunities for those who want to perform in musical groups.

Auburn University Theatre is home of one of the oldest student organizations on the Auburn Campus, The Auburn University Players. The Department produces a full season of exciting plays and musicals both on the Main Stage and the Theatre Upstairs. Membership and auditions are open to the entire university community. The Auburn University Theatre provides a great opportunity to participate in and appreciate the performing arts.

The Auburn Studio of the Alabama Public Television Network produces programs which are seen throughout the state on the Alabama Educational Television network. WEGL-FM is the campus radio station, operated by students.

Discipline - Auburn University establishes and enforces only those rules and regulations for conduct as are needed to maintain the well-being of the individual student and the University community. The student, by registering at the University, agrees to conform with its regulations. The student is subject to disciplinary action for violating any section of the Code of Student Discipline, which appears in full in the student handbook, the Tiger Cub. Enrollment in no way exempts any student from penalty in case of conviction by public authorities for commission of an illegal act.

Student Government Association

Upon enrollment at Auburn University, each student becomes a member of the Student Government Association, the official organization of the student body. The SGA is the voice of the students, promoting cooperation and communication with the faculty, administration, the Auburn City Council, and the state legislature. The SGA also promotes the social and academic life of Auburn students.

The SGA is organized into three branches. Headed by the SGA President, the executive branch takes on many special projects through the Executive Cabinet. The legislative branch, the SGA Senate, is made up of representatives of each school and/or college. The judiciary branch makes final judgment on all decisions involving the Code of Laws. The Student Government Constitution and Laws, published in the Tiger Cub, detail the functioning of the student government.

Organizations

The student handbook, Tiger Cub, available in Cater Hall and Foy Student Union, has a complete listing of the 300+ chartered and officially recognized organizations on the Auburn campus. Most of these organizations are open to any interested student.

Social Fraternities

The National Pan-Hellenic Council (NPHC) coordinates the activities of its member groups:


The Interfraternity (IFC) Council coordinates the relationships among the member fraternities:

- Alpha Gamma Rho, Alpha Kappa Lambda, Alpha Psi, Alpha Tau Omega, Beta Theta Pi, Chi Phi, Delta Chi, Delta Sigma Phi, FarmHouse, Kappa Alpha, Kappa Sigma, Lambda Chi Alpha, Phi Delta Theta, Phi Gamma Delta, Phi Kappa Psi, Phi Kappa Tau, Pi Kappa Alpha, Pi Kappa Phi, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Sigma Phi Epsilon, Sigma Pi, Theta Chi and Theta Xi.

Social Sororities

The Panhellenic Council coordinates activities of its member groups:

- Alpha Chi Omega, Alpha Delta Pi, Alpha Gamma Delta, Alpha Omicron Pi, Alpha Xi Delta, Chi Omega, Delta Delta Delta, Delta Gamma, Delta Zeta, Gamma Phi Beta, Kappa Delta, Kappa Kappa Gamma, Phi Mu, Pi Beta Phi, Sigma Kappa and Zeta Tau Alpha.

The National Pan-Hellenic Council coordinates the activities of its member groups:

- Delta Sigma Theta Sorority, Inc. and Zeta Phi Beta Sorority, Inc.

Office of International Student Life

The Office of International Student Life is a unit of the AU Office of Admissions/Student Affairs that has been established to help international students with admissions to Auburn University, general guidance, and advising. This office coordinates and sponsors educational and social programs as well as events for International students such as a joint student orientation held every semester in conjunction with the Office of International Education, and the Auburn/Opelika community Friend Program. The World’s Fair, one of our most popular events, which is held every spring semester gives international students a chance to display their culture, also helps all Auburn students and the community learn more about and appreciate the diverse richness of other cultures. Through these and other programs, the Office of International Student Life focuses on helping International students to adjust to their new environment as well as promoting diversity on Auburn’s campus and in the community. For additional information, contact: 204 Mary Martin Hall 334-844-2353; e-mail: orgenny@auburn.edu or Web: www.auburn.edu/international.

Special Clinics

The Speech and Hearing Clinic of the Department of Communications Disorders, primarily a teaching facility, provides service for students with speech, hearing or language problems. These services may involve both diagnoses and treatment of problems.

Other Student Services

The Auburn University Bookstore is located in Haley Center and offers a full line of new and used textbooks, course packets, computers, software, art, engineering & school supplies, and clothing and gifts. The AU Bookstore operates two satellite stores: The Connection, an electronics and entertainment store, located on the patio of Foy Union, and Strictly Business which sells mostly school supplies and graduate level business textbooks, located in the Lower Business building. All three locations accept the Tiger Club card, cash, major credit cards, and personal checks. Please visit our website: www.aubookstore.com.

James E. Martin Aquatics Center - Provides two swimming pools for use by Health and Human Performance classes, intercollegiate athletics, intramural and club sports, students, faculty, staff and community members. Programs and events are planned and staffed to provide a healthy and safe aquatic environment. For information regarding programs and hours of operation, call 844-4182.

Parking Permit Registration

It is the responsibility of students and employees of Auburn University operating a vehicle on campus to register for and display a parking permit as prescribed in the Auburn University Parking and Traffic Regulations manual.

Vehicles with Alabama State Government tags must adhere to all University traffic and parking rules and regulations pertaining to motor vehicles. State vehicles may park in designated A, B, C and R zones and in designated Loading Zones for a period not to exceed 30 minutes.

Parking permits are valid for one year beginning September 1 and ending August 31 of the next year. The registration period for employees is between August 1 and August 31. Registration during this period is conducted by mail. Normal registration for students occurs between August 1 and August 31, as well as between terms and before classes begin.

Permit registration is conducted by the Parking and Traffic Services Office. Employees are mailed preprinted forms, which are to be returned to Parking Services along with the proper registration fee or with approval for payroll deduction. Parking and Traffic Services will return by mail the appropriate hang tag permit. All students must register for a parking permit at the Auburn University Police Department or other designated location. Office hours for permit registration are 7:15 a.m. - 4:15 p.m., Monday through Friday. Student permit registration payments and fine payments are made at the Bursar’s Office, Quad Center.
Interdepartmental and Interdisciplinary Courses

Statistics

While graduate degrees in Statistics are offered through the Department of Discrete and Statistical Sciences in the College of Sciences and Mathematics, courses in statistics, both general introductory courses and those treating the application of statistics to specific disciplines or problems, are offered through the cooperation of many departments and colleges throughout the University. Students interested in receiving training in statistics to support their degree program should consult their adviser and the listing of statistics courses in the “Courses of Instruction” section of this Bulletin, under the heading “STAT.”

Undergraduate Statistics Minor

Required: STAT 3600, 3610, 6620
Elective: STAT 3611, 3010, 6020, 6110, 6630 (Select 6 hours)

A minimum average grade of C (2.0) in all course work in the minor is required. No course take under the S/U option can be counted toward the minor. Specialized courses in statistical methods taught in other departments may be substituted for the above electives with permission of the Chair of the Statistics Committee. A list of previously approved substitutes is available in the Department of Discrete and Statistical Sciences.

Biochemistry

While degrees in Biochemistry are offered through the Department of Chemistry in the College of Sciences and Mathematics, courses in biochemistry, required in or relevant to many degree programs, are offered through the cooperation of many departments and colleges throughout the University. Students interested in training in biochemistry to support their degree program should consult their adviser and the listing of biochemistry courses in the “Courses of Instruction” section of this Bulletin, under the heading “BCHE.”

Molecular Biology

While degrees in Molecular Biology, as well as some undergraduate courses, are offered through the Department of Biological Sciences in the College of Sciences and Mathematics, graduate courses in molecular biology, required in or relevant to many degree programs, are offered through the cooperation of many departments and colleges throughout the University. Students interested in graduate-level training in molecular biology should consult their adviser and the listing of Molecular Biology courses in the “Courses of Instruction” section of this Bulletin, under the heading “CMBL.”

Interdepartmental and Interdisciplinary Curricula

Biosystems Engineering (BSEN)

The curriculum in Biosystems Engineering is coordinated by the Department of Agricultural Engineering and the Department of Biosystems Engineering in the College of Engineering for further information.

Environmental Science (ENS)

The curriculum in Environmental Science is an interdepartmental program based on the strengths of Auburn University in the engineering, biological and physical sciences. See the Department of Civil Engineering in the College of Engineering for further information.

Forest Engineering (FOEN)

The curriculum in Forest Engineering is coordinated by the School of Forestry and the College of Engineering. See the Department of Biosystems Engineering in the College of Engineering for further information.

Materials Engineering (MATL)

The curriculum in Materials Engineering is an interdisciplinary curriculum conducted cooperatively by departments in the College of Engineering and the College of Sciences and Mathematics. See the Department of Mechanical Engineering in the College of Engineering for further information.

Women's Studies

Women’s Studies, an interdisciplinary minor, advances teaching, research and scholarship about women and gender perspectives. The minor sheds light on existing knowledge of women and gender, integrates the study and voices of women into traditional disciplines, examines the impact of the social construction of gender and promotes change to improve women’s, men’s and children’s lives.

Eighteen semester hours in Minor (minimum 9 hours at 3000 level or above).

Courses required: Many courses listed in the minor are taught by different instructors. Students are required to check with the program director or a women’s studies adviser prior to registering regarding course content.
College of Agriculture

JOHN JENSEN, Interim Dean
R. L. GUTHRIE, Executive Associate Dean
W.E. HARDY JR., Associate Dean
W. J. ALVERSON, JR., Assistant Dean

The College of Agriculture prepares students for careers in agriculture and related professions. Courses provide a broad foundation in the basic sciences, a general knowledge of the applied sciences, and a reasonable number of cultural subjects. Most of the basic science courses are given in the freshman and sophomore years and serve as a basis for a better understanding of the applied subjects, usually taken in the junior and senior years.

Curricula are offered in Agricultural Business and Economics, Agricultural Communications, Agronomy and Soils, Animal Sciences, Fisheries and Allied Aquacultures, Horticulture and Poultry Science. The College of Agriculture also furnishes the subject matter training in Agriculture for the curricula of Biosystems Engineering and Agriscience Education. Students who wish to major in other agricultural fields should consult with the Dean.

Transfer credits for agricultural subjects not considered equivalent to those required in the chosen curriculum may be substituted for elective credit; however, duplication of credit will not be allowed. Equivalence of agricultural subjects will be determined by the Dean's Office; however, students may also obtain transfer credit on the basis of validating examinations. Arrangements for validating examinations must be made with the Dean of Agriculture in the first term of enrollment in the College of Agriculture at Auburn and the examinations must be completed before the middle of the second term. Transfer credit for courses which are upper-division courses at AU will not be accepted from two-year colleges.

Pre-Veterinary Medicine

It is possible to gain admission to the College of Veterinary Medicine upon completion of the minimum requirements listed below. Students may declare an option upon admission to the College of Agriculture and must declare an option by the end of their freshman year. If students are admitted to the College of Veterinary Medicine after the completion of all the requirements in the first three years of the option, they may obtain a Bachelor of Science degree in the option after completion of the freshman year in the College of Veterinary Medicine.

The minimum requirements (74 semester hours) for admission to the College of Veterinary Medicine, Auburn University are incorporated in the first three years of the options listed under the following curricula: Animal Sciences, Fisheries and Allied Aquacultures and Poultry Science.

English Composition (6), Mathematics (3), Core History (6), Philosophy (3), PHYS 1500 & 1501 and, PHYS 1510 & 1511 (8), Literature (6), Social Studies (6), BIOL 1020 & 1030 (8), CHEM 1030 & 1031 and CHEM 1040 & 1041 (8), CHEM 2070, 2071, and CHEM 2080 & 2081 (8), Fine Arts (3), BCHE 3200 (3), Scientific Electives (6).

See also the curriculum in Pre-Veterinary Medicine (PVET), College of Science and Mathematics.

Dual-Degree Program with Engineering

This program gives students the opportunity to receive two baccalaureate degrees - one in agriculture and one in engineering. Although the program was developed primarily for students desiring a combination of a biological sciences program with an engineering program, it does not preclude the consideration of other Agriculture-Engineering combinations.

In general, students will be enrolled in the College of Agriculture for approximately three years and in the College of Engineering for approximately two years. During the first three years, the students should take those mathematics, physics and chemistry courses necessary to allow them to transfer to the College of Engineering. Additionally, before transferring to the College of Engineering, they should have completed approximately three-fourths of the total hours required by the College of Agriculture for the awarding of the degree.

To become dual-degree candidates under this program, students must have GPAs which indicate the likelihood of satisfactory completion of College of Engineering degree requirements and recommendation from the Dean of the College of Agriculture. The recommendation should be sought one term before the expected transfer to the College of Engineering.

It is also possible for qualified students to transfer to the College of Engineering following the junior year with the intent of seeking a master's degree rather than a bachelor's degree in one of the engineering disciplines. Consult the Engineering Dean's Office concerning this option.

Minors

**AGRBUSINESS MINOR**

18 semester hours in Minor (minimum 9 hours at 3000 level or above)

<table>
<thead>
<tr>
<th>Courses required:</th>
<th>Cr. Hr.</th>
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</thead>
<tbody>
<tr>
<td>CCT 2910 Fundamentals of Accounting</td>
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<tr>
<td>AGEC 4040 Agriculture Finance</td>
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<tr>
<td>AGEC 6000 Principles of Agribusiness Mgmt</td>
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<tr>
<td>OR</td>
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<tr>
<td>AGEC 6010 Farm Management</td>
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<td>OR</td>
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<tr>
<td>AGEC 6100 Agribusiness Management</td>
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</tbody>
</table>

Elective Courses - See adviser for approved course listing.

**AGRONOMY & SOILS MINOR**

17 semester hours in Minor (minimum 9 hours at 3000 level or above)

<table>
<thead>
<tr>
<th>Courses required:</th>
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</thead>
<tbody>
<tr>
<td>AGRN 1000 Basic Crop Science</td>
<td></td>
</tr>
<tr>
<td>AGRN 2040 Introductory Soils</td>
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</tbody>
</table>

Elective Courses - See adviser for approved course listing.

**ANIMAL SCIENCES MINOR**

15 - 16 semester hours in Minor (minimum 9 hours at 3000 level or above)

<table>
<thead>
<tr>
<th>Courses required:</th>
<th>Cr. Hr.</th>
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</thead>
<tbody>
<tr>
<td>ANSC 1000 Introductory Animal Science</td>
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</tbody>
</table>

Elective Courses - See adviser for approved course listing.

**ENTOMOLOGY MINOR**

15 semester hours in Minor (minimum 9 hours at 3000 level or above)

<table>
<thead>
<tr>
<th>Courses required:</th>
<th>Cr. Hr.</th>
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<tbody>
<tr>
<td>ENTM 3040 General Entomology</td>
<td></td>
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</tbody>
</table>

Elective Courses - See adviser for approved course listing.

**FISHERIES AND ALLIED AQUACULTURE MINOR**

Junior (03) classification is required

15 semester hours in Minor (minimum 9 hours at 3000 level or above)

<table>
<thead>
<tr>
<th>Selected from:</th>
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<tbody>
<tr>
<td>FISH 2100 Introduction to Fisheries Science</td>
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<td>FISH 6210 Principles of Aquaculture</td>
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<td>FISH 6220 Water Science</td>
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<td>FISH 6250 Aquaculture Production</td>
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<tr>
<td>FISH 6320 Limnology</td>
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<td>FISH 6380 Ichthyology</td>
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<tr>
<td>FISH 6410 Introduction to Fish Health</td>
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<tr>
<td>FISH 6510 Fisheries Biology and Management</td>
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</tbody>
</table>

**NATURAL RESOURCES ECONOMICS AND ENVIRONMENTAL POLICY MINOR**

15 semester hours in Minor (minimum 12 hours at 3000 level or above)

<table>
<thead>
<tr>
<th>Courses required:</th>
<th>Cr. Hr.</th>
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<tbody>
<tr>
<td>ECON 2030 Macroeconomics</td>
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<tr>
<td>AGEC 6090 Resource Economics I</td>
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<tr>
<td>AGEC 6120 Env &amp; Natural Res Economics</td>
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</table>

Elective Courses - See adviser for approved course listing.

**PLANT PATHOLOGY MINOR**

15 semester hours in Minor (minimum 9 hours at 3000 level or above)

<table>
<thead>
<tr>
<th>Courses required:</th>
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<tbody>
<tr>
<td>PLPA 3000 General Plant Pathology</td>
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</table>

Elective Courses - See adviser for approved course listing.
POULTRY SCIENCE MINOR
15 semester hours in Minor (minimum 12 hours at 3000 level or above)
Courses required: Cr. Hr.
POUL 1000 Introductory Poultry Science ......................... 3
POUL 3030 Commercial Poultry Production ....................... 4
Elective Courses - See adviser for approved course listing.

RURAL AND COMMUNITY DEVELOPMENT MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: Cr. Hr.
RSOC 3620 Community Organization ......................... 3
SOCY 3700 Methods of Social Research .................... 3
Elective Courses - See adviser for approved course listing.

Agricultural Business and Economics (AGEC)
The curriculum provides broad technical training and a strong liberal arts and business background to prepare students for careers in a wide array of agribusiness and related fields.

Students may choose a general program of study, or select one of four career tracks that provide more specialized training in: (1) Agribusiness Management and Marketing that emphasizes training in business management, marketing/sales, and finance, (2) Farm Management that emphasizes management and decision-making skills at the farm level, (3) Natural Resources Management that trains students in resource issues and effective utilization of those resources, or (4) Community and Economic Development that emphasizes the roles of public and private entities in the developmental process. Programs are designed to help students reach their goals and help ensure a rewarding career.

Curriculum in Agricultural Business & Economics

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| BIOL | 1030|     |     |     |     |
| ECON | 2030|     | 3   |     |     |
| ENGL | 2200| 2210|     | 3   |     |
| ACCT | 2110| 2210|    4|     |     |
| STAT | 2510|     |     | 3   |     |
| STAT | 2610|     |     |     | 3   |
| COMM | 1000|     |     |     | 3   |

summers

| JRNL | 4920| Internship OR |     | 3   |
| JRNL | 4430| Journalism Workshop |     |     |

SR

| PRCM | 3040| Found of Public Relations |     | 3   |
| RTVF | 3350| Writing for TV/Radio/Film |     |     |

November

| JRNL | 4470| Adv. Feature Writing OR |     |     |
| JRNL | 4230| Adv. Reporting OR |     |     |
| JRNL | 4460| Press Law and Ethics |     |     |

November

| AGEC | 4070| Agricultural Law |     | 3   |
| AGRN | 2040| Basic Soil Science |     | 4   |

AGRC

| Elective |     |     |     |     |

TOTAL HOURS - 120

Agricultural Elective - See adviser for approved course listing.
Hort, Agron, Ansc, PouL - See adviser for approved course listing.

Agronomy and Soils (AGRN)
Courses prepare Agronomy graduates for: (1) turfgrass industry, (2) chemical industry, producers of fertilizers, herbicides and other agricultural chemicals; (3) farm-advisory agencies such as soil testing laboratories and other private consultants; (4) public farm-advisory agencies such as the Agricultural Extension Service or the Natural Resources Conservation Service; (5) research agencies of corporations, U.S. Department of Agriculture, colleges and universities and Agricultural Experiment Stations; (6) farming and (7) environmental agencies.

Curriculum in Agronomy & Soils - Production Track

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</table>

AGRN

| Elective |     |     |     |     |

TOTAL HOURS - 120

Career Track and Agricultural Electives: see adviser for approved list.

Agricultural Communications (AGCO)
The Agricultural Communications major provides graduates with training in a wide range of agricultural, biological and physical science courses, plus a strong background in journalism, general communications, and public relations subjects.

Many large agricultural media and medical technological operations, plus many magazine companies, publish highly technical material. Editors and writers of such publications need a knowledge of agricultural and technical subject matter and terminology, as well as communication skills. This combination is not found in other curricula.

Curriculum in Agricultural Communications

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</table>

JRNJL

| Elective |     |     |     |     |

TOTAL HOURS - 120

College of Agriculture
### Curriculum in Agronomy & Soils - Science Track

<table>
<thead>
<tr>
<th>CRN</th>
<th>Description</th>
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</thead>
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<td></td>
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</table>
| AGRN 1000 | Basic Crop Science                               | **4** | **1**

**TOTAL HOURS - 120**

### Curriculum in Agronomy & Soils - Business Track

<table>
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<tr>
<th>CRN</th>
<th>Description</th>
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<tbody>
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</table>
| AGRN 1000 | Basic Crop Science                               | **4** | **1**

**TOTAL HOURS - 120**

### Curriculum in Agronomy & Soils - Turfgrass Track

<table>
<thead>
<tr>
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<tbody>
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</tbody>
</table>
| AGRN 1000 | Basic Crop Science                               | **4** | **1**

**TOTAL HOURS - 120**

### Agronomy & Soils electives to be taken from courses approved by adviser.
Animal Sciences (ANSC)

The department offers three curriculum options. The Pre-Vet/Pre-Professional option (ANPV) provides students with a foundation in the biological and physical sciences for careers in emerging areas of animal biotechnology while satisfying requirements for application to Auburn’s College of Veterinary Medicine, other professional schools or graduate school. The Production option (ANPC) offers greater breadth in animal production management and agribusiness while retaining more elective hours for additional curriculum flexibility. Students may use electives to develop expertise in fields such as meat science, animal breeding, nutrition, reproduction, growth, behavior, equine science and companion animals.

Curriculum in Animal Sciences - Muscle Foods Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Semester</th>
<th>Year</th>
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Curriculum in Animal Sciences - Production Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Semester</th>
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Curriculum in Animal Sciences - Pre-Vet - Pre-Professional Option

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TOTAL HOURS - 120

* ANSC Core II: choose two of these three courses: ANSC-3400, ANSC-3500, or ANSC-3600.
** Muscle Foods (MF) Support courses; see your adviser or the advising check sheet for ANMF.
Biosystems Engineering (BSEN)

The Biosystems Engineering Department offers the only accredited degree in Biosystems Engineering in Alabama. It is committed to preparing students for productive professional careers in the biosystems industries and related natural resource and environmental systems sectors. Specific educational objectives of the program are to produce graduates with: the skills necessary to solve engineering problems associated with the production, processing, storage, and manufacture of food, fiber, and agricultural products; the ability to combine engineering skills with training in biological sciences to solve problems and to work in multidisciplinary teams; the ability to analyze problems critically and conduct scientific experimentation and engineering analysis; the ability to continue developing professionally throughout their career.

The curriculum is coordinated by Samuel Ginn College of Engineering and the College of Agriculture. Beginning students should apply for admission to the Samuel Ginn College of Engineering and complete the Pre-Biosystems Engineering program. A Forest Engineering Option is also available under the Biosystems Engineering degree program.

See the Samuel Ginn College of Engineering Section for curriculum model, admission and degree requirements.

Fisheries and Allied Aquacultures (FISH)

Fisheries Science combines a general foundation in chemistry, mathematics and biological sciences with applied courses in the principles needed to manage fresh and saltwater aquatic resources. The degree is intended to equip students with a broad understanding of fundamental scientific principles needed to develop solutions for the increasing pressures on our aquatic resources and the need to provide safe, reliable food through aquaculture production. Through a sequence of courses, students specialize in emphasis areas of aquatic ecology, fisheries management or aquaculture. The FISH Pre-Vet/Pre-Professional area of emphasis provides students with a broad base of scientific knowledge necessary for success in the College of Veterinary Medicine, other professional schools, or graduate school. Careers for graduates include work in environmental management, fisheries resource management, extension, and commercial aquaculture production, processing, and marketing.

Curriculum in Fisheries and Aquatic Sciences

(Aquaculture, Aquatic Resources Management and Fisheries Management Areas of Emphasis)

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Students in the Pre-Professional emphasis must satisfactorily complete 6 semester hours of Emphasis courses (FISH 6210, FISH 6240, FISH 6250, or FISH 6520) plus 6 semester hours of Science Electives (BIOL 3000, BIOL 3010, BIOL 3200, ANSC 3400, BIOL 4000, BIOL 4100, BIOL 4200, FISH 4970)

Horticulture (HORT)

Courses prepare Horticulture graduates for the following careers; nursery manager, landscape designer, landscape installer, landscape maintenance, interior landscaping, plant propagator, city or state horticulturist, extension horticulturist, horticulture writer, horticulture teacher, florist shop manager, greenhouse manager, vegetable producer, orchard manager, chemical company representative, seed company representative or retail garden center manager.

Three undergraduate tracks are available to students in Horticulture: Landscape Horticulture, Nursery and Greenhouse Science and Fruit and Vegetable Crop Production. Horticulture offers masters and doctoral degrees which leads to professional positions in teaching, research and extension.
### Curriculum in Nursery & Greenhouse Science

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### SR Horticulture Elective Group 1 and 2: see adviser for approved course listing.

### Curriculum in Fruit & Vegetable Production

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### Poultry Science (POUL)

This curriculum is designed to develop technical, analytical, communication, business and management skills needed for advancement to leadership positions in the live poultry production, poultry food product production, and allied agricultural industries. Graduates will be able to apply their knowledge of science, economics, business and ethics to identify, analyze and responsibly address challenges associated with poultry production and the production of nutritious, wholesome and safe poultry products for the modern consumer. Professional and general electives allow students to pursue expertise in their individual area of interest. Although not specifically required, enrollment in summer internship is encouraged and accepted as professional elective credit.

### Curriculum in Poultry Science

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**TOTAL HOURS - 120**

Horticulture Elective Group 1 and 2: see adviser for approved course listing.
Poultry Science Pre-Veterinary Medicine

This curriculum develops technical, analytical and communication skills, as well as the broad scientific knowledge base needed for success in technical and research positions in the poultry and allied industries, or post-graduate programs leading to advanced degrees in the sciences; such as, the Master of Science, Doctor of Philosophy or Doctor of Veterinary Medicine. Courses listed for the first six semesters (91 hours) satisfy requirements for admission to the College of Veterinary Medicine. Completion of the remaining requirements or one year in the College of Veterinary Medicine entitles the student to a B.S. degree in Poultry Science.

College of Agriculture

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Professional electives see adviser for approved list.

Curriculum in Poultry Science/Pre-Veterinary Medicine

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Professional electives see adviser for approved list.
College of Architecture, Design and Construction

DANIEL D. BENNETT, Dean
SHARON GABER, Associate Dean

THE COLLEGE OF ARCHITECTURE, DESIGN AND CONSTRUCTION offers undergraduate programs in the academic areas of Architecture, Building Science, Industrial Design and Interior Architecture. Graduate programs are offered in Building Science, Community Planning, Industrial Design, and Landscape Architecture.

The College of Architecture, Design and Construction maintains the right to limit enrollment in all programs and may retain student work for exhibition or for records and accreditation purposes.

School of Architecture

Entering Freshmen - Eligibility for acceptance to Architecture and Interior Architecture is based on performance in courses in the first year of the model curriculum and the cumulative GPA on these courses which must be a minimum of 2.8.

Transfer Students from non-architectural programs are required to begin the design sequence with first year. Transfer students from accredited schools of Architecture will be required to present a portfolio of their work to the Design Review Committee for evaluation. Assuming acceptance, the Committee will determine the level of placement in the design sequence.

Urban Studies Program - The School maintains an urban studies center in downtown Birmingham. All students in the Architecture and Interior Architecture/Architecture programs are required to spend one semester in Birmingham during their fourth year.

Special opportunities are offered for qualified students: a Foreign Studies Program with an organized itinerary of travel and study; and a Rural Studies program to work hands-on in helping communities and individuals in the rural South meet needs for shelter and an improved quality of life. Professional experience in a related field is recommended prior to the last year of study.

Academic Standards and Policies - All design studio courses must be taken in sequence and in observance of the pre-requisite courses as stated. All students completing the second year design sequence will be reviewed for continuance into the third year design sequence. Any student receiving a grade below C in ARCH 1010 or ARCH 2010, 2020 will be reviewed by the Design Review Committee at the end of the year for approval to continue in the design sequence. Similarly, a student with a majority of grades at the C level may be reviewed by the Committee.

In the event a grade of D is received in any of the upper level required courses or in the event a grade of F is assigned (3000-4000 or 5000-level design courses), a review is required for continuance in the program including the option of being required to repeat the entire design sequence for that year, or to withdraw from the program. Students must maintain professional standards of behavior, as outlined in the Tiger Cub, in all required courses. Failure to do so may be grounds for dismissal from the program.

To proceed to the beginning sequence of a design studio at third-, fourth- or fifth-year levels, the student must have completed all required courses prior to that level or have the approval of the Design Review Committee. Enrollment in 3000- and 4000-level BLSG courses will be limited to those with an overall GPA of 2.5 or above and third-year standing in design.

Department of Building Science

Entering Freshmen who meet the general admission requirements of Auburn University will be admitted to the Pre-Building Science program.

Transfer Students must have a minimum GPA of 2.8 and will be accepted on a space-available basis as determined by the department head.

Academic Standards and Policies - To be classified as 03 BSCI, the student must have completed all course work shown in the first two years of the model curriculum, have a 2.8 cumulative GPA on all courses attempted at Auburn University, and have a minimum of 64 semester hours. The department reserves the right to limit enrollment.

Department of Industrial Design

Students who meet the general admission requirements of Auburn University will be admitted to the Pre-Industrial Design Program.

Transfer Students from other institutions must meet the university admission requirements. Students transferring from other design disciplines will be required to present examples of their work to determine studio placement. Internal transfer students should contact the department head to determine eligibility.

Summer Design Program - Students who have completed courses in the first year of the model curriculum qualify for the Summer Design Program. This program allows students to complete the first year Industrial Design Studio requirements. After completion, students may enter the sophomore design studio sequence in the fall semester. Contact the department head for more information.

Academic Standards and Policies - Design courses must be taken in sequence and may not be taken simultaneously with pre-requisites. All courses in the freshman year must be completed before entering the sophomore year of study. A grade of C or higher must be made in studio courses. Grades below C in studio courses 1310 through 4210 must be repeated. Any student with two grades at the C level or below in INDD 1310, 1320, 2110 or 2210 may be reviewed by the Design Review Committee for approval to continue in the design sequence. Admission to the Industrial Design curriculum in the second and third years requires a 2.5 cumulative GPA. The department maintains the right to select the most highly qualified students for admission and to continue in the program and to retain original work accomplished as part of course instruction. A portfolio and presentation are required for graduation.

Architecture

The Bachelor of Architecture degree is awarded upon the completion of the five-year curriculum. Qualified students may elect to pursue concurrently a second Bachelor of Interior Architecture degree.

Curriculum in Architecture (Traditional)

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<tr>
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<td>Calculus I</td>
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<tr>
<td>SCMH 1010</td>
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The Cooperative Education program is available to students after the second year of study. Active participation in the Intern Development Program (IDP) is encouraged after completion of the third year in the curriculum. IDP is a pre-requisite to licensing in the State of Alabama.

In the United States, most state registration boards require a degree from an accredited professional degree program as a pre-requisite 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 Master of Architecture. A program may be granted a five, three or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master’s 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.

The five-year Bachelor of Architecture degree is accredited by the National Architectural Accrediting Board. The four-year pre-professional Bachelor of Science in Environmental Design is not an accredited degree.

Auburn University is a member of the Association of Collegiate Schools of Architecture. Students are encouraged to work at an architect’s office, a construction site or other approved professional endeavor prior to their fourth year.

### Interior Architecture

Interior Architecture is involved with the making of “place,” and to pursue this endeavor to the fullest extent, Auburn has integrated Interior Architecture and Architecture resulting in the granting of two degrees upon completion of the fifth year of study. Students must apply separately to the Interior Architecture Program. The graduate who receives a Bachelor of Interior Architecture degree and a Bachelor of Architecture degree is a person trained in interior design who also is qualified to sit for an Architectural License Exam and the NCIDQ Exam for Interiors. Participation in the Interior Architecture Program is highly selective. See adviser for details.

### Curriculum in Architecture (Summer)

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<tr>
<td>ARCH 5991 Thesis Research</td>
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<tr>
<td>ARCH 3110 3120 Architectural History</td>
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<td>ARCH 3410 Dessine Elective</td>
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<tr>
<td>BSCI 3450 Structures III</td>
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<tr>
<td>ARCH 3100 3120 Architectural History II &amp; III</td>
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**TOTAL HOURS - 159**

### Curriculum in Architecture (Traditional)

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<td>PHYS 1500 Gen. Physics I</td>
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<tr>
<td>ARCH 4320 Materials &amp; Methods II</td>
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</table>

**TOTAL HOURS - 172**

Professional Elective: See adviser for approved course listing.
Master of Landscape Architecture

The Master of Landscape Architecture program is in transition from a first professional degree program to a graduate degree program administered by the Graduate School. Please see the Graduate School section of this Bulletin for the description of the program. Students who are already admitted under the first professional program should see their adviser for details related to requirements and schedules.

Building Science

Students in the Building Science program learn the basic principles of science, architecture, engineering, business and construction. The four-year curriculum leads to the degree of Bachelor of Science in Building Construction, accredited by the American Council for Construction Education. Graduates qualify for positions in all areas of the construction industry.

The Cooperative Education Program is offered after completion of two semesters of study at Auburn.

Non-majors will be accepted in BSCI classes on a space-available basis.

Industrial Design

Students of Industrial Design learn the basic principles of design, engineering, human factors, marketing and sociology. They acquire such technical skills as computer-aided design and drafting, prototype fabrication, photography, sketching and graphics techniques. Students are introduced to design methods, color theory, product planning, visual statistics, materials, manufacturing methods, consumer psychology and environmental studies.

The four-year curriculum, which is accredited by the National Association of Schools of Art and Design, leads to the professional degree of Bachelor of Industrial Design. Graduates will qualify for positions in industrial design consultant offices and in various industries. Motivated students will be considered for admission to the Graduate Program in Industrial Design. The Cooperative Education Program is offered at the completion of the second year of study.
Environmental Design

Any student in the College, during the third year of study, may apply to be a degree candidate for the Bachelor of Science in Environmental Design. This four-year, non-accredited degree is available at the recommendation of the head of the student’s academic unit, and with the approval of the dean. If a Bachelor of Science in Environmental Design degree is received, a graduate must apply for re-admission to be a candidate for any other degree offered by the College. Some candidates for Master’s programs may complete the requirements for the Bachelor of Science in Environmental Design, as a second baccalaureate degree, at the completion of undergraduate studies as qualification requirements for entry to graduate studies. Contact Department head for more information.

Curriculum in Environmental Design

The student is to complete major requirements of 30 hours of approved courses in ARCH, INDD or LAND; 30 hours of directed electives in support of the major and 19 hours of electives. Electives may include basic ROTC.

TOTAL HOURS - 120
The College of Business prepares students to become effective and socially responsible managers of business, industrial organizations, and government agencies and responsible citizens and leaders of society. To achieve this goal, the College offers undergraduate programs leading to the Bachelor of Science in Business Administration. In addition, it offers graduate work for the degrees of Master of Business Administration (MBA), Master of Science (MS) in both Economics and Business Administration, Master of Accountancy (MAC), and the Doctor of Philosophy in Management. For the degree of Master of Science in Business Administration (MSBA), which includes a non-thesis option as well, students are currently being enrolled in finance, marketing and the Management Department concentration option of Human Resources Management. Students may also enroll in the Masters of Management Information Systems (MMIS) program. The College of Business and the School of Accountancy are accredited at the undergraduate and graduate levels by the Association to Advance Collegiate Schools of Business (AACSB International). Detailed information on graduate programs may be found in the “Graduate School” section in this Bulletin.

Curriculum
The undergraduate curriculum includes a two-year Pre-Business Program required of all students and a two-year Professional Option Program. These programs provide a balanced course of study for all students, with approximately one-half of the hours in business and economics courses and one-half in courses offered outside the College. The courses required have been selected so that all students will have access to the “common body of knowledge” as designated by the Association to Advance Collegiate Schools of Business (AACSB International).

The Pre-Business Program, followed by all business students in their freshman and sophomore years, provides a sound foundation of work in the arts and sciences, including courses in mathematics, humanities, social sciences and natural sciences. This lower division program also includes some of the introductory business courses.

The Professional Option Programs are offered through the School of Accountancy and the Departments of Aviation Management and Logistics; Economics; Finance; Management; and Marketing. The Professional Option plans allow each student to concentrate in an area of interest during the junior and senior years. The 13 options available include: Accountancy (ACCT), Finance (FINC), International Business (IBUS), Economics (ECON), Business Administration (BSAD), Operations Management (OPMN), Human Resources Management (HRMN), Management Information Systems (ISMN), Entrepreneurship and Family Business (ENFB), Marketing (MKTG), Logistics (LOGT), Aviation Management (AVMG) and Professional Flight Management (AVMF). Through these programs, the College seeks to develop in its students the analytical, decision-making and communication skills required of managers who lead modern organizations.

Admission to the College
Students entering the Pre-Business Program directly from high school or another college or university, in addition to meeting Auburn University’s admission requirements, should have competence in the mathematics taught in high school geometry and second year algebra. Students also may be considered for transfer into the program from another school or campus if they have attained an overall GPA of at least 2.2 on all courses attempted at Auburn University.

Admission to Business Courses
A 2.2 cumulative GPA is required for enrollment in any Business course (expect ECON 2020, ECON 2027, BUSI 1010, and BUSI 2010). This rule applies to both Business and non-Business students.

Graduation Requirements
To be graduated, business students must meet the hours and subject matter requirements of their curricula and must have an overall average of at least 2.0 on all courses attempted at Auburn University and meet all university requirements. At least 50 percent of the business credit hours required for the business degree must be taken at Auburn University.

Student Advising System
The Office of Student Affairs of the College of Business is responsible for orienting all new students, freshmen and transfers to the College. All students report each semester to the Lowder Building, Suite 023, to plan their academic schedules and to obtain information. Faculty are available to all students for academic counseling and career guidance. Students are encouraged to seek advice on professional and academic questions from department heads and faculty through personal arrangements or appointments made by Student Affairs.

Student Affairs is also available to assist students from another College or School on campus to pursue a second baccalaureate degree in the College of Business.

Cooperative Education Program
Business students are eligible to participate in AU’s Cooperative Education Program. This program allows students to combine academic training with actual business experience.

Minors
For Departmental minors, business courses must be at the 3000 level or above, with the exception of Aviation Management minor, and from an approved list.

ACCOUNTANCY MINOR
15 semester hours in Minor (3000 level or above)

Courses required:

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<th>Course Code</th>
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<tbody>
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<td>ACCT 3110</td>
<td>Financial Reporting I</td>
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<td>ACCT 3120</td>
<td>Financial Reporting II</td>
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Elective Courses - See adviser for approved course listing.

AVIATION MANAGEMENT MINOR
A minor in Aviation Management is offered for non-Business majors. Program requirements include completion of a minimum of 15 hours from the following list with a minimum of 12 hours of 3000-level or above courses or higher. AMLG 1010 (required), AMLG 4090 (required), AMLG 4060, AMLG 4380, AMLG 4130, AMLG 4190, AMLG 4160, AMLG 4170, AMLG 4180.

ECONOMICS MINOR
15 semester hours in Minor (3000 level or above)

Courses required: NONE

Elective Courses - See adviser for approved course listing.

FINANCE MINOR
15 semester hours in Minor (3000 level or above)

Courses required: NONE

Elective Courses - See adviser for approved course listing.

INTERNATIONAL BUSINESS MINOR
15 semester hours in Minor (3000 level or above)

Courses required:

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<td>ECON 5000</td>
<td>International Economics</td>
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<td>MKTG 4400</td>
<td>International Marketing</td>
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Elective Courses - See adviser for approved course listing.

OPERATIONS MANAGEMENT MINOR
15 semester hours in Minor

Courses required:

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<tr>
<th>Course Code</th>
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<td>MNGT 3140</td>
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<td>MNGT 3250</td>
<td>Intro to Enterprise Ops Sys</td>
<td>3</td>
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<tr>
<td>MNGT 4250</td>
<td>Competitive Manufacturing Oper</td>
<td>3</td>
</tr>
<tr>
<td>MNGT 4350</td>
<td>Competitive Service Operations</td>
<td>3</td>
</tr>
<tr>
<td>MNGT 4740</td>
<td>Quality Management Systems</td>
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MARKETING MINOR
MKTG 3310 and 15 hours of marketing electives.
Courses required: Cr. Hr.
MKTG 3310 Principles of Marketing ......................... 3
E elective Courses - See adviser for approved course listing.

LOGISTICS MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: NONE  
E elective Courses - See adviser for approved course listing.

BUSINESS MINOR
A Business Minor has been established within the College of Business for non-business majors. The courses required correspond with the common body of knowledge as specified by AACSB International. Completion of these courses provides the basic understanding of the foundations of business administration and facilitates progress toward graduate work in business. The courses required for the business minor are: ECON 2020, ACCT 2110, FINC 3610, MNGT 3100 and MKTG 3310. If any of these courses are taken to fulfill the University Core Curriculum requirement or a requirement in the major/professional option, alternative courses may be substituted on departmental approval. See course descriptions for appropriate prerequisites.

BUSINESS-ENGINEERING-TECHNOLOGY
Students who minor in Business-Engineering-Technology learn, practice, and integrate entrepreneurship, engineering, and business management skills demanded by the technology-driven global economy, solve real-world case study and design problems, and work in cross-functional teams. The minor is a joint offering by the Colleges of Business and Engineering. Admission to the minor is competitive. Engineering and business majors apply for admission to the Business-Engineering-Technology Program as second semester sophomores.
16 semester hours in the minor
Courses required: Cr. Hr.
ENGR 3510 Introduction to Engineering and Business ........ 3
ENGR 3520 Applying Bus. and Engr. Theories in Practice ........ 3
BUSI 3530 Entrepreneurship and E-commerce .................. 3
BUSI 4540 Strategic Mgmt. of Technology and Innovation ....... 3
ENGR 4970 Capstone Project I: Design Proposal ................. 1
ENGR 4980 Capstone Project II: Design Project ............... 3

Pre-Business Program
The requirements of the Pre-Business Program are the courses that appear in the freshman and sophomore years of the individual models. Students who enter from high school register in this program until they complete all Pre-Business requirements. Students who enter by transfer and who have not yet completed all Pre-Business requirements, must register in the Pre-Business Program.

Before being admitted into a Professional Option Program, business students must complete all courses in the Pre-Business Program with a satisfactory academic record. Specific professional options may differ in some details from the models presented below. Students should consult an adviser before selecting any classes.

School of Accountancy (ACCT)
The mission of the School of Accountancy at Auburn University is to prepare its students at the undergraduate and masters level to successfully compete in a very dynamic and challenging business environment. Through faculty excellence in instruction, research, outreach, the School will meet the needs of its students and other constituents by emphasizing the professional competencies necessary for both entry-level placement and rapid advancement within the business community.
The undergraduate degree prepares students for success in various public and private accounting careers. Students who plan to sit for the CPA Exam should consider a fifth year of study through the Master of Accountancy (MAC) Program. Students sitting for the CPA Exam in the State of Alabama must have completed a total of 150 semester hours of post secondary education, including a baccalaureate degree at an accredited college or university, with a concentration in accounting.
Department of Finance (FINC)

Finance

The objective of the finance curriculum is to develop the specialized finance knowledge, techniques, and skills necessary for successful placement in finance related positions. The program encompasses the major areas of finance including corporate finance, financial institutions and markets, and investments. In addition, the program offers elective work in the subareas of real estate and risk management and insurance. The program will allow students the opportunity to develop not only the specialized knowledge of finance, but also the professional presentation and use of such knowledge through oral and written communication. Students enrolled in the finance major also complete the College of Business core curriculum designed to provide the broader understanding of the entire business organization including accounting, economics, management and marketing.

Curriculum in Finance

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International Business

The objective of the program is to provide students with not only the business preparation necessary for success in the global environment, but also the foreign language skills to effectively communicate in that environment. The IBUS curriculum is designed to provide maximum flexibility and broad-based preparation for future career opportunities.

Graduates are prepared for entry-level positions in many areas of business activity depending upon their particular area of concentration within business. Within the language component, students must select from French, German, or Spanish.

Curriculum in International Business

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Department of Management (MNGT)

The Management Program prepares students in basic business functions as well as the process of management and the use of technology to support these functions and processes. The professional options within the Management Department are designed to impart knowledge that will assist future managers to be good decision makers for their organizations. The professional majors available are Operations Management (OPMN), Human Resources Management (HRMN), Business Administration (BSAD), Management Information Systems (ISMN), and Entrepreneurship and Family Business (ENFB).

Operations Management (OPMN)

The Operations Management Program provides a comprehensive education for positions in manufacturing, service, and consulting organizations. The primary goals are to provide knowledge and experience oriented toward practical, on-the-job applications and to prepare students for entry-level positions in private and public sector organizations. In addition, the program provides excellent preparation for graduate or professional studies in operations management.
**Curriculum in Operations Management**

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**Human Resources Management (HRMN)**

The Human Resources Management Program provides a comprehensive education in human resources management. The primary goals are to provide knowledge and experience, oriented toward practical, on-the-job applications and prepare students for entry-level positions in private and public sector organizations. In addition, the Program provides excellent preparation for graduate or professional studies in Human Resources Management.

**Curriculum in Human Resources Management**

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**Business Administration (BSAD)**

The Business Administration curriculum is an interdepartmental degree designed to provide maximum course flexibility and a broad-based preparation for future career opportunities. Students are required to demonstrate basic oral and written communication skills, familiarity with technological tools and an understanding of the inter-relationship between the U.S. and foreign countries. The Business Administration curriculum prepares students for entry-level managerial and staff responsibilities in business, government and non-profit organizations.

**Curriculum in Business Administration**

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**Entrepreneurship and Family Business**

The Entrepreneurship and Family Business curriculum offers an opportunity for students to gain insight into the criteria necessary for new ventures and for the managing of family-oriented business endeavors. Focus of the curriculum is on both start-up activities and the development of skills necessary to manage publicly-held and privately-owned entrepreneurial operations.
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### Information Systems Management (ISMN)

Information Systems Management Program provides a comprehensive education in management information systems. A 2.2 cumulative GPA is required for enrollment in any MIS course. This rule applies to both Business and non-Business students. The primary goals are to provide knowledge and experience, oriented toward practical, on-the-job applications and prepare students for entry-level positions in private and public sector organizations. In addition, the program provides excellent preparation for graduate or professional studies in Information Systems Management. Students are cautioned that 3000- and 4000-level MIS courses have enforced pre-requisites and an earned grade of C or better must be obtained for all pre-requisites to 4000-level courses.

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### Marketing (MKTG)

Marketing majors discover the interrelationship of marketing with other management tools and prepare themselves for executive/managerial careers involving functional areas such as advertising, channel and product decision-making, pricing, retailing and strategic market planning.

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## Department of Aviation Management and Logistics (AMLG)

The Department of Aviation Management and Logistics provides a technical management background and specialization in aviation leading to careers with airlines, aircraft manufacturers, airports, and other segments of the aviation industry. Information regarding awards, scholarships, internships, and aviation management student organizations is available through the program director. Concentrations within the basic program are Aviation Management (AVMG) and Professional Flight Management (AVMF). Individuals interested in registering in any of the foregoing major fields are advised to contact the program director for Aviation Management in the College of Business for proper counseling and classification. The Department also offers a curriculum in Logistics (LOGT). Logistics majors prepare for careers in carrier, physical distribution, and industrial traffic management and for assignments in urban transportation and development planning, and as logistics and distribution specialists. A 2.2 cumulative GPA is required for enrollment in any Business and/or AMLG course. This rule applies to Business and non-Business students.

In addition, Aviation Management majors pursuing the Professional Flight Management Program must have, and maintain, a minimum overall GPA of 2.25 to enroll in Professional Flight Management courses.

### Curriculum in Logistics

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**TOTAL HOURS - 123**

Students not attempting the University IT examination should take COMP 1000. Group A and Group B: See adviser for approved course listing.

### Curriculum in Professional Flight Management

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**TOTAL HOURS - 123**

Students not attempting the University IT examination should take COMP 1000. Group B: See adviser for approved course listing.
Undergraduate Curricula

Bachelor's degree options in the College of Education are the Bachelor of Science in Education and the Bachelor of Music Education.

Teaching and non-teaching programs are offered through the College of Education. Teaching programs are presented first, followed by non-teaching programs.

Scholastic Requirements - In recognition of responsibilities to the schools in which its graduates teach, the College maintains a program of selective admission and retention of candidates for the teaching profession. This program is designed to assure that no candidates are recommended for admission to the Teacher Education Program, the professional internship or certification unless they are deemed competent in their university studies and professional performance.

Transfer Requirements - A minimum GPA of 2.5 (on a four-point scale) on all college courses attempted, on all courses attempted at Auburn, and on all courses attempted in the intended program is required to transfer into the College of Education.

Admission to Teacher Education in Early Childhood Education and Elementary Education Programs - All freshmen and transfer students entering the Early Childhood Education program will be classified pre-Early Childhood (GCEC); all freshmen and transfer students entering the Elementary Education program will be classified pre-Elementary (GCEE). Admission to Teacher Education will occur in each of these two programs following the procedures listed below. Students should check with Professional Education Services for specific application deadlines/procedures each term.

1. Students must submit a formal written application for admission to Teacher Education after completing at least 45 semester hours applicable to their program, usually at the end of the sophomore year. To be eligible to apply, the following criteria must be met:
   a) minimum GPA of 2.50 on all course work attempted,
   b) minimum GPA of 2.50 on all course work attempted at Auburn,
   c) minimum cumulative GPA of 2.5 on all course work attempted, in the program, in professional studies and in the teaching area,
   d) successful performance in the pre-professional field experience (pre-teaching),
   e) Alabama Prospective Teacher Test taken.
2. All students meeting the above criteria will be eligible to proceed to the professional internship. Requirements for admission to the professional internship are: (1) admission to the Teacher Education Program; (2) completion of appropriate courses in the area of specialization as specified on the program checklist; (3) a minimum GPA in each of the following: (a) Auburn University cumulative, (b) professional teacher education, (c) the teaching major(s) and overall program; (4) demonstrated potential for teaching.

To be eligible for graduation with recommendation for teacher certification, students will be expected to complete the requirements identified above and demonstrate readiness to teach through a successful internship and exit evaluation.

Persons with degrees may apply for study in a curriculum leading to professional certification. The same standards must be met to qualify for recommendation for certification. Applications and specific information about the criteria for admission to Teacher Education are available from the Professional Education Services Office in 3464 Haley Center.

Professional liability (tort) insurance is required for students in designated majors.

Program Options, Teaching

The following table shows teacher education program options available in the College of Education. Programs appear by department.

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<tr>
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Rehabilitation & Special Education

Collaborative Teacher       | X           |

Early Childhood Special Education (birth through 8 years)

- Students completing an Elementary Education (K-6) program or some Secondary Education (6-12) programs may complete additional course work to add a Middle School (4-8) teaching endorsement.

Requirements for Fields of Specialization

Curriculum models appear below. Curriculum check lists are available in the Office of Teacher Education Services, 3464 Haley Center.
Minors

ADULT EDUCATION MINOR
15 semester hours in Minor
Courses required: Cr. Hr.
ADED 4600 Nature of Adult Education ....................... 3
ADED 4620 Comm. Concepts, Programs and Resources .......... 3
ADED 4660 Teaching in the Non-School Setting .................. 3
ADED 4970 Special Topics in AE ............................. 3
An Adult Education advisor approved elective ................ 3

EXERCISE SCIENCE MINOR
16 semester hours in Minor
Courses required: Cr. Hr.
HLHP 3020 Sci. Found in HLHP ................................ 4
HLHP 3620 Biomechanics ........................................ 4
HLHP 3650 Motor Learning & Performance ...................... 4
HLHP 3880 Physiology of Exercise ............................. 4

OFFICE SYSTEMS MANAGEMENT MINOR
15 semester hours in Minor
Choose from:
CTCT 1200 Keyboarding & Formatting ........................ 3
CTCT 2200 Document Processing ................................ 3
CTCT 3000 Leadership Skills for Pers./Org. Dev ............... 3
CTCT 3200 Records Management ................................ 3
CTCT 3240 Information Processing I ............................ 3
CTCT 3250 Information Processing II ............................ 3
CTCT 4200 Managing Office Systems ............................ 3
CTCT 4940 Directed Field Experience in Bus. Ed. ............. 3
CTCT 4970 Special Topics in Bus. & Office Ed. ............... 1-3

SPORT COACHING MINOR
16 semester hours in Minor
Courses required: Cr. Hr.
HLHP 3020 Sci. Found in Health & Human Perf. ............... 4
HLHP 3620 Principles of Sport Coaching ........................ 3
HLHP 4620 Exercise & Sport Psychology ........................ 3
HLHP 4970 Seminar Special Topics ............................ 4
HLHP 4910 Practicum ............................................. 2

Non-Degree Program
The Physical Activity and Wellness Program is a non-degree program that requires 8 hours (4 courses), including PHED 1100, Wellness, and 3 courses (each one from a different category of physical activity). Categories include cardio-respiratory fitness (PHED 1200), fitness and conditioning (PHED 1300), team sports (PHED 1400), individual sports (PHED 1500), performance activities (PHED 1600), and aquatic skills (PHED 1700). Students who complete the 8 hour program may apply for a Physical Activity and Wellness Certificate, issued by the Department of Health and Human Performance. Students may also elect to take individual courses, without completing the 8 hour program. Of course, students may elect to take more than 4 courses, if they desire to use the program to insure a regular physical activity program.

Curriculum and Teaching

Curriculum in Agriscience Education

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Non-Degree Program

Curriculum in Early Childhood Education

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Curriculum in Data Processing

Non-Degree Program

Curriculum in Early Childhood Education

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Directed Elective - See advisor for approved course listing.

Students may apply for internship one year prior to internship.

* Pre-requisite admission to Teacher Education.

+ Pre-requisite to internship.

++ Co-requisite with internship.
### Curriculum in Early Childhood Education

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* Pre-requisite admission to Teacher Education.
** Requires one summer of study.
++ Co-requisite with internship.

### Curriculum in Elementary Education

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* Pre-requisite admission to Teacher Education.
** Students may choose to apply for a cohort group that requires summer enrollment or they may choose a group that does not require summer enrollment. Students wishing to participate in certain special internship opportunities such as the Consortium for Overseas Student Teaching program (COAST) should apply for the cohort group requiring summer enrollment.
++ Co-requisite with internship.

### Curriculum in English Language Arts Education

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**TOTAL HOURS - 123**

Students may apply for internship one year prior to internship.
## Curriculum in Foreign Language Education-German

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### Pre-requisite: Admission to Teacher Education.

### Co-requisite: with internship.

### English Elective, French Elective, Spanish Elective: see adviser for approved course listing.

## Curriculum in Foreign Language Education-French

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### Pre-requisite: Admission to Teacher Education.

### Co-requisite: with internship.

### English Elective, French Elective, Spanish Elective: see adviser for approved course listing.

## Curriculum in Foreign Language Education-Spanish

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### Pre-requisite: Admission to Teacher Education.

### Co-requisite: with internship.

### English Elective, French Elective, Spanish Elective: see adviser for approved course listing.

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**FLFR Elective:** see adviser for approved course listing.

**FLSP Elective:** see adviser for approved course listing.

Students may apply for internship one year prior to internship.

* Pre-requisite admission to Teacher Education.

+ Pre-requisite to internship.

** Co-requisite with internship.
### Curriculum in Comprehensive Science

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** SO **

| CHEM| 1030| Fundamental of Chemistry I & II         | 3   |
|     | 1040|                                         |     |
|     | 1031| Fundamental of Chemistry I & II Lab     | 1   |
| ENGL| 2210| Great Books I & II                      | 3   |
|     | Core Social Science Group I & II         | **3** |
|     | Public Speaking                         | **3** |
| COMM| 1000|                                         |     |
| PHYS| 1500| Physics I & II                          | **4** |

** TOTAL HOURS - 122 **

Students may apply for internship one year prior to internship.

- ** Pre-requisite admission to Teacher Education with 2.75 GPA.
- ++ Co-requisite with internship.

### Curriculum in Science Education-Secondary-Chemistry

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** TOTAL HOURS - 123 **

Students may apply for internship one year prior to internship.

- ** Pre-requisite admission to Teacher Education with 2.75 GPA.
- ++ Co-requisite with internship.

### Curriculum in Science Education-Secondary-Biology

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** SR **

| CHEM| 1010| Chemistry I & II                        | **3** |
| CHEM| 1020| Chemistry I & II Lab                    | **1** |
| ENGL| 2210| Great Books I & II                      | **3** |
|     | Core Social Science Group I & II        | **3** |
| COMM| 1000| Public Speaking                         | **3** |
| BIOL| 1030| Principles of Biology                   | **4** |

** TOTAL HOURS - 123 **

Students may apply for internship one year prior to internship.

- ** Pre-requisite admission to Teacher Education with 2.75 GPA.
- ++ Co-requisite with internship.

### Curriculum in Science Education-Secondary-Physics

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** TOTAL HOURS - 123 **

Students may apply for internship one year prior to internship.

- ** Pre-requisite admission to Teacher Education with 2.75 GPA.
- ++ Co-requisite with internship.

Chemistry Elective, Geology Elective: see adviser for approved listing.
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### Health and Human Performance

### Curriculum in Physical Education-Teacher Education

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### TOTAL HOURS - 127

Students may apply for internship one year prior to internship.

* + Pre-requisite admission to Teacher Education.
* + Pre-requisite to internship.
** + Pre-requisite to internship.
*** Theory & Skill courses are to be taken together.
### TOTAL HOURS - 124

Students may apply for internship one year prior to internship.

* + Pre-requisite admission to Teacher Education.
* + Pre-requisite to internship.
** + Pre-requisite to internship.
*** Theory & Skill courses are to be taken together.
** Pre-requisite keyboard Proficiency
### Rehabilitation and Special Education

#### Curriculum in Early Childhood Special Education

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**TOTAL HOURS - 120**

*Students may apply for internship one year prior to internship.*

- **Pre-requisite admission to Teacher Education.**
- + **Pre-requisite to internship.**
- ++ **Co-requisite with internship.**

### Field Experiences

The Laboratory Experiences Program provides sequential learning opportunities in public school and community settings for students throughout the teacher preparation program. Laboratory experiences are provided primarily through the following programs: (1) Field Experience Program, (2) Extended Laboratory Experiences, and (3) Professional Internship.

The pre-teaching Field Experience Program provides an initial experience for all students as a pre-requisite for admission to the Professional Teacher Education Program. This experience involves the students in planning and evaluating learning experiences, counseling, participating in pre-school conferences, and school and community meetings and involvement in actual teaching situations.

The Extended Laboratory Experiences Program is conducted concurrently with field experiences and courses which provide experiences in the schools and communities.

The Professional Internship is a full-time assignment in an off-campus school and community. Experiences include personal and professional contacts with phases of community life and the application of concepts, skills and knowledge the students have acquired in classroom situations.

The students must register for Professional Internship and pay fees the semester they intern. The program is divided into orientation, off-campus experience and evaluation. Students must be admitted to the Teacher Education Program prior to the Professional Internship, must have completed appropriate courses in their areas of specialization, and must meet minimum GPA requirements.

Other laboratory experiences for students are provided within the framework of courses in the Teacher Education Program.

### Dual Objectives Program

Students in other schools and colleges of the university who wish to complete requirements for graduation in an academic department and also to complete the degree requirements of the Teacher Education Program may pursue the dual objectives program. Students should inquire in their dean’s office to determine if their college/school participates in the dual objectives program.

Students electing to pursue the dual objectives program will have an advisor in the academic department in which they are enrolled and an advisor in the College of Education. Advising students con-
cerning the curriculum of the academic department, including the major and other requirements, will be the responsibility of the adviser in that department. The responsibility for advising students on matters concerning the Teacher Education Program will be that of the adviser in the College of Education. The semester course schedule of the students will be approved by both advisers. Information describing the dual objectives program is available in the Professional Education Services Office of the College of Education in Haley Center and in the dean's office where the students are enrolled.

Students enrolled in the College of Education who desire to complete certification requirements in more than one teaching field will complete the curriculum in each field: general studies, teaching specialization and professional teacher education (including the internship).

Applications and specific information about the criteria for selection and admission to Teacher Education are available in the Professional Education Services Office in Haley Center 3464.

Programs, Non-Teaching

The following is a list of non-teaching curricula available. Programs appear by department.

Educational Foundations, Leadership, and Technology

Adult Education. A program to prepare students concerned with the learning of adults. This program, at the undergraduate and graduate levels, prepares students for positions in adult continuing education programs, corporate training departments, private training enterprises and education programs within community colleges and universities. This program does not require admission to Teacher Education.

Curriculum in Adult Education

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<tr>
<td>ADED 4600</td>
<td>Nature of Adult Education</td>
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<tr>
<td>ADED 4620</td>
<td>Community Conc, Prog &amp; Res</td>
<td>3</td>
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<tr>
<td>ADED 4900</td>
<td>Directed Study</td>
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<td>ADED 4050</td>
<td>Methods of Teaching in AE</td>
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<td>ADED 4660</td>
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<td>ADED 4920</td>
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Curriculum in Exercise Science

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<td>MATH 1150</td>
<td>Pre-Calculus Algebra &amp; Trig</td>
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<td>PHED 1100</td>
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<td>TOTAL HOURS - 120</td>
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Health Promotion. A non-teaching program to prepare students as competent allied health professionals in commercial fitness, corporate fitness, wellness, and medical (cardiac, pulmonary, physical rehabilitation, etc.) settings. This program does not require admission to Teacher Education. However, an internship (HLHP 4920) is an integral part of the professional preparation.

Curriculum in Health Promotion

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<td>MNGT 3100</td>
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<td>HLHP 3400</td>
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<td>FINC 3610</td>
<td>Principles of Finance</td>
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Health and Human Performance

Exercise Science. A non-teaching program to prepare students for graduate study in the exercise science sub-disciplines (biomechanics, exercise physiology, and motor behavior) and entry into professional programs such as medicine, physical therapy, and occupational therapy. This program does not require admission to Teacher Education.
Rehabilitation and Special Education

Rehabilitation Services Education. A non-teaching program to prepare students to serve with adults with disabilities through a number of career pursuits, including vocational evaluators and adjustment specialists, case managers and job coaches. Graduates can use this major for entry into rehabilitation graduate programs, such as counselor training, physical therapy, occupational therapy and related fields.

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<tr>
<th>Curriculum in Rehabilitation Services</th>
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<tr>
<td><strong>Core Social Science Group 1 &amp; 2</strong></td>
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Related Programs and Services

Programs in the College of Education are approved by the National Council for Accreditation of Teacher Education (NCATE), the National Association of State Directors of Teacher Education and Certification (NASDETEC), the Interstate Reciprocity Compact (IRC) and the Alabama State Board of Education for certifying superintendents, supervisors, principals, counselors, elementary and secondary teachers and educational media specialists. Upon satisfactory completion of a prescribed course of study and upon recommendation of the dean of the College of Education, a professional certificate will be issued by the State Department of Education.

Assurance of Competence

The College of Education at Auburn University guarantee the success of graduates who receive their initial professional certification through the College and who are employed within their area(s) of specialization. The College will provide remediation at no cost to an individual who was recommended for certification by the College of Education and whose job performance within two years after program completion is deemed unsatisfactory by a local education agency based on performance evaluations established by the State Board of Education.

Vocational Rehabilitation Service

The Alabama Department of Rehabilitation Services in cooperation with Auburn University maintains the local Rehabilitation Service which provides vocational guidance, counseling, training and placement services to disabled citizens. The Rehabilitation Service also makes available to disabled citizens such services as: surgical and/or medical care, hospitalization, therapeutic treatment, and artificial appliances, when these services are essential to training and/or employment and the individual is not financially able to secure them.

Learning Resources Center

The Learning Resources Center (LRC), located in 3410 Haley Center, is a service component for the College of Education and the College of Liberal Arts. The LRC provides instructional technology services which include videotapes, computer software, audio recordings, transparencies, kits, and books and periodicals for the education profession. Two computer classrooms, a Micro-Center, and the college computer network are managed by the LRC. LRC personnel assist faculty and students with the production, selection, and utilization of newer instructional and informational technologies. Audio-visual equipment services are provided for classes taught in Haley Center. LRC Duplicating provides a quick copy center for students, faculty and staff.
ENGINEERS ARE FACED with worldwide problems and expectations. These problems range from the extremes of interplanetary exploration through orbiting systems to the problems arising from our population explosion: energy, better productivity, housing, transportation and environmental issues.

As a renewed appreciation develops for the contributions of science and technology, engineering leaders are calling for engineers who are better equipped to tackle the specific, technical problems of the future. They also are calling for engineers who by breadth of education and understanding of other disciplines can convince others of the role of engineers not only in technical matters but in policy decisions to ensure the use of technology to benefit mankind.

Engineering education at Auburn also provides in a four-year curriculum both the technical knowledge and the broad general education necessary to equip engineers for their problem-solving challenges. Centered on mathematics and the physical sciences, the curricula also stress the importance of social sciences, humanities and communication skills. Auburn’s engineering programs enable individuals to develop their natural talents and provide knowledge, skills and understanding that will help them to find their places in society as well as in their vocations.

Admission

Freshmen eligibility is determined by the Admissions Office. However, since the requirements for engineering education necessitate a high school preparatory work of high intellectual quality and of considerable breadth, the following program is recommended as minimum preparation: English, four units; mathematics (including algebra, geometry, trigonometry, and analytical geometry), four units; chemistry, one unit; history, literature, social science, two or three units. Physics and foreign languages are recommended but not required.

Transfers from other institutions must apply through the Admissions Office. The exact placement of these students can be determined only upon review of their transcripts by the College of Engineering. See “Admission of Transfer Students” in the General Information section for complete requirements.

The College allows credit for courses completed with satisfactory grades provided the courses correspond in time and content to courses offered at Auburn. Courses that are taught at the 3000-level or higher at Auburn are generally not transferable from junior colleges.

Many courses required by the College of Engineering are highly specialized in their content and potential transfer students need to select courses with care. Therefore, to ensure maximum transferability of credits, students are encouraged to contact the College as soon as possible about acceptable credits.

Transfers from On-Campus must be approved by the College of Engineering and the admissions committee of the chosen curriculum, and meet the same academic requirements as off-campus transfer students. The criteria include a minimum overall Auburn GPA of 2.2 and the completion of the first mathematics course listed in the chosen curriculum with a grade of C or better.

Programs

Pre-Engineering. The Pre-Engineering Program consists of a freshman program of studies to prepare students for curricula in the College of Engineering. It also provides academic and career counseling to assist students in determining the curriculum that best fulfills their personal and educational objectives.

Professional Programs. Curricula accredited by the national accrediting agency, the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), lead to the degrees of Bachelor of Aerospace Engineering, Chemical Engineering, Civil Engineering, Electrical and Computer Engineering, Industrial and Systems Engineering, Materials Engineering, Mechanical Engineering, Textile Engineering and Biosystems Engineering. The curriculum leading to the Bachelor of Computer Science is accredited by the Computer Science Association Commission of the Computing Sciences Accreditation Board. The Department of Textile Engineering also administers curricula leading to the degrees of Bachelor of Textile Management and Technology and Bachelor of Textile Chemistry which are accredited by the Textile Institute, an international organization headquartered in Great Britain, which reviews textile academic programs worldwide.

These curricula are designed to meet the educational requirements of the engineering professions. The program in the fundamental sciences of mathematics, chemistry and physics is followed by a study of basic engineering sciences. Specialized or departmental courses are taken in the third and fourth years. Flexibility is provided in all degree programs through electives so that the individual may emphasize areas of personal interest.

A Forest Engineering Option is also available under the Biosystems Engineering degree program. It is offered jointly by the Biosystems Engineering Department and the School of Forestry and Wildlife Sciences. The curriculum in Environmental Science is offered jointly with the College of Agriculture and the College of Sciences and Mathematics.

Dual-Degree. The College of Engineering has agreements with several predominantly liberal arts institutions to offer an academic program where a student can earn two baccalaureate degrees. Under the terms of this program the first three years of study are devoted to earning a major in any one of the disciplines offered by the institution first entered, while completing the basic sciences and mathematics courses required for pre-engineering at Auburn.

Upon completion of three years of study in the liberal arts the student transfers to the College of Engineering. After a minimum of two years of study in an engineering curriculum, the student earns degrees from both institutions. The broad background provided by this program may enable a student to cope more effectively with many of the problems of modern-day society.

Dual degree agreements have also been made with Auburn University’s Colleges of Agriculture, Liberal Arts and Sciences and Mathematics, to provide for dual-degree programs with the College of Engineering.

Graduate. The College of Engineering offers the M.S. and Ph.D. degrees in aerospace, chemical, civil, computer science and software engineering, electrical and computer, industrial and systems, materials and mechanical engineering and integrated textile and apparel science. The following professional degrees are offered as well: Master of Aerospace Engineering, Master of Chemical Engineering, Master of Civil Engineering, Master of Electrical and Computer Engineering, Master of Industrial and Systems Engineering, Master of Materials Engineering, Master of Mechanical Engineering and Master of Software Engineering.

Cooperative Education. The Cooperative Education Program is offered in all curricula of the College of Engineering. Refer to the program and write to the Director, Cooperative Education, Auburn University, AL 36849 for a booklet which gives additional information.

Extension. The Engineering Extension Service extends the resources of the College of Engineering to the people, businesses and industries of the state. Programs in this service are technical assistance, short courses, conferences, workshops and seminars. For more information, contact: Director, Engineering Extension Service, 217 Ramsay Hall, Auburn University, AL 36849.
Videotape-Based Off-Campus Courses. The College offers graduate-level courses for credit and non-credit to off-campus students through its Graduate Outreach Program. Graduate-level courses are videotaped in the classroom on the Auburn campus and mailed to off-campus students on the same day. Students enrolled in the program are required to do the same homework assignments and take the same exams as the on-campus students enrolled in the course. For information on admission to the program, fees, course offerings and other particulars, write to the Graduate Outreach Program, 202 Ramsay Hall, Auburn University, AL 36849 or call (334) 844-5300.

Scholastic Requirements. Pre-Engineering students are transferred to the curriculum of their choice in the College of Engineering upon meeting the following requirements:
1. Complete all appropriate freshman courses;
2. Earn an overall GPA on all required and approved elective course work as follows: 2.2 for all curricula, except for a 2.0 for Textile Management;
3. Recommendation by the Curriculum Admissions Committee.

A student who has not met the above criteria after four resident semesters is dropped from the College. Junior standing will not be granted to any student in the Pre-Engineering Program.

Degree Requirements. To earn the bachelor's degree in the College of Engineering, students must complete the subjects in the curriculum, have a minimum GPA of 2.0 in all work attempted at Auburn University and have a cumulative GPA of 2.0 on courses passed in the major at Auburn. The major is defined as all course work shown in bold print on the relevant curriculum model. It is the student's responsibility to keep informed of course requirements and scheduling. Failure to do so may jeopardize graduation.

Military Science. All curricula in the College of Engineering permit the use of six hours of basic or advanced ROTC courses passed at Auburn University. For the options, see the specific curriculum. For programs that do not have sufficient electives, credit will be determined on an individual basis. ROTC courses cannot be substituted for any university core or ABET-required courses.

Minors

BUSINESS-ENGINEERING-TECHNOLOGY

Students who minor in Business-Engineering-Technology learn, practice, and integrate entrepreneurship, engineering, and business management skills demanded by the technology-driven global economy, solve real-world case study and design problems, and work in cross-functional teams. The minor is a joint offering by the Colleges of Business and Engineering. Admission to the minor is competitive. Engineering and business majors apply for admission to the Business-Engineering-Technology Program as second semester sophomores.

16 semester hours in the minor
Courses required:
- BUSI 3510 Introduction to Engineering and Business ...
- BUSI 3530 Entrepreneurship and E-commerce ...
- BUSI 4540 Strategic Mgmt. of Tech. and Innovation ...
- BUSI 4970 Capstone Project I: Design Proposal ...
- BUSI 4980 Capstone Project II: Design Project ...

COMPUTER SCIENCE MINOR

19 semester hours in Minor
Courses required:
- COMP 1200 Introduction to Comp for Engr & Sci ...
- COMP 2210 Fund of Computer Science II ...
- COMP 3240 Discrete Structures ...
- COMP 3270 Introduction to Algorithms ...
- COMP 3700 Computer Design & Modeling ...

INFORMATION TECHNOLOGY MINOR

15 semester hours in Minor (minimum 9 hours at 3000-level) or above, selected from the following courses: COMP 3000, COMP 4000, COMP 6000, COMP 6010, COMP 6020, COMP 6030.
Courses required: NONE

Elective Courses: see adviser for approved course listing.

Department of Aerospace Engineering

Aerospace engineers are concerned with the application of scientific principles and engineering concepts and practices to design, build, test and operate aerospace systems. The curriculum is intended to provide students with a broad understanding of fundamental scientific and technological principles, and to develop the ability to use these principles in developing solutions to engineering problems.

The objectives of the aerospace engineering program are: (1) to help students develop written and oral communication skills and to acquire a knowledge of history, literature and society; (2) to provide students a solid foundation in and a sound working knowledge of basic engineering principles; (3) to help students obtain an understanding of the engineering principles and skills specifically needed in the aeronautical and astronautical disciplines; and (4) to assist and encourage each student to develop an enhanced ability to learn and think creatively.

Required courses cover aeronautical and astronautical subjects. Students may also choose to emphasize either aeronautical or astronautical systems. Technical electives allow concentration in such areas as aerodynamics, aeronautics, flight dynamics and control, propulsion, structures and structural dynamics. The design of aerospace components and systems is considered to be an integral part of the education of aerospace engineers. Hence, design is included throughout the curriculum. 

Military Science: see adviser for approved course listing. Aerospace/Aviation: see adviser for approved course listing.

Curriculum in Aerospace Engineering

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TOTAL HOURS - 128

Design Option - see adviser for approved course listing. Aerospace/Astronautical - see adviser for approved course listing.
Department of Biosystems Engineering

The mission of the Biosystems Engineering Department is to develop and disseminate engineering knowledge to solve problems in agriculture, food, forestry, natural resources and the environment. It meets the resident instruction portion of that mission through the offering of a degree program which leads to a Bachelor of Biosystems Engineering. A Forest Engineering Option is also available under the Biosystems Engineering degree program.

Biosystems Engineering

The Biosystems Engineering Department offers the only accredited degree in Biosystems Engineering in Alabama. It is committed to preparing students for productive professional careers in the biosystems industries and related natural resource and environmental systems sectors. Specific educational objectives of the program are to produce graduates with: the skills necessary to solve engineering problems associated with the production, processing, storage, and manufacture of food, fiber and agricultural products; the ability to combine engineering skills with training in biological sciences to solve problems and to work in multidisciplinary teams; the ability to analyze problems critically and conduct scientific experimentation and engineering analysis; the ability to continue developing professionally throughout their career.

The curriculum is coordinated by the Samuel Ginn College of Engineering and the College of Agriculture. Students should apply for admission to the Samuel Ginn College of Engineering and complete the Pre-Biosystems Engineering program.

Curriculum in Biosystems Engineering

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Biosystems Electives: see adviser for approved course listing.

Curriculum in Forest Engineering

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FOREST ENGINEERING OPTION

The Biosystems Engineering Department in conjunction with the Samuel Ginn College of Engineering and School of Forestry and Wildlife Sciences offers an option in Forest Engineering as a part of the Bachelor of Biosystems Engineering degree. It is committed to preparing students for productive professional careers in the forest products industry and related natural resource and environmental systems sector. Specific educational objectives of the program are to produce graduates with: the skills necessary to solve engineering problems associated with the management of forest and natural resources and the production of wood fiber, and the manufacture and utilization of wood-based products, the ability to combine engineering skills with training in forest sciences to solve problems and to work in multidisciplinary teams; the ability to analyze problems critically and conduct scientific experimentation and engineering analysis; the ability to continue developing professionally throughout their career.

The Forest Engineering Option is coordinated by the Samuel Ginn College of Engineering and the School of Forestry. Beginning students should apply to the Samuel Ginn College of Engineering and complete the Forest Engineering Option portion of the Pre-Biosystems Engineering program. Students pursuing the Forest Engineering Option must meet School of Forestry and Wildlife Sciences requirements for admission to the Forestry Summer Field Practicum.

Curriculum in Forest Engineering

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Department of Chemical Engineering

Chemical engineering at Auburn provides program specializations in Biochemical Engineering, Computer-aided Control in Chemical Engineering, Environmental Chemical Engineering, Pre-Medicine/Biomedical in Chemical Engineering, Technical Services and Pulp and Paper Chemical Engineering. Through the general program and these specializations, graduates have attractive opportunities in process engineering (chemical, paper, plastics, pharmaceuticals and biochemicals), professional and consulting services (environmental, process design/control, technical service, marketing, research and development). Students are also prepared for graduate study in chemical engineering, medicine, business and law.

Chemical engineering builds on a thorough grounding in chemistry obtained from general, organic, physical and thermodynamics and other advanced chemistry topics appropriate to the program specialization. Fundamental and specific math, science and engineering topics are selected to provide a strong core chemical engineering background and the needs of each program specialization. Each graduate has a strong working knowledge of the core chemical engineering topics including material and energy balances applied to chemical processes, thermodynamics of physical and chemical equilibria, heat, mass and momentum transfer, chemical reaction engineering, continuous and stagewise separation operations, process dynamics, statistics and control. The design experience is interwoven throughout the curriculum from elementary design principles in material and energy balances using modern computing methods to the capstone senior project design and process control sequence employing advanced computer process and control simulators and experimental control systems.

The specific curriculum goals are designed to enable each graduate to model or simulate chemical and physical processes, design and conduct experiments, analyze and interpret chemical engineering data, design and determine capital costs for chemical and physical processes, perform mass and energy balances, understand professional and ethical responsibility, communicate (written and orally) technical information, effectively apply modern computing and experimental chemical engineering tools, be economically, socially, environmentally and safety conscious and demonstrate the skills learned in the classroom and laboratory.

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Electives, Technical Electives, Physical Science Electives: See adviser for approved course list.

Biochemical Engineering Specialization

Chemical engineers trained in biochemical engineering and biotechnology are the key to successful commercialization of new biologically based processes ranging from high value pharmaceuticals to new food processes. This program specialization provides a strong biology and chemistry fundamental background for graduate work in biochemical engineering and a plan of study to meet these objectives.

Students in this specialization will also be responsible for BIOC 3200, BCHE 6180, CHEN 5680, and CHEM 2081 and Biochemical Engineering Technical Elective (3 hours). These courses replace Technical Elective 1, 2, 3, the Elective, and the Physical Science Elective. A list of approved electives is available in the department office.

Any deviation from the above requires approval of the department head.

Computer Control Chemical Engineering Specialization

Chemical engineers with expertise in the application of computer-aided process control, computer-aided process systems and advanced technology are highly sought after by all process industries. The program specialization provides appropriate courses for an individual with interests in computer control.

Students in this specialization will also be responsible for CHEN 4970, CHEM 6130, 6131, and Computer Control in CHEN Technical Elective (7 hours). These courses replace Technical Elective 1, 2, 3, the Elective, and the Physical Science Elective. A list of approved electives is available in the department office.

Any deviation from the above requires approval of the department head.

Environmental Chemical Engineering Specialization

The environmental specialization in chemical engineering prepares students for careers in the expanding environmental arena. Students specializing in this area learn about the chemical processes and reactions which affect the environment, pollution prevention, the latest standards for air, water and land quality, as well as, hazardous materials management. This specialization prepares students for environmental positions in a broad range of manufacturing and service industries all of which must comply with increasingly complex environmental standards, and in various state and federal agencies.

Students in this specialization will also be responsible for CIVL 4210, Environmental CHEN Technical Elective, CHEM 6130, CHEM 6131 and CHEN 6670. These courses replace Technical Elective 1, 2, 3, the Elective, and the Physical Science Elective. A list of approved electives is available in the department office.

Any deviation from the above requires approval of the department head.
Pulp and Paper Chemical Engineering Specialization

This specialization prepares students for challenging and rewarding technical careers in the pulp and paper and numerous allied industries, which service the paper industry. The industry is capable of sustained development with a renewable raw material base, recyclable products and processing technology able to achieve energy self-sufficiency and environmental compatibility. Entry-level positions for students successfully completing this specialization include process engineering, project engineering, environmental engineering, product development, technical service, sales and marketing.

Students in this specialization will also be responsible for CHEN 3090, CHEN 4100, CHEN 4560, and CHEM 6071. A list of approved electives is available in the department office.

Any deviation from the above requires approval of the department head.

Technical Service Specialization

This specialization prepares students for careers in technical service to the paper, chemical, petroleum, plastics and allied industries. This program specialization provides appropriate courses for individuals interested in technical service, product engineering, engineering consulting and technical sales.

Students in this specialization will also be responsible for CHEN 3090, CHEN 4100, and Technical Service Special Technical Elective (6 hours). These courses replace Technical Elective 1, 2, 3, the Elective, the Physical Science Elective, and CHEM 6071. A list of approved electives is available in the department office.

Any deviation from the above requires approval of the department head.

Curriculum in Civil Engineering

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Environmental Science

The Environmental Science program, like the rather broad field of environmental science, is by its very nature highly interdisciplinary. Although, the College of Engineering administers the program through the Department of Civil Engineering, the College of Agriculture and the College of Sciences and Mathematics are equal partners in developing the curriculum, guiding student development and providing instruction.

Environmental quality issues tend to be complex and often a significant level of expertise in physics, chemistry, biology, and geology is needed just to understand and appreciate a specific problem. Moreover, formulating solutions often requires mathematical expertise as well as specific knowledge of the air, water, and soil environments. Thus, the program is structured to educate environmental scientists quite broadly, but also with considerable depth.

The program is specifically tailored to produce graduates who can enter and have a reasonable expectation of success in a field that is continually changing. The principal educational goals are to provide each student with a broad-based general education, a solid background in mathematics, physical science, and biological science, breadth of exposure to the environmental science field, and depth of knowledge in a specific area of environmental science of choice.

The curriculum is organized around a core of courses that are required of all students. Students desiring to specialize may select from groups of courses, called professional tracks, that emphasize envi-
Department of Computer Science and Software Engineering

Computer Science

The Computer Science curriculum, leading to the Bachelor of Science in Computer Science degree, combines a general foundation in science, mathematics, social sciences and humanities and the fundamentals of computer science with advanced work in the theoretical basis for computation, and design and analysis of algorithms and software development methodologies. It prepares the student for careers in software design, analysis and development as well as graduate study. Course work includes hands-on exposure to a variety of computer systems, tools and techniques. Through a sequence of advanced elective courses, the plan of study allows the student to specialize in areas of the computer science core. In addition, the student selects a concentration of 9 semester hour credit hours outside computer science. This provides the opportunity to study advanced courses in mathematics, physics, etc.). This concentration allows the student to specialize in areas of the computer science core. The Computer Science degree program is accredited by the Computer Science Accreditation Board, Inc (CSAB).

Curriculum in Computer Science

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Software Engineering

The focus of this curriculum, which leads to a Bachelor of Software Engineering degree, is on the analysis, design, verification, validation, construction, application and maintenance of complex software systems. The software systems include operating systems and networks, compilers, real-time and embedded systems, distributed and parallel systems, and engineering, scientific, and business applications software systems. The degree program prepares students for professional careers and graduate study with a balance of computer science theory and practical application of software engineering methodology using modern software engineering environments and tools. The curriculum is based on a strong core of topics including software modeling and design, construction, process and quality assurance, intelligent and interactive systems, networks, operating systems, and computer architecture. The curriculum also enriches each student’s general education with a range of courses from science, mathematics, the humanities and the social sciences. Through a sequence of advanced elective courses, the plan of study allows the student to specialize in areas of the computer science and software engineering core. Engineering design theory and methodology, as they apply to software systems, form an integral component of the curriculum, beginning with the first course in computing for engineers and scientists and culminating with a comprehensive senior design project.

Curriculum in Software Engineering

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Department of Electrical and Computer Engineering

The Electrical and Computer Engineering curricula produce well-educated graduates prepared to practice engineering at a professional level in an era of rapid and challenging technological development. The goal of the professional portion of each curriculum is to emphasize basic areas of study while providing the flexibility to accommodate a diversity of interests and talents. To this end, each curriculum emphasizes engineering design, hands-on laboratory experience, knowledgeable use of digital computer systems, oral and written communication skills, the importance of business, economic, social and global forces on engineering, appreciation of the need to maintain the highest ethical standards, and the maintenance of professional competence through continued self-improvement after graduation.

Each curriculum builds upon a solid foundation in mathematics and science. In the Electrical Engineering curriculum, topics in the seven fundamental areas as of electrical engineering are introduced early and are carefully coordinated to provide the principles necessary for the practice of electrical engineering. In the Computer Engineering Option, fundamental topics in both electrical engineering and computer science are introduced early and are carefully coordinated to provide the principles necessary for the design and application of computer components and systems. In each case, design experience is interwoven throughout the curriculum by introducing basic design concepts early, emphasizing design experiences in the laboratories, and culminating with a capstone design project in the senior year. The senior year elective structure provides students with the flexibility to pursue a range of career options.

Curriculum in Electrical Engineering (Computer Engineering Option)

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Curriculum in Electrical Engineering (Computer Engineering Option)
Joint Program in Wireless Engineering

The Wireless Engineering curriculum is a joint offering of the Department of Electrical and Computer Engineering and the Department of Computer Science and Software Engineering, leading to the Bachelor of Wireless Engineering (BWE) degree. The curriculum is designed to produce well-educated graduates prepared to practice engineering at a professional level to improve life and business in these times of a mobile society. Graduates of this program will be able to analyze, develop, design, test, administer and support wireless network systems, communication devices, and other components used in wireless computer and telecommunication networks.

The BWE curriculum has two formal options - Wireless Electrical Engineering (EE), emphasizing the design of hardware and networks, and Wireless Software Engineering (SWE), emphasizing the design of software and networks. Through a choice of several courses within the senior year, a student can select one of two areas of specialization within each degree option. Students interested in designing wireless hardware, such as integrated circuit chips, wireless communication devices, and wireless network switching equipment, should choose the Hardware Specialization within the Wireless EE Option. Students interested in application software development, including server-side, client-side, and embedded applications, should choose the Software Specialization within the Wireless SWE Option. Students interested in pursuing a career with wireless service providers and other companies that develop and maintain wireless networks and sell service should choose the Network Specialization within either the Wireless EE Option or the Wireless SWE Option.

Each curriculum builds upon a solid foundation in mathematics, science, and electrical or software engineering fundamentals to introduce wireless communications theories, devices, circuits, systems, networks, standards, management, and applications. Design experience is interwoven throughout the curriculum by introducing basic design concepts early, emphasizing hands-on design experiences in the laboratories, including effective use of computers and other modern engineering tools, and culminating with a capstone design project in the senior year. In addition to its technical aspects, the curriculum emphasizes oral and written communication skills, the importance of business, economic, social and global forces on engineering, appreciation of the need to maintain the highest ethical standards, and the maintenance of professional competence through continued self-improvement after graduation.

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** Network Specialization requires ELEC 6120, ELEC 6220, and COMP 6330.
Department of Industrial and Systems Engineering

The Industrial and Systems Engineering (INSY) curriculum draws on specialized skills in the mathematical, physical and social sciences to develop a student’s ability to deal with economic, technical and human considerations in design, analysis and control of industrial and service systems. The curriculum provides a solid core of courses in systems analysis and design, along with courses in ergonomics and economic analysis. Design experience is integrated throughout the curriculum starting in the freshman year and culminates in a one-semester senior design project in which students apply their knowledge to the solution of real-world problems. Technical and departmental engineering elective courses provide flexibility in the program. Technical electives allow students to select from courses in engineering, and computer science. The degree provides graduates with broad, flexible career opportunities with industrial, consulting, service or governmental organizations. The degree can also provide the foundation and background for further studies in engineering and business.

Curriculum in Industrial and Systems Engineering

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Department of Mechanical Engineering

Department of Mechanical Engineering focuses on the design and operation of machinery and the prediction of machine behavior in industries such as: vehicles (land, sea, air, and space), processing (of materials, food, and chemicals), production and fabrication, power generation, heating and refrigeration, and many others. Mechanical engineers design both mechanical components, as well as mechanical systems comprised of different categories of components. Mechanical engineers study the engineering sciences of rigid mechan-ics (force and motion), deformable mechanics (stress and strain), thermo-fluid sciences (energy and hydraulics), and mechanisms (dy- namics and control), often applying these sciences far afield from the traditional mechanical industries.

The mission of the Mechanical Engineering Program is to educate students to become professionals who are prepared to enter practice, and to engage in advanced and lifelong learning, in the pro- fession of mechanical engineering. The Program emphasizes a back- ground in the fundamental disciplines of Mechanical Engineering, as well as the supporting mathematics, basic science, and core sub- jects, leading to a comprehensive design experience in the senior year. Laboratory experience (physical and computer) and communi- cation (written and oral) are emphasized throughout the curriculum. Specialized concentrations are offered in Automotive Engineering (in cooperation with the Society of Automotive Engineers Collegiate Design Series) and in Pulp and Paper (in cooperation with the Pulp and Paper Institute).

Curriculum in Mechanical Engineering

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Materials Engineering

The curriculum in Materials Engineering (MATL), administered by the Department of Mechanical Engineering, is structured to address problems associated with the design of materials and materials processes to meet specific needs. The objective of the undergraduate MATL program is to produce professionally qualified materials engineering graduates for a range of industries. Emphasis is on the basic sciences and principles of engineering with applications of these principles to materials behavior. The student must obtain a broad foundation in chemistry, physics and mathematics, which is applied in engineering courses. Within materials engineering courses, students obtain a foundation in the major areas of materials science and to the major classes of engineering materials, which is applied in courses
in materials properties and selection, computational methods and in a capstone design course. Students gain exposure to another engineering discipline through technical electives. Students may design alternative, cross-disciplinary sequences, but they must be coordinated and approved by the Materials Engineering Curriculum Committee. Graduates will be prepared to meet the needs of industry and/ or continue their studies towards an advanced degree.

**Curriculum in Materials Engineering**

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</table>

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**Department of Textile Engineering**

The diverse fiber and related industries provide careers in process engineering, quality engineering, research and product development, chemicals and dyestuffs, environmental protection, management, marketing, technical sales, lab and technical services. Graduates work in companies which make products for aerospace, aircraft, apparel, architecture and construction, automotive, computer, electronics, fiber optics, filtration, home furnishings, medical, military and defense, the paper industry, recreation, safety and protection. Students may prepare for graduate study in a variety of areas, including polymer science, materials engineering, bioengineering, industrial engineering, medical fields, business, computers, and law. Internships and the Cooperative Education Program at Auburn offer opportunities for related job experience. Programs in textile engineering provide students with a high quality, comprehensive education as well as career-related, specialized course work.

**Textile Engineering**

The textile engineering curriculum is based upon a solid, general engineering core that includes calculus, differential equations, linear algebra, chemistry, physics, and fundamental engineering courses. The design aspect of textile engineering is incorporated into all major courses in the curriculum. Major courses in fiber analysis and processes incorporate laboratory exercises that allow students to apply their knowledge of mathematics, science, and engineering to real-world examples. All seniors are required to complete a two-semester, independent design project that includes experimental design and data collection and analysis, and present their results in the form of a written report and an oral presentation. Students may choose a specialization in engineering or science or a minor in business or Business-Engineering-Technology.

**Textile Chemistry**

Students receive a thorough grounding in general, organic, and physical chemistry and advanced chemistry topics related to fibers and processes, polymers, and environmental topics. Bench labs and opportunities for research at the undergraduate level enhance students’ educational experience.

**Textile Management and Technology**

This curriculum integrates a technical and management background. Graduates are prepared to work and communicate effectively with both the engineering and business cultures of a company and with cross-functional teams. Students may choose a specialization or minor in science, foreign language, or business.

**Curriculum in Textile Engineering**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1610</td>
<td>Calculus I &amp; II</td>
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</tr>
<tr>
<td>CHEM 1010</td>
<td>Chemistry I &amp; II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1021</td>
<td>Chemistry I &amp; II Lab</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 1100</td>
<td>English Composition I &amp; II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1210</td>
<td>Technology &amp; Civilization I &amp; II</td>
<td>3</td>
</tr>
<tr>
<td>COMP 1200</td>
<td>Introduction to Computers</td>
<td>2</td>
</tr>
<tr>
<td>ENGR 1100</td>
<td>Engineering Orientation</td>
<td>0</td>
</tr>
<tr>
<td>ENGR 1110</td>
<td>Introduction to Engineering</td>
<td>2</td>
</tr>
</tbody>
</table>

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**Technical Electives - see adviser for approved course list.**

**TOTAL HOURS — 128**

Technical electives: see adviser for approved list of courses.
<table>
<thead>
<tr>
<th>Curriculum in Textile Management and Technology</th>
<th>Curriculum in Textile Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FR</strong></td>
<td><strong>FS</strong></td>
</tr>
<tr>
<td><strong>ENGL</strong> 1100 1120 English Composition I &amp; II</td>
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<tr>
<td>CHEM 1010 1020 Chemistry I &amp; II</td>
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<tr>
<td>CHEM 1011 1021 Chemistry I &amp; II Lab</td>
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<tr>
<td>MATH 1130 Pre-Calculus with Trigonometry **</td>
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<tr>
<td>MATH 1610 Calculus I **</td>
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<tr>
<td>Core History **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXTN</strong> 2000 Introduction to Textile Technology **</td>
<td>2</td>
</tr>
<tr>
<td>****</td>
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</tr>
<tr>
<td><strong>SO</strong></td>
<td><strong>FS</strong></td>
</tr>
<tr>
<td><strong>ENGL</strong> 2200 2210 Great Books I &amp; II</td>
<td>3</td>
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<tr>
<td>PHIL 1040 Business Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1000 Introduction to Physics **</td>
<td>4</td>
</tr>
<tr>
<td><strong>TXTN</strong> 2110 Yarn Form I **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXTMT</strong> 2120 Yarn Form II **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXTN</strong> 2210 Fabric Form System **</td>
<td>3</td>
</tr>
<tr>
<td>****</td>
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<tr>
<td><strong>JR</strong></td>
<td><strong>FS</strong></td>
</tr>
<tr>
<td><strong>ECON</strong> 2020 Microeconomics</td>
<td>3</td>
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<tr>
<td>ACCT 2910 Fundamental Cost Accounting **</td>
<td>3</td>
</tr>
<tr>
<td>STAT 3010 Stats for Engineers &amp; Scientists **</td>
<td>3</td>
</tr>
<tr>
<td><strong>COMM</strong> 1000 Public Speaking or ROTC **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXMT</strong> 2410 Dye &amp; Finish **</td>
<td>4</td>
</tr>
<tr>
<td><strong>TXMT</strong> 3220 Non-conventional Fabrics **</td>
<td>2</td>
</tr>
<tr>
<td><strong>TXMT</strong> 2410 Advanced Fabric Forming **</td>
<td>2</td>
</tr>
<tr>
<td><strong>TXMT</strong> 3310 St. Prop Fibers **</td>
<td>4</td>
</tr>
<tr>
<td>****</td>
<td>****</td>
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<tr>
<td><strong>SR</strong></td>
<td><strong>FS</strong></td>
</tr>
<tr>
<td><strong>MNGT</strong> 3100 Principles of Management **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXMT</strong> 3200 Fabric Design Analysis **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXTN</strong> 3450 Technical Text **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXTN</strong> 3520 Text Quality Control **</td>
<td>2</td>
</tr>
<tr>
<td><strong>TXMT</strong> 4800 Plant Operation/Cost Control **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXMT</strong> 4900 4910 Senior Research I &amp; II</td>
<td>1</td>
</tr>
<tr>
<td>Free Elective **</td>
<td>3</td>
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<tr>
<td>****</td>
<td>****</td>
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<tr>
<td><strong>SR</strong></td>
<td><strong>FS</strong></td>
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<tr>
<td><strong>MNGT</strong> 3100 Principles of Management **</td>
<td>3</td>
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<tr>
<td><strong>TXMT</strong> 3200 Fabric Design Analysis **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXTN</strong> 3450 Technical Text **</td>
<td>3</td>
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<tr>
<td><strong>TXTN</strong> 3520 Text Quality Control **</td>
<td>2</td>
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<tr>
<td><strong>TXMT</strong> 4800 Plant Operation/Cost Control **</td>
<td>3</td>
</tr>
<tr>
<td><strong>TXMT</strong> 4900 4910 Senior Research I &amp; II</td>
<td>1</td>
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<td>Free Elective **</td>
<td>3</td>
</tr>
<tr>
<td>****</td>
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<tr>
<td><strong>TOTAL HOURS — 120</strong></td>
<td><strong>TOTAL HOURS — 127</strong></td>
</tr>
</tbody>
</table>

Technical Elective: see adviser for approved course listing.
THE SCHOOL OF FORESTRY AND WILDLIFE SCIENCES offers educational programs that prepare graduates for employment in a wide variety of forestry, wildlife, natural resources, and environmental management positions. Forests and their associated resources play a unique and increasingly important role in contemporary society through enhancement of both economic development and environmental quality. The School's programs emphasize understanding of interrelationships among the functions and values of renewable natural resources. This understanding is essential to their effective management and, ultimately, to the meeting of societal needs.

In keeping with the University's land-grant mission, the School's goals are to pursue excellence in education, research and extension/outreach/public service activities focused on the forests, wildlife and associated resources of Alabama and the southeastern United States. With respect to undergraduate education, this involves the preparation and graduation of individuals who have both the necessary skills for initial employment and the breadth and depth of educational background to support professional growth and continuing career advancement.

Curricula

The School of Forestry and Wildlife Sciences offers undergraduate curricula leading to Bachelor of Science (B.S.) degrees in Forestry, Wildlife Sciences, and in Wildlife Sciences Pre-Veterinary Medicine. A Forest Engineering Option is available under the Bachelor of Biosystems Engineering (BBSE) degree program. It is offered in conjunction with the Samuel Ginn College of Engineering. Note: Qualified Forestry students are encouraged to consider participation in the Forestry Scholars Program (see below). Forestry and Wildlife students with exceptional academic qualifications should also consider enrollment in the University's Honors College (see Honors College).

The Bachelor’s programs in Forestry and the Forest Engineering Option in Biosystems Engineering (the latter with certain additional Forestry courses, see School’s web site, below) are accredited by the Society of American Foresters (SAF). SAF is the accrediting body recognized by the Council on Higher Education Accreditation as the accrediting agency for forestry education in the United States. Graduation from such SAF-accredited programs is required of all applicants for Registered Forester status in Alabama and several other states. The Biosystems Engineering program with the Forest Engineering Option is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Completion of the Wildlife Sciences degree program qualifies the graduates for certification as Associate Wildlife Biologists by The Wildlife Society. Completion of the Wildlife Pre-Vet concentration prepares students for Veterinary Medicine study.

Web Site

Students are encouraged to visit the School’s web site (http://www.sfs.ws.auburn.edu) and, in particular, its Student Services Office link (http://sfs.ws.auburn.edu/ssso/). These sites provide a wealth of elaborative information on the School’s programs and faculty as well as updates on courses, scheduling, etc. The latter are sometimes necessary after the Bulletin is printed.

Admission

General Requirements

Freshman eligibility is determined by the University Admissions Office. However, since the requirements for forestry and wildlife education necessitate high school preparatory work of high intellectual quality and considerable breadth, the following program is recommended: English (4 units), mathematics (including algebra, geometry, trigonometry and analytic geometry) (4 units), chemistry (1 unit), biology (1 unit), physics (1 unit), history, literature or social science (2 or 3 units), and foreign languages (1 unit). Freshmen in Forestry are admitted to the Pre-Forestry (PFOR) curriculum. Wildlife Sciences students are admitted directly into the Wildlife Sciences curriculum (WILD).

Transfers from other institutions must apply through the Admissions Office. The exact placement of transfer students can be determined only upon review of their transcripts by the School of Forestry and Wildlife Sciences.

Credit toward a degree in the School of Forestry and Wildlife Sciences will not be allowed for mathematics, chemistry or physics courses at a lower level than those specified in the curriculum for the degree sought. Students who are not prepared to take the courses prescribed may take lower level courses without degree credit.

Transfer credit for forestry and wildlife courses not considered equivalent to those required in the chosen curriculum may be substituted for elective credit. However, duplication of credit will not be allowed. Equivalency of forestry and wildlife courses will be determined by the Dean’s Office. Students also may obtain credit for FORY and WILD courses on the basis of validating examinations. Arrangements for validating examinations must be made with the Dean’s Office.

Forestry Requirements

The Professional Curriculum in Forestry (FORY) begins with the courses in the School of Forestry and Wildlife Sciences Summer Field Practicum (see below). Students are admitted to this curriculum once a year during spring semester. To be considered for admission, a student must have completed, or be enrolled in all required courses in mathematics, statistics, biology, microeconomics, English, and chemistry, plus an additional nine credit hours from any other courses in the Pre-Forestry curriculum (PFOR) (see below). In addition, students admitted to the professional forestry curriculum must have a minimum GPA, computed only on courses that can be used toward the undergraduate forestry degree (applicable courses), of 2.0.

Because admission to the professional forestry curriculum is limited, the number of students admitted may be fewer than the number of qualified applicants. Students who submit completed applications (including transcripts for transfer students) for admission to the Summer Field Practicum by March 15 each year will be ranked, using GPA in applicable courses. Applicants not selected may reapply in subsequent years.

Students in the FORY and BSEN Forest Engineering Option curriculum (see below) must attend the Forestry Practicum, which is scheduled for the summer term preceding the junior year and is held at the Solon Dixon Forestry Education Center near Andalusia.

To remain enrolled in the professional forestry curriculum, students must maintain minimum GPA standards as established by Auburn University.

Forest Engineering Option Requirements

Students are admitted to the professional Biosystems Engineering with Forest Engineering Option curriculum (BSEN with FYEN option) upon successful completion of the Pre-Biosystems Engineering (PBSE) Forest Engineering Option program in the Samuel Ginn College of Engineering with a GPA of 2.2 or greater. (See additional detail on Forest Engineering Option below.) Students pursuing the Forest Engineering Option must meet School of Forestry and Wildlife Sciences requirements for admission to the Forestry Summer Field Practicum as noted on the FOEN curriculum PFOR. To receive a Society of American Foresters accredited degree, the student must complete the additional courses listed at www.sfs.ws.auburn.edu/ssso.

Wildlife Sciences Requirements

Admission requirements for the Wildlife Sciences curricula (WILD and WILD/PVET) are the same as for Forestry (above) with this exception: on-campus transfer students must have a cumulative Auburn GPA of at least 2.0 on all work attempted.
Forestry

The objectives of the forestry curriculum are to provide: 1) the fundamental knowledge regarding the resources that professional foresters typically manage and the multiple uses, sustaining, and conservation of those resources; 2) a general education integrating physical, social and biological sciences to prepare the forester for the role as steward of public and private forest resources; and 3) training and skills needed for initial forestry employment, as well as, for advancement to higher levels of managerial responsibility. The forestry degree is appropriate for students who seek employment in any aspect of forest resource management, from forest industry lands where timber production is typically the primary objective, to private non-industrial properties where multiple use predominates, to public lands where recreation or environmental protection is often paramount. The curriculum emphasizes biological, ecological, environmental, social, and economic considerations in forest management.

The required courses in the professional forestry curriculum (FORY, see below) are designed to be taken in sequence and as a block. The work is integrated among courses in each semester and between semesters. Students must pay careful attention to the pre-requisites of the junior and senior year courses, which are strictly enforced by the School, to ensure successful completion of the forestry program.

Forestry students are required to meet the minimum requirements of one Emphasis area. The approved Emphases are listed following the FORY curriculum model (see below). More information about planning for completion of Emphases is available from the School of Forestry and Wildlife Sciences Student Services Office (see also SSO web site).

Curriculum in Pre-Forestry (PFOR)

<table>
<thead>
<tr>
<th>FR</th>
<th>F</th>
<th>S</th>
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<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020</td>
<td>Principles of Biology &amp; Lab</td>
<td>4</td>
<td>**</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1030</td>
<td>Organismal Biology &amp; Lab</td>
<td>4</td>
<td>**</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1010</td>
<td>Survey of Chemistry I &amp; II</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1021</td>
<td>Survey of Chemistry I &amp; II</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 1100</td>
<td>English Composition I &amp; II</td>
<td>3</td>
<td>3</td>
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<tr>
<td>MATH 1610</td>
<td>Calculus I</td>
<td>4</td>
<td>**</td>
<td>4</td>
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<tr>
<td></td>
<td>Core Social Science</td>
<td>3</td>
<td>**</td>
<td>3</td>
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<tr>
<td></td>
<td>Core Philosophy</td>
<td>3</td>
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<tr>
<td>ECON 2040</td>
<td>Introduction to Soils</td>
<td>3</td>
<td>3</td>
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<td>ENGL 2210</td>
<td>Great Books I &amp; II</td>
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<tr>
<td></td>
<td>Communication Skills in Leadership</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Statistics</td>
<td>3</td>
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</tr>
<tr>
<td>STAT 2510</td>
<td>ACCT 2910 or PHYS 1000</td>
<td>3-4</td>
<td>**</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Courses in bold type above are required for admission to Forestry (FORY) curriculum.

Curriculum in Professional Forestry (FORY)

| SUMMER | | | | |
|---|---|---|---|
| FOEN 3000 | Forest Operations | 1 | 1 |
| FOEN 3040 | Forest Surveying | 3 | 3 |
| FORY 3020 | Forest Biology | 2 | 2 |
| FORY 3050 | Field Mensuration | 1 | 1 |
| FORY 3060 | Forest Management | 3 | 3 |
| JR | | | |
|  | Core Fine Arts | 3 | ** | 3 |
|  | Introduction Wood Science | 3 | ** | 3 |
|  | Dendrology | 3 | ** | 3 |
| FORY 3180 | Forest Measurements I & II | 3 | 3 | 3 |
| FORY 3200 | Forest Tree Physiology | 3 | 3 | 3 |
| FORY 4230 | Forest Ecology | 3 | 3 | 3 |
| FORY 6400 | Forest Economics | 3 | 3 | 3 |
| SR | | | |
|  | Emphasis | 6 | 6 | 6 |
| FORY 4150 | Forest Health | 3 | ** | 3 |
| FORY 4970 | Senior Project | 3 | ** | 3 |
| FORY 6230 | Silviculture | 3 | ** | 3 |
| FORY 6410 | Forest Management | 3 | ** | 3 |
| FORY 6420 | Forest Policy | 3 | ** | 3 |

TOTAL HOURS - 127-128

Courses in bold type above are components of the Forestry major.

Forest Emphases

To provide students an opportunity to develop strengths in areas of particular personal and professional interest, the School has developed a series of course groupings called Emphases which, beyond the broad base of Junior year core courses, afford opportunity for specialized study. Current emphases are: Forest Land Management, Forest Operations, Forest Products, Urban Forestry, Business, Forest Biology, Wildlife Management, Spatial Analysis, and Policy. Emphases are selected by students at the close of the Summer Practicum. These choices are taken into account by the student and his/her faculty adviser as the program of study for completion of the professional (FORY) program is developed. Details on courses in each Emphasis (both required and optional, 12 credit hours minimum) are available from the School's Student Services Office and web site.

Scholars Program in Forestry

The Scholars Program in Forestry provides qualified students an opportunity to explore areas besides the Emphases listed above in which they are particularly interested and/or to prepare for graduate study. Students with at least 3 semesters remaining in the Forestry curriculum, and with at least a 3.3 GPA overall or 3.0 in courses in the Forestry core curriculum, may apply for admission to the program by petition to the student's academic adviser and the Dean. Under the guidance of the faculty adviser, and with Dean's approval, the student develops an Emphasis to fit his/her unique interests. The Scholars Emphasis must include FORY 4990 in addition to a minimum of 12 semester hour credits in courses at the 3000 level or above.

Forest Engineering Option

The Biosystems Engineering Department in conjunction with the Samuel Ginn College of Engineering and the School of Forestry and Wildlife Sciences offers an accredited degree in Biosystems Engineering with a Forest Engineering Option. Graduates are qualified to pursue Professional Engineering (PE) credentials.

This program is committed to preparing students for productive professional careers in the forest products industry and related natural resource and environmental systems sectors. Specific educational objectives of the program are to produce graduates with: the skills necessary to solve engineering problems related with the management of forest and natural resources and the production of wood fiber and the manufacture and utilization of wood-based products; the ability to combine engineering skills with training in forest sciences to solve problems and to work in multi-disciplinary teams; the ability to analyze problems critically and conduct scientific experimentation and engineering analysis; and the ability to continue developing professionally throughout their career.

The curriculum is coordinated by the Samuel Ginn College of Engineering and the School of Forestry and Wildlife Sciences. Students register in the Samuel Ginn College of Engineering, and are assigned academic advisers in Biosystems Engineering and in Forestry. Beginning students should apply to the Samuel Ginn College of Engineering and complete the Pre-Biosystems Engineering, Forest Engineering Option, program. (See the Samuel Ginn College of Engineering section for the curriculum model, and detailed admission and degree requirements.)

Wildlife Sciences

The Wildlife Sciences (WILD) degree program provides a broad biological education that is specifically designed to meet the needs of students interested in a career involving management of wildlife. Graduates are employed with state or federal wildlife agencies, environmental consulting firms, private conservation organizations, and private land management companies. Because many jobs require a Master's degree, the program is designed primarily to prepare students for graduate studies in wildlife biology and management. Students must complete designated courses in the major (see bold type in curriculum models below) with at least a 2.0 GPA.
Wildlife Sciences, Pre-Veterinary Medicine (WILD/PVET) Concentration

Students may be admitted to the College of Veterinary Medicine (CVM) by the end of the spring semester preceding the date of admission to the CVM. Professional Electives - Listed on School’s SSO website.
HUMAN SCIENCES is a professional program central to the land-grant mission that draws from the natural and social sciences, the arts and humanities. It integrates and interrelates knowledge from these disciplines to advance the well-being of individuals, families, and consumers. The course of study provides a broad liberal education, specialized career preparation, as well as a background for individual and family living. Areas of specialization focus on aspects of environment, health, consumer products and services, and human development. Human Sciences offers men and women professional and pre-professional preparation careers in education, business, industry, social agencies, and government.

The College of Human Sciences includes the departments of Consumer Affairs, Human Development and Family Studies, and Nutrition and Food Science. The College is fully accredited by the Council of Accreditation of the American Association of Family and Consumer Sciences (AAFCS). Programs of study leading to the Bachelor of Science degree can be planned within five curricula in the College of Human Sciences. These curricula are designed with flexibility to meet the needs of students with a variety of academic interests and goals. In addition to the College accreditation, program-specific accreditations/approvals/endorsements/certifications have been attained for several programs.

Transfer Requirements. Admission to the College: Students may transfer into Apparel Merchandising, Design and Production Management, Hotel and Restaurant Management, and Nutrition and Food Science from another college or school on campus if they have attained an overall unadjusted GPA of at least 2.00 on all courses attempted at Auburn University. Transfer into Human Development and Family Studies requires a higher unadjusted GPA of at least 2.25 on all course work attempted at Auburn University.

The Interior Design (INDS) program in the College maintains the right to limit freshman and transfer enrollment. On-and off-campus transfer students must meet criteria listed in the application with the Department of Consumer Affairs no later than the March 1 deadline.

Graduation Requirements. To earn the bachelor’s degree from the College of Human Sciences, students must complete the hours and subject matter requirements of their curricula and must have a minimum GPA of 2.0 on all course work attempted at Auburn University, and in addition, a 2.0 cumulative GPA on all work attempted in the major.

College of Human Sciences

JUNE M. HENTON, Dean
ARTHUR W. AVERY, Associate Dean
DOROTHY H. CAVENDER, Associate Dean

Department of Consumer Affairs

The Department of Consumer Affairs focuses on consumers’ interactions with their near physical environment. Two majors are offered: 1) Apparel Merchandising, Design and Production Management and 2) Interior Design. These curricula focus on principles of design, product development, management, marketing science and technology, and consumer behavior. Majors in these curricula may lead to careers in business, industry, and government which apply knowledge to developing, evaluating and merchandising consumer products, interpreting consumers’ wants and needs, informing consumers and designing environmental spaces. A senior-level internship is required in both curricula. A minor in Business and an International Minor in Human Sciences are available.

Apparel Merchandising, Design and Production Management

Apparel Merchandising, Design and Production Management is a professional curriculum with two options: 1) Apparel Merchandising and 2) Product Design and Production Management. Diversity within the major allows students to select such varied fields as apparel design, apparel production management, retail sales, apparel merchandising, retail buying, fashion journalism, and consumer-producer relations.

Academic Standards and Policies: Students in both AMDP options must earn a grade of a C or higher in all courses in the major before being allowed to proceed to the next course in the sequence. Major courses include the Human Sciences College core courses and all required Consumer Affairs courses which are indicated in bold print in the models.

Curriculum in Apparel Merchandising/Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Cr. Hr.</th>
<th>FR</th>
<th>F</th>
<th>S</th>
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<tbody>
<tr>
<td>MATH</td>
<td>1150</td>
<td>Pre-Calculus Algebra &amp; Trigonometry</td>
<td>4 **</td>
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<tr>
<td>HIST</td>
<td>1100</td>
<td>Core History</td>
<td>3</td>
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<tr>
<td>ENGL</td>
<td>1120</td>
<td>English Composition I &amp; II</td>
<td>3 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAHS</td>
<td>1600</td>
<td>Textile Industrial Complex</td>
<td>3 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAHS</td>
<td>1750</td>
<td>Fund of Product Development</td>
<td>4 **</td>
<td></td>
<td></td>
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<tr>
<td>CAHS</td>
<td>2000</td>
<td>Global Consumer Culture</td>
<td>3 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAHS</td>
<td>2000</td>
<td>Marriage &amp; Family in Global Context</td>
<td>3 **</td>
<td></td>
<td></td>
<td></td>
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<td>SO</td>
<td>1020</td>
<td>Survey of Chemistry I &amp; II</td>
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<td>CHEM</td>
<td>2020</td>
<td>Principles of Microeconomics</td>
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<td>ENGL</td>
<td>2210</td>
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<td>3 **</td>
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<td>4600</td>
<td>World Prod &amp; Trade of Text &amp; App</td>
<td>3 **</td>
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<tr>
<td>CAHS</td>
<td>4940</td>
<td>Apparel Merchandising &amp; Retail Mngt</td>
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<td>CAHS</td>
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<td>AMDP Internship</td>
<td>8 **</td>
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</table>

| TOTAL HOURS - 123 |

Select professional electives from the approved professional elective list.

Students must pass the placement test on computer skills or take COMP 1000 to enroll in ACCT 2910.
 required Interior Design courses will be expelled from the INDS program.

Students who earn two D grades or one F grade in the major before being allowed to proceed to the next course in the sequence. Major courses include the Human Sciences College core courses and all required Consumer Affairs courses which are indicated in bold print/criminal background certification will not be allowed to enroll in practica, research, or internship courses or courses that require direct contact with children, youth, adolescents, and/or vulnerable adults.

The program maintains the right to limit freshmen and transfer enrollment. On and off campus transfer applicants must meet criteria listed in the "Academic Policies" section of the Auburn University Bulletin and must file applications with the INDS program before being admitted, or they will be held to the same admission requirements as transfer students.

Students in INDS must earn a grade of a C or higher in all courses in the major before being allowed to proceed to the next course in the sequence. Major courses include the Human Sciences College core courses and all required Consumer Affairs courses which are indicated in bold print in the model. Students who earn two D grades or one F grade in the required Interior Design courses will be expelled from the INDS program and must transfer out of the program immediately.

### Interior Design

Interior Design is a four-year Bachelor of Science program accredited by the Foundation for Interior Design Education Research (FIDER). The curriculum focuses on the design of the near environment, the aesthetic and functional aspects of space planning, furnishings and materials, mechanical equipment and the integration of these aspects of the built environment to fit the needs of the user. A professionally supervised internship is required. Student work from courses in the major may be limit freshmen and transfer enrollment. On and off campus transfer applicants must meet criteria listed in the "Academic Policies" section of the Auburn University Bulletin and must file applications with the INDS program before being admitted, or they will be held to the same admission requirements as transfer students.

Students in INDS must earn a grade of a C or higher in all courses in the major before being allowed to proceed to the next course in the sequence. Major courses include the Human Sciences College core courses and all required Consumer Affairs courses which are indicated in bold print in the model. Students who earn two D grades or one F grade in the required Interior Design courses will be expelled from the INDS program and must transfer out of the program immediately.

### Department of Human Development and Family Studies

The Department of Human Development and Family Studies is concerned with the integration of knowledge from various fields for the purpose of studying individuals and families across the lifespan. The department offers a course of study to prepare students for a variety of careers, including teaching and administering programs for young children, adolescents and adults; parent education; mental health or family financial counseling; and Cooperative Extension. One undergraduate curriculum, with three options, is offered by the department. The curriculum is approved by the National Council on Family Relations to offer the Provisional Certified Family Life Education (CFLE) designation and has three options: Infant and Preschool, School-age and Adolescence and Adult and Aging. The Department operates the Auburn University Early Learning Center and the Harris Early Learning Center of Birmingham, both accredited by the National Academy of Early Childhood Programs, a division of the National Association for the Education of Young Children.

FINGERPRINT/CRIMINAL BACKGROUND CHECKS ARE REQUIRED OF ALL HDFS MAJORS. Students who have not obtained fingerprint/criminal background certification will not be allowed to enroll in practica, research, or internship courses or courses that require direct contact with children, youth, adolescents, and/or vulnerable adults.

Prior to beginning third semester, students must pass the placement test on computer skills or take COMP 1000 to enroll in ACCT 2910.

Select professional electives from approved professional elective list.

** Production Management requires TXTN 2700 and ACCT 2910.

Product Design focus requires six hours from list of approved art history, theatre or journalism courses.

Students must pass the placement test on computer skills or take COMP 1000 to enroll in ACCT 2910.
**Curriculum in Human Development and Family Studies**

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<td>1120</td>
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<td>MATH</td>
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<td>Global Consumer Culture</td>
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<td>Marriage &amp; Family in Global Context</td>
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<td>Family Resource Management</td>
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</table>

**TOTAL HOURS - 120**

Department of Nutrition and Food Science

The Department offers two majors: Hotel and Restaurant Management (HRMT) and Nutrition and Food Science (NUFS). The HRMT program emphasizes food and lodging services for consumers in the tourism industry. Students have a choice of three options: Nutrition/Dietetics, Food Science, and Nutrition Science.

Hotel and Restaurant Management (HRMT)

The HRMT major prepares students for careers in hotels, motels, restaurants, and other positions in the tourism and hospitality industry. Its mission is to educate the students in the arts and sciences of the hospitality industry and to prepare them with a thorough understanding of the premium service concept and high standards of excellence necessary for professional responsibilities.

**Curriculum in Hotel and Restaurant Management**

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<td>1120</td>
<td>3</td>
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<tr>
<td>MATH</td>
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<td>Introduction to Psychology</td>
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<td>3</td>
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<td>NUF</td>
<td>1010</td>
<td>Intro to Hospitality Management</td>
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</table>

**TOTAL HOURS - 120**

Nutrition and Food Science (NUFS)

The field of nutrition is concerned with human physiology and biochemistry and their relationship to human health, diet, and well-being. The NUFS curriculum has three options which permit specialization according to students’ specific interests. The Nutrition Science option prepares students for health professional schools, such as medical, dental, and physical therapy, as well as for graduate study in the nutrition discipline.

The Nutrition/Dietetics option prepares students for careers in dietetics, nutrition education, and nutrition. The Didactic Program in Dietetics (DPD) is currently granted approval status by the Commission on Accreditation for Dietetic Education by the American Dietetic Association, 216 W. Jackson Blvd., Chicago, IL 60606-6995, 312/899-5400. Students who successfully complete the Nutrition/Dietetics option (DPD) are qualified to apply for a post-baccalaureate dietetic internship which is a requirement prior to taking the national examination to become a Registered Dietitian.

Food Science utilizes the biological and physical sciences to study the nature of foods and the principles underlying food production and processing. The Food Science option prepares students for careers in the foods industry in the area of quality control, product development, and food safety, as well as for government agencies. The Food Science option meets the educational requirements of the Institute of Food Technologists (IFT).

**Curriculum in Nutrition/Dietetics/Option**

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**TOTAL HOURS - 120**

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<td>Nutritional Biochemistry</td>
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</table>
This option meets the Institute of Food Technologists educational requirements for scholarship eligibility.
I N THE COLLEGE OF LIBERAL ARTS, a student can specialize in a particular field while also gaining a broad general education. Four academic areas - humanities, fine arts, communications and behavioral and social sciences - are represented by the College’s 13 departments: Art; Communication and Journalism; Communication Disorders; English; Foreign Languages and Literatures; History; Music; Philosophy; Political Science; Psychology; Sociology; Anthropology and Social Work; and Theatre.

Besides affording specialization in majors, the curricula of this College lay a strong foundation for further studies in graduate school or professional school. The College also provides courses needed by students of all other instructional divisions of the University.

Academic Policies

To earn a second baccalaureate or a double major, students must complete a separate body of knowledge appropriate for the degree; the Liberal Art’s dean’s office determines when this is possible. AU academic policy stipulates the minimum hours necessary in addition to the primary degree or curriculum. Liberal Arts consistently monitors that, at a minimum, there must be 30 additional hours of non-overlapping course work in the major.

Undergraduate Degrees

Academic majors, programs, and options are offered in more than 30 fields, described below in the Liberal Arts Curriculum and in the curricula of the School of Fine Arts. Four-year degrees offered by the College in these fields are the Bachelor of Arts, Bachelor of Science and Bachelor of Fine Arts. The Bachelor of Arts degrees in French, German and Spanish are offered as shared degrees between Auburn University and Auburn University Montgomery, effective Fall 2002.

Graduate Degrees

Doctor of Philosophy degrees are offered in English, History, Psychology, and Public Administration and Public Policy. Master of Arts degrees are offered in English, Spanish, History, Political Science, Sociology and Communication. Master of Science degrees are offered in Communication Disorders and Psychology.

The designated degrees of Master of Communication Disorders, Master of Hispanic Studies, Master of Communication, Master of Public Administration and Master of Technical and Professional Communication are offered. The College’s School of Fine Arts offers Master of Fine Arts degrees. Degree programs are described in the Graduate School section.

Education

The College of Education offers a Fifth-Year Program to Liberal Arts students holding a baccalaureate degree in English or foreign language. Upon successful completion of the program, a master’s degree in Education (M.Ed.) will be awarded and the graduate will be recommended for an A level teaching certificate (master’s level certificate).

The University Honors College

This program offers individual learning opportunities and participation in honors courses to students with extraordinarily high academic aptitude. For more information, refer to the Academic Policies section of this Bulletin.

Cooperative Education Programs

Cooperative Education Programs which give students an opportunity to integrate academic training with work experience are offered in Art, Criminology-Criminal Justice, Economics, English (technical writing), Health Administration, Journalism, Mass Communication, Political Science, Psychology, Public Administration, Public Relations, Social Work and Sociology. Students alternate each term between college and a work assignment provided through the Director of the Cooperative Education Program.

Center for the Arts and Humanities

The Auburn University Center for the Arts and Humanities conducts humanities programs for the general public in localities throughout the state. For information, contact Dr. Allen Cronenberg, Director, in the Center’s offices at Pebble Hill.

Majors in the Liberal Arts Curriculum

A major may be declared at the time of admission or thereafter but must be declared by the end of the term in which the student has completed 45 semester hours of credit, including transfer and all other credit. A student transferring into the college with 45 or more semester hours’ credit must declare a major upon admission. Before a major is declared, a student will follow the requirements of the Liberal Arts Curriculum and will be identified by the symbol UNLA.

Bachelor of Arts: Anthropology, Art, Communication, Criminology-Criminal Justice, Economics, English, Foreign Languages-International Trade [these include the shared AU-AUM undergraduate language courses required of the major but not non-language courses required for the major], French, [shared AU-AUM degree], German [shared AU-AUM degree], History, Journalism, Mass Communication, Philosophy, Political Science, Psychology, Public Administration, Public Relations, Social Work, Sociology, Spanish [shared AU-AUM degree], and Theatre.

Bachelor of Science: Communication Disorders and Health Services Administration.

Minors

ANTHROPOLOGY MINOR

15 semester hours in Minor (minimum 9 hours at 3000 level or above) Courses required: NONE

ART HISTORY MINOR

21 semester hours in Minor (minimum 9 hours at 3000 level or above) Courses required: Cr. Hr.

ARTS 1710 Intro to Art History I ............................................ 3
ARTS 1720 Intro to Art History II ........................................... 3
ARTS 1730 Intro to Art History III ......................................... 3
ARTS 4900 Independent Study in Art History .......................... 3

CLASSICS MINOR

15 semester hours in Minor (minimum 9 hours at 3000 level or above) Courses required: 10 hrs. of Greek or Latin (2000 level or higher)

COMMUNICATION MINOR

18 semester hours in Minor (minimum 9 hours at 3000 level or above) Courses required: Cr. Hr.

COMM 3500 Foundations of Human Comm ................................ 3
COMM 3600 Found of Rhetoric & Social Influence ..................... 3
COMM 3300 Found Mass Communication ................................. 3

CRIMINOLOGY AND CRIMINAL JUSTICE MINOR

15 semester hours in Minor (minimum 9 hours at 3000 level or above) Courses required: Cr. Hr.

CRIM 2000 Crime & Justice in America ................................... 3
CRIM 3000 Criminology ...................................................... 3

ENGLISH MINOR

15 semester hours in Minor (minimum 9 hours at 3000-level or above) Courses required: NONE

Elective Courses - See adviser for approved course listing.
FRENCH MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: Cr. Hr.
FLFR 2010 Intermediate French I ......................... 4
FLFR 2020 Intermediate French II ...................... 4
Elective Courses - See adviser for approved course listing.
Students must earn a C and maintain a 2.5 GPA in all courses that count toward the minor.

GERMAN MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: Cr. Hr.
FLGR 2010 Intermediate German I .................. 4
FLGR 2020 Intermediate German II .................. 4
Elective Courses - See adviser for approved course listing.
Students must earn a C and maintain a 2.5 GPA in all courses that count toward the minor.

HISTORY MINOR
15 semester hours above the 1000-level, including six hours at the 2000-level and nine hours at the 3000-level or above.

MUSIC MINOR
15 semester hours in Minor (To minor, arrange for a performance audition with an applied music instructor)
Courses required: Cr. Hr.
MUSI 1310 Music Theory I ................................. 2
MUSI 1320 Music Skills I .................................... 1
MUSI 1410 Music Theory II ................................ 2
MUSI 1420 Music Skills II ..................................... 1
MUSI 3510 or 3520 Music History I or II .............. 3
MUSI 3610 or 3630 Conducting I .......................... 2
MUAP 1310 Performance ..................................... 1
MUAP 1410 Performance ..................................... 1
MUAP 2310 Performance ..................................... 1
MUAP 2410 Performance ..................................... 1
MUSI 1000 Perf. Attendance (4 semesters required) ... 0

PHILOSOPHY MINOR
18 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: Select one core Logic and one core Ethics course
Elective Courses - See adviser for approved course listing.

POLITICAL SCIENCE MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: Cr. Hr.
Poli 1090 American Government & Politics .............. 3
Elective Courses - See adviser for approved course listing.

RELIGIOUS STUDIES MINOR
18 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: Select one core Logic and one core Ethics course
RELG 1010 Introduction to Religious Studies
Elective Courses - See adviser for approved course listing.

SOCIAL WORK MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required:
SOWO 2000 Introduction to Social Work
SOWO 2850 History of Social Welfare
SOWO 3910 Field Practicum
Elective Courses - See adviser for approved course listing.

SOCIOLOGY MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: NONE
Elective Courses - See adviser for approved course listing.

SPANISH MINOR
15 semester hours in Minor (minimum 9 hours at 3000 level or above)
Courses required: Cr. Hr.
FLSP 2010 Intermediate Spanish I ..................... 4
FLSP 2020 Intermediate Spanish II ..................... 4
Elective Courses - See adviser for approved course listing.
Academic Disciplines: see program director for a list.
Students must earn a C and maintain a 2.5 GPA in all courses that count toward the minor.

Options
Engineering. This program provides for enrollment in the Liberal Arts Curriculum and in the College of Engineering. Two degrees will be awarded: a bachelor of arts degree in the Liberal Arts major and a bachelor’s degree in the designated engineering field. Students should receive dual advising through the Colleges of Liberal Arts and Engineering. Typically, five to six academic years are necessary to complete dual requirements.

Pre-Law. Most majors and curricula are accepted as preparation for the study of law. Courses deemed useful, and which may be taken as electives, in majors, and in some cases to fulfill certain core requirements, are available from the Pre-Law Program, located in Haley Center, where students receive advice on preparing for law school admission and the study of law.

Pre-Health. Most majors and curricula in Liberal Arts are accepted as preparation for professional degrees in health, including advanced degrees from schools of medicine, dentistry, optometry, physical therapy, occupational therapy and others. Generally, particular courses in the sciences, mathematics and philosophy should be taken in the University Core. Additional sciences and mathematics may be needed as electives. The University’s Pre-Health Adviser, housed in the College of Sciences and Mathematics, should be consulted for elective and core course guidance and for assistance in applying to graduate/professional schools.

The Liberal Arts Adviser is available for all other matters related to the student’s undergraduate studies.

Curriculum in Anthropology (ANTH)

F \ F \ S \ F \ S
ANTH 1000 Intro to Anthr; A4 Field Approach ....... 3 3
ENGL 1100 1120 English Composition I & II ........ 3 3
FLNG 1000 Foreign Language (College Core) .......... 4 4
Core History ............................................. 3
Core Mathematics ..................................... 3
Core Fine Arts ......................................... 3
Elective ................................................. 1

FR \ F \ S
ANTH 2100 Introductory Archaeology ............... 3 3
ANTH 2300 Intro. To Physical Anthropology .......... 3 3

FR \ F \ S
ANTH Elective .......................................... 6 3

FR \ F \ S
ANTH 3000 Culture, Marriage & the Family ........ 3 3
ANTH 3100 Language and Culture OR ............... 3 3
ANTH 3700 Political Ecology ......................... 3 3
ANTH 3200 Anthropology of Gender OR .......... 3 3
ANTH 3600 Medical Anthropology ................. 3 3
ANTH Elective ......................................... 3
ANTH Group 1 ........................................ 3
Elective ................................................. 3

FR \ F \ S
SOCY 1000 Sociology - Global Perspectives or .... 3 3
GEOG 1010 Global Geography ......................... 3 3
ENGL 2200 2210 Great Books I & II ................. 3 3
Core History ............................................. 3
Core Philosophy ....................................... 3
Core Science .......................................... 4 4

SR \ SR
ANTH 4900 Anthrological Theory ..................... 3 3
ANTH Elective ......................................... 6 3
Elective ................................................. 9

FR \ F \ S
STAT 2010 Statistics for SS & Behavior Science .... 4 4

FR \ F \ S
ARTS 1110 1120 Drawing I & II ....................... 3 3
ARTS 1210 Design I ...................................... 3 3
ARTS 1710 1720 Introduction to Art History I & II . 3 3

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**Curriculum in Communication (COMM)**

Students must apply for admission to the COMM major. All applicants must have completed 45 hours of course work (including the university core or its equivalents), and earn a minimum 2.3 overall GPA. See the Department Chair or program coordinator for further information.

**Curriculum in Criminology-Criminal Justice (CRIM)**

Students desiring the Communicating Disorders (CMDS) major must formally apply for admission to the program after completion of 30 semester hours of course work that meets university core requirements. Applications and procedures for admission are available in the CMDS Department, Haley 1199. Students must apply for admission by January 30 to begin the major in summer semester and applications must be received by May 30 to begin the major in fall semester. Applications may be submitted at any time prior to the deadlines.
Curriculum in Economics (ECLA)

Also see ECON major in the College of Business.

| Core Social Science Group 1 | 3 ** |
| Core Fine Arts | 3 ** |
| Core History | 3 ** |
| Core Mathematics | 3 ** |
| Economics Elective | 4-6 |
| Electives | 5-6 |
| TOTAL HOURS - 120 | 15 15 |

Students either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in English (ENGL)

| Core Social Science Group 1 & 2 | 3 3 |
| Core Fine Arts | 3 3 |
| Core History | 3 3 |
| Core Mathematics | 3 3 |
| Electives | 3 6 |
| TOTAL HOURS - 120 | 15 15 |

Students either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in French (FLFR)

The baccalaureate degree in French is offered as a shared degree program between Auburn University and Auburn University, Montgomery, effective Fall 2002. It includes language courses for the major only. Students must meet both AU and AUM criteria for admission, have a 2.50 GPA in the major and a 2.00 GPA overall for graduation. No courses below a C count toward the major. Neither AU nor AUM will offer an independent baccalaureate in French.

| Core Social Science Group 1 | 3 3 |
| Core Fine Arts | 3 3 |
| Core History | 3 3 |
| Core Mathematics | 3 3 |
| Core Science | 3 ** |
| Elective | 4 4 |
| TOTAL HOURS - 120 | 14 16 |

Students either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in French and Apparel Merchandising (FLFM)

The baccalaureate degree in French and Apparel Merchandising is offered as a shared degree program between Auburn University and Auburn University, Montgomery, effective Fall 2002. It includes language courses for the major only.

Students must meet both AU and AUM criteria for admission, have a 2.50 GPA in the major and a 2.00 GPA overall for graduation. No courses below a C count toward the major. Neither AU nor AUM will offer an independent baccalaureate in French and Apparel Merchandising.

| Core Social Science Group 1 | 3 3 |
| Core Fine Arts | 3 3 |
| Core History | 3 3 |
| Core Mathematics | 3 3 |
| Elective | 3 6 |
| TOTAL HOURS - 120 | 15 15 |

Students either pass the computer competency test or take COMP 1000 as one of their electives.
Curriculum in French-International Trade (FLFT)

The baccalaureate degree in French-International Trade is offered as a shared degree program between Auburn University and Auburn University, Montgomery, effective Fall 2002. Currently, only the shared AU-AUM undergraduate language courses are required of this major and there are no shared non-language courses. Students must meet both AU and AUM criteria for admission, have a 2.50 GPA in all courses that count toward the major and have a 2.00 GPA overall for graduation. Neither AU nor AUM will offer an independent baccalaureate in French.

**FR**  **S**  **F**  **S**
COMM 1000 Public Speaking ........................................... ** 3  ** 3
FLFR 1010 1020 Elementary French I & II ......................... 4 4
ENGL 1100 1120 English Composition I & II ....................... 3 3

**SR**
CAHS 3600 Textiles .................................................. 4 4
CAHS 3850 Mech. Planning & Control ......................... ** 3  ** 3
CAHS 4600 World Product & Distrib. ....................... 3 3
FLFR 4310 French for International Trade .................. 3 3
FLFR 4610 French for Fashion I ......................... ** 3  ** 3
FLFR 4620 French for Fashion II .................... ** 3  ** 3
FLFR 4980 Senior Capstone .................. 1 ** 3 3
FLFR Elective ........................................ 2 2

**SO**
CAHS 2200 Great Books I & II .................................. 3 3
FLGR 1010 1020 Elementary German I & II .................. 4 4
ENGL 1100 1120 English Composition I & II ....................... 3 3

**JR**
ACCT 2110 Principles of Financial Accounting ............... 3 3
ACCT 2210 Principles of Managerial Accounting ............... 3 3
MNGT 3100 Principles of Management ....................... 3 3
MKTG 3310 Principles of Marketing ......................... 3 3
FLFR 3310 French Civilization ................................ ** 3  ** 3
FLFR 4980 Senior Capstone ................................ ** 3  ** 3
FINC 3610 Principles of Finance ................................ 3 3
FINC 4510 Multinational Finance Management ............... 3 3
FLFR 3100 French Literature ................................ ** 3  ** 3
FLFR 4310 French for International Trade .................. 3 3
FLFR 4980 Senior Capstone ................................ ** 3  ** 3
FINC 4510 Business Elective ................................... 3 3

**TOTAL HOURS - 120**

FLFR Elective, Business Elective: See adviser for approved course listing.

Students either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in German-International Trade (FLGT)

The baccalaureate degree in German-International Trade is offered as a shared degree program between Auburn University and Auburn University, Montgomery, effective Fall 2002. Currently, only the shared AU-AUM undergraduate language courses are required of this major and there are no shared non-language courses. Students must meet both AU and AUM criteria for admission, have a 2.50 GPA in all courses that count toward the major and have a 2.00 GPA overall for graduation. Neither AU nor AUM will offer an independent baccalaureate in German.

**FR**  **S**  **F**  **S**
FLGR 1010 1020 Elementary German I & II ....................... 4 4
ENGL 1100 1120 English Composition I & II ....................... 3 3

**SO**
PHIL 1000 Core Philosophy ........................................ 3 3
ENGL 2200 2210 Great Books I & II ....................... 3 3

**JR**
ACCT 2110 Principles of Financial Accounting ............... 3 3
ACCT 2210 Principles of Managerial Accounting ............... 3 3
MNGT 3100 Principles of Management ....................... 3 3
MKTG 3310 Principles of Marketing ......................... 3 3
FLGR 3010 Introduction to German Literature ................ 3 3
FLGR Elective ........................................ 3 3

**TOTAL HOURS - 120**

FLGR Elective: See adviser for approved course listing.

Students either pass the computer competency test or take COMP 1000 as one of their electives.
### Curriculum in Health Services Administration (HADM)

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>HADM 2200</td>
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</tr>
<tr>
<td>HADM 3300</td>
<td>3</td>
</tr>
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<td>HADM 4000</td>
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<tr>
<td>HADM 4100</td>
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<td>HADM 4200</td>
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**TOTAL HOURS - 120**

### Curriculum in History (HIST)

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<tr>
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**TOTAL HOURS - 120**

### Curriculum in Journalism (JRNL)

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<tr>
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<td>JRNL 2310</td>
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<tr>
<td>JRNL 2910</td>
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<td>JRNL 3220</td>
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**TOTAL HOURS - 120**

### Curriculum in Mass Communication (RTVF)

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<td>RTVF 3350</td>
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**TOTAL HOURS - 120**

Students must apply for admission to the JRNL major. All applicants must have completed 45 hours of course work (including the university core or its equivalents), and earn a minimum 2.3 overall GPA. See the Department Chair or program coordinator for further information.
### Curriculum in Philosophy (PHIL)

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<tbody>
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<td>PHIL 1020</td>
<td>Introduction to Ethics</td>
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<td>3</td>
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<td>ENGL 3340</td>
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<tr>
<td>ENGL 2210</td>
<td>Core Science</td>
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<tr>
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<td>JR</td>
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2000-, 3000-, 4000-level courses: See adviser for approved course listing. Students either pass the computer competency test or take COMP 1000 as one of their electives.

### Curriculum in Philosophy-Religious Studies Option (RELG)

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2000-, 3000-, 4000-level courses: See adviser for approved course listing. Students either pass the computer competency test or take COMP 1000 as one of their electives.

### Curriculum in Public Administration (PUBA)

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<td>3</td>
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<tr>
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Groups 1, 2, 3: See adviser for approved course listing. Students either pass the computer competency test or take COMP 1000 as one of their electives.
### Curriculum in Public Relations (PRCM)

Students must apply for admission to the PRCM major. All applicants must have completed 45 hours of course work (including the university core or its equivalents), and earn a minimum 2.3 overall GPA. See the Department Chair or program coordinator for further information.

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*Internship may be taken part time for 3 credits or full time for 6 credits.

### Curriculum in Social Work (SOWO)

Graduates are trained to become beginning-level generalist practitioners eligible for licensure and to apply for advanced standing social work graduate programs. Admission to the program required before enrolling in SOWO 4060, SOWO 1000, SOWO 2000 and 3910 must be completed with a C or better prior to application.

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<td>Core Philosophy</td>
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<td>Core Fine Arts</td>
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Students either pass the computer competency test or take COMP 1000 as one of their electives.

### Curriculum in Sociology (SOCY)

For Groups, Major Elective, Major Required and Supporting Course Work: See adviser for approved course listing.

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* Internship may be taken part time for 3 credits or full time for 6 credits.

### Curriculum in Spanish (FLSP)

The baccalaureate degree in Spanish is offered as a shared degree program between Auburn University and Auburn University, Montgomery, effective Fall 2002. It includes language courses for the major only. Students must meet both AU and AUM criteria for admission, have a 2.50 GPA in the major and a 2.00 GPA overall for graduation. No courses below a C will count toward the major. Neither AU nor AUM will offer an

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Students either pass the computer competency test or take COMP 1000 as one of their electives.
## Curriculum in Spanish-International Trade (FLST)

The baccalaureate degree in Spanish-International Trade is offered as a shared degree program between Auburn University and Auburn University, Montgomery, effective Fall 2002. Currently, only the shared AU-AUM undergraduate language courses are required of this major and there are no shared non-language courses. Students must meet both AU and AUM criteria for admission, must earn a C and maintain a 2.5 GPA in all courses that count toward the major and have a 2.00 GPA overall for graduation. Neither AU nor AUM will offer an independent baccalaureate in Spanish and International Trade.

<table>
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<tr>
<th>Code</th>
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</table>

**TOTAL HOURS - 120**

FLSP Elective: See adviser for approved course listing.

Students either pass the computer competency test or take COMP 1000 as one of their electives.

## School of Fine Arts

In all Fine Arts curricula, electives may include six hours Basic ROTC or Advanced ROTC. In curricula which do not provide sufficient electives for this purpose, ROTC may be taken in lieu of required courses not in the University core to be selected with help of departmental adviser.

Course prefix symbols for Fine Arts Curricula: Art (ARTS), Music (MUSI, MUAP), Theatre (THEA)

### Department of Art

The Department of Art offers two fields of study - Graphic Design and Studio/Fine Arts. Graphic design prepares students to create publications such as magazines, posters, illustrations, and books, as well as websites and multi-media presentations. Fine Arts prepares students to become artists and for careers in visual arts institutions.

The Department of Art offers two professional degrees: the B.F.A. in Studio Art (ARTF) and B.F.A. in Graphic Design (ARTG). Admission into the B.F.A. in Graphic Design is selective and based on a two stage process. Contact the Department of Art for details. Fine Arts students choose one area of concentration: painting, sculpture, printmaking or ceramics. Graphic Design students follow a curriculum that provides variety and depth in all aspects of the field, supported by Fine Arts electives. Both degrees provide significant, intensive studio experience. The B.A. in Art (ATLA - listed under Majors in the Liberal Arts Curriculum) is for students who want a studio art education within the liberal arts tradition. Students elect studio courses in several areas, rather than a single concentration. Students in this program have greater flexibility in electives, enabling them to access a broad array of courses within the university.

All majors share a structured program in visual arts fundamentals, are supported by courses in art history, and promote an understanding of the roles and responsibilities of artists and designers in society.

The Department of Art is an accredited member of the National Association of Schools of Art and Design, and a member of the College Art Association.
## Curriculum in Studio Art (ARTF)

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| ARTS | 2110 | Figure Drawing | 3 | 3 |
| ARTS | 2140 | Advanced Drawing I | 3 | 3 |
| ARTS | 2310 | Painting I | 3 | 3 |
| ARTS | 2410 | Printmaking I | 3 | 3 |
| ARTS | 2510 | Sculpture | 3 | 3 |
| ARTS | 2810 | Ceramics I | 3 | 3 |
| Studio | 3 | 3 |

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| JR | Core History | 3 | 3 |
| Core Science | 4 | 4 |
| ARTS | 3000 | Art History | 3 | 3 |
| ARTS | 3100 | Intermedia | 3 | 3 |
| Fine Arts Level II & III | 3 | 3 |
| Studio | 6 | 6 |
| Elective | 3 | 3 |

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| Core Science | 4 | 4 |
| Core Math | 3 | 3 |
| ARTS | 3800 | Issues & Criticism in Contemp Art | 3 | 3 |
| ARTS | 4910 | Professional Art Practice | 2 | 2 |
| ARTS | 4980 | Senior Project | 4 | 4 |
| Fine Arts Level IV | 4 | 4 |
| Studio | 3 | 3 |

** | ** | ** | ** | ** |
| TOTAL HOURS - 126 | Fine Arts Level I, II, III, IV and Studio: See adviser for approved course listing. Students either pass the computer competency test or take COMP 1000 as an elective. | ** | ** | ** |

## Curriculum in Graphic Design (ARTG)

Admission into the B.F.A. in Graphic Design is selective and based on a two-stage process. Contact the Department of Art for details.

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| ARTS | 1730 | Art History III | 3 | 3 |
| ARTS | 2110 | Figure Drawing | 3 | 3 |
| ARTS | 2140 | Advanced Drawing I | 3 | 3 |
| ARTS | 2310 | Painting I | 3 | 3 |
| ARTS | 2410 | Printmaking I | 3 | 3 |
| ARTS | 2510 | Sculpture | 3 | 3 |
| ARTS | 2810 | Ceramics I | 3 | 3 |
| Studio | 3 | 3 |

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| Core Science | 4 | 4 |
| ARTS | 3000 | Art History | 3 | 3 |
| ARTS | 3100 | Intermedia | 3 | 3 |
| Fine Arts Level II & III | 3 | 3 |
| Studio | 6 | 6 |
| Elective | 3 | 3 |

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| Core Science | 4 | 4 |
| Core Math | 3 | 3 |
| ARTS | 3800 | Issues & Criticism in Contemp Art | 3 | 3 |
| ARTS | 4910 | Professional Art Practice | 2 | 2 |
| ARTS | 4980 | Senior Project | 4 | 4 |
| Fine Arts Level IV | 4 | 4 |
| Studio | 3 | 3 |

** | ** | ** | ** | ** |
| TOTAL HOURS - 126 | Fine Arts Level I, II, III, IV and Studio: See adviser for approved course listing. Students either pass the computer competency test or take COMP 1000 as an elective. | ** | ** | ** |

## Department of Music

The Department of Music provides students a variety of music experiences. Performance groups, such as the Marching Band, Symphonic Band, Concert Band, Campus Band, Orchestra, Concert Choir, Men’s Chorus, Women’s Chorus, University Singers, Gospel Choir and various smaller music ensembles, are available to all qualified university students. Many performance groups require a successful audition before admission. Information is available within the department.

The Department of Music works in cooperation with the College of Education in course offerings for music education degrees. Students pursuing music education degrees will register through the College of Education.

The Department of Music also offers a Music Minor in performance. Students must audition for the program. More information is available in the Music Department office.

All students taking private instruction (MUAP) will be audtioned before enrollment and must concurrently enroll in MUSI 1000 (Performance Attendance). Regulations concerning this class are available in the Music Department Office.

## Department of Theatre

The Department of Theatre provides instruction and production experience to students interested in developing their talents in the theatre arts, whether as majors or non-majors. Consequently, a broad range of classroom, laboratory, and performance experiences is provided in acting, directing, scenic and lighting design, costume design, theatre technology, construction and crafts, theatre history, dramatic literature, theatre criticism, theatre administration and management.

The Bachelor of Arts degree is designed for students seeking to study theatre within the liberal arts curriculum. The B.A. (THLA) is for students who choose to study theatre as a humanistic discipline or who wish to concentrate in theatre history/criticism, dramatic literature, performance or production.

The Bachelor of Fine Arts degree is for students who have specific professional goals in mind. The B.F.A. (THEA) is for students seeking professional training and/or desiring an intensive program in a specific area of theatre. Admission to the program, generally at the end of the sophomore year, is by audition or presentation of portfolio for the Theatre faculty. Students are expected to maintain a 2.7 GPA in their area of emphasis, subject to continued term review by the faculty. Final recommendation for graduation is made after the successful presentation of a recital or a major role or the successful execution of a design or major project during the student’s final year.
### Curriculum in Theatre Production:
**Design and Technology (THEA)**

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| THEA 3510 Lighting Design | 3 ** |
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| THEA 4980 BFA Senior Project | 3 ** |
| THEA 4990 Electives | 3 ** |

**TOTAL HOURS - 120**

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**TOTAL HOURS - 120**

### Curriculum in Theatre-Production Management Emphasis (THEA)

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**TOTAL HOURS - 120**

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Theatre Professional Elective: See adviser for approved course listing.
### Curriculum in Nursing-Traditional

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**TOTAL HOURS - 125**

### Curriculum in Nursing-Accelerated

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**TOTAL HOURS - 125**

### Curriculum-Educational Advancement for Registered Nurses (EARN)

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The SCHOOL OF NURSING, established in 1979, offers a program of study leading to the degree of Bachelor of Science in Nursing. The nursing curriculum prepares beginning professional nurse generalists who are capable of functioning as members of the health-care team in providing care for individuals and groups in diverse settings. The program also provides an educational base for advancement in formal study, research and practice. The facilities and resources of the University are used to provide a broad academic background in the humanities and sciences. Graduates are eligible to take the NCLEX-RN examination to become registered nurses.

A pre-professional program in Nursing Science is required of students seeking admission to the professional curriculum. The first two years of course work are designated Pre-Nursing (PNUR). The traditional Professional Program (NURS) requires four semesters and one summer of study, including classroom, laboratory and clinical experiences.
of credits. Students must possess the functional ability to perform the skills and behaviors required of a professional nurse. These abilities include but are not limited to:

a) Adequate vision, such as that required to observe changes in physical conditions, to read small print on labels and markings on syringes, and to discern subtle changes in color;
b) Adequate hearing, such as that required to distinguish muted sounds through a stethoscope;
c) Fine motor skills and manual dexterity, such as that required to handle small, delicate equipment;
d) Strength to turn and assist with lifting adults, and to lift and carry children;
e) The mobility to respond quickly in emergency situations;
f) The ability to communicate and interact effectively with others, orally and in writing;
g) The ability to detect odors; and
h) The ability to read independently and to comprehend the written word.

Professional Program: Admission to the professional program is open annually in fall semester. Pre-nursing students must formally apply in February to the School of Nursing. Applicants are notified by June 1 of acceptance or non-acceptance. Due to limited enrollment, all students who meet minimum criteria may not be admitted. Criteria for consideration for admission include a minimum GPA of 2.5, completion of the pre-nursing requirements, references and a completed application. Admission decisions are based on unadjusted GPAs.

Registered nurses: The School of Nursing offers an Educational Advancement for Registered Nurses (EARN) Program in which RN students may complete the requirements for the B.S.N. degree in one calendar year of full-time study. A flexible format with full-time and part-time options allows RN students to continue employment. Registered nurse students must complete the pre-nursing curriculum required of all nursing majors. The School of Nursing should be contacted for further advisement.

Accelerated Nursing Degree Program: The School of Nursing offers an Accelerated Nursing Degree (AND) Program which enables students who hold a bachelor’s or higher degree in another field to progress through the professional nursing curriculum in three semesters and one summer of full-time study. Students interested in the AND Program must complete specified pre-nursing courses prior to being considered for admission to the Professional curriculum. An undergraduate GPA of 2.5 is required for admission to the AND Program. Admission decisions are based on unadjusted GPAs. The School of Nursing should be contacted for further advisement.

Academic Regulations
Advanced placement or CLEP credit in pre-nursing courses is granted according to university policies stated elsewhere in the Bulletin. No advanced standing is allowed in the natural sciences by the School of Nursing. Proficiency examinations or Advanced Placement (CEEB), with accepted score, may be used for advanced placement.

An overall GPA of 2.0 must be maintained for progression through the professional program. Pre-nursing students who do not attain an overall GPA of at least 2.5 at the beginning of their sophomore year should consider alternative fields of study.

A minimum grade of C is required in pre-nursing courses. Transfer credit will not be granted for courses in which a grade less than C is earned.

In the professional program, a minimum grade of C must be achieved in all courses. Because the professional nursing curriculum is designed for progressive development of nursing knowledge and skills, students who earn a grade less than C in a professional program course are not allowed to progress to the next clinical course. The course in which the student earns a grade less than C may be repeated one time only. Students who earn a grade less than C in two or more professional program courses or whose GPA falls below a 2.0 will be dropped from the professional program. Transfer credit is not generally allowed for courses in the professional program.

The Professional Program
Facilities: The School of Nursing is housed in Miller Hall, where classrooms, an auditorium, a skills laboratory and faculty offices are located. A learning resource and computer center is jointly operated with the School of Pharmacy. Facilities for clinical nursing experiences include East Alabama Medical Center and other hospitals in the area, Lee County Mental Health Center, clinics, nursing homes, physicians’ offices, Lee County Public Health Department, public schools and industrial sites. Students are responsible for complying with policies and procedures required by agencies in which clinical work is done.

Expenses: Students accepted into the professional program should expect to incur additional expenses. Uniforms, equipment, transportation to clinical sites, exit exams, content exams, NCLEX reviews, a health examination and liability and health insurance coverage are among the requirements. Detailed information is furnished by the dean’s office at the time of admission.

Accreditation: The School of Nursing operates with full approval of the Alabama Board of Nursing and is fully accredited by the National League for Nursing Accrediting Commission, 350 Hudson St., New York, N.Y., 10014. Telephone (212) 363-5555.
Admission

Course requirements for admission to the Harrison School of Pharmacy may be satisfied by completion of the Pre-Professional Curriculum in the College of Sciences and Mathematics. Any or all of these requirements may be met by transfer of credit from other institutions.

Admission is limited and is contingent upon available facilities and faculty. To be considered for admission the applicant must have a satisfactory GPA and satisfactory scores on the Pharmacy College Admissions Test (PCAT). A grade of D in any required course will not be accepted. Students are accepted into the Harrison School of Pharmacy only during fall semester. All pre-pharmacy course work must be completed by the end of the summer term before the professional program begins during fall semester.

For priority consideration, applications should be submitted no later than January 15. To be considered for admission, applicants are required to come to campus for a personal interview. Prospective students may obtain application materials, which further outline admission policies and procedures, from the Office of Academic and Students Affairs, 209 Walker Building, Auburn University, AL 36849-5501 or online at www.pharmacy.auburn.edu.

Admission Requirements *

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* The requirements for admission to the Harrison School of Pharmacy are currently under revision. It is anticipated that students entering the School beginning Fall Semester 2005 will be required to complete approximately 83 semester hours of prescribed pre-requisite courses. Students who intend to apply for admission to the Harrison School of Pharmacy must, in addition to complying with the pertinent University standards and guidelines, the curriculum provides an appropriate balance of course work in the following areas: biomedical sciences (basic and clinical); pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; pharmacy practice; and pharmacy practice experience. The goal of the curriculum is to prepare students who can provide pharmaceutical care and are lifelong learners. To accomplish this, the curriculum involves students in continuous patient care responsibilities starting upon entry into the School. Students also participate as active, self-directed learners in interdisciplinary teaching models.

Academic Performance Standards

1. The implementation of all guidelines will be in addition to those existing policies and standards of the University.
2. To remain in good standing, students are required to achieve a School of Pharmacy GPA of at least 2.25. GPAs will be calculated only from professional course work, which is defined as core pharmacy courses approved by the faculty and listed in the Doctor of Pharmacy curriculum.
3. Harrison School of Pharmacy students with semester or cumulative GPAs below 2.25, or who receive Ds and Fs in required courses may be dismissed from the Harrison School of Pharmacy or required to undergo a remedial plan of study as directed by the Committee on Admissions and Academic Requirements. The remedial plan of study may require students to take courses in which they received grades of less than C. Policies concerning academic progression, probation, and dismissal are specified in the Harrison School of Pharmacy’s Academic Performance Standards. A copy of the Standards may be obtained from the Harrison School of Pharmacy’s Office of Academic and Student Affairs. 
4. Students must observe pre-requisites and co-requisites stated in the current Auburn University Bulletin. A pre-requisite statement denoting "__-year PYDI standing" indicates that the student must have passed all courses in the prior year of the curriculum.
5. Any student in the pharmacy curriculum who is subject to academic suspension and desires to re-enter the Harrison School of Pharmacy must, in addition to complying with the pertinent Uni-
versity regulations, be approved by the Harrison School of Pharmacy’s Committee on Admissions and Academic Requirements.

NOTES:

• Students are required to file an application with the Alabama State Board of Pharmacy for registration as an intern at the time they are enrolled in the Harrison School of Pharmacy. Information and intern registration forms may be obtained from the Alabama State Board of Pharmacy, One Perimeter Park South, Suite 425 South, Birmingham, AL 35243.
• Upon entering pharmacy school, and at the beginning of each academic year, students are required to furnish professional liability insurance, current CPR and First Aid certification, personal medical insurance and documentation that immunizations are up-to-date.
• Pharmacy students are required to attend the Professional Seminar Series.
• All Harrison School of Pharmacy elective courses are acceptable for professional electives credit. The Office of Academic and Student Affairs will provide information on any non-pharmacy elective courses which are acceptable. ROTC students should see their adviser concerning special elective credit.
• Students in the Doctor of Pharmacy program are required to own a laptop computer that meets the School’s specifications. Questions about computer specifications should be directed to the School’s Office of Information Technology. Computer literacy must be demonstrated upon entry to pharmacy school.
• Students having appropriate qualifications and pre-requisites may be able to take graduate course work while enrolled in the Doctor of Pharmacy program. However, such work cannot be applied toward both the Doctor of Pharmacy and graduate degrees.
• Students are required to adhere to all of the Harrison School of Pharmacy’s codes, policies, and professional requirements. The School will take disciplinary action against those students who violate such codes, policies, and professional requirements.
• Students will be required to periodically take examinations to assess their ability to integrate the knowledge, skills, and attitudes learned to date. Students may be required to complete remedial course work should their performance be unsatisfactory.
• Consistent with the policies of Auburn University, The Harrison School of Pharmacy reserves the right to make changes in its academic programs, codes, policies and professional requirements.
• Students will be notified of their site assignments for the Advanced Practice Experiences at the earliest feasible time, to enable them to make housing arrangements. Rotation sites are located throughout Alabama, western Georgia and the Florida panhandle. Although students may request specific sites, each site has a limited enrollment and students may be assigned to sites they do not request. Students are responsible for procuring housing, including the assessment of its safety and living conditions (e.g., privacy and single-sex housing). Students are also responsible for housing and other living expenses incurred when assigned to rotation sites away from the Auburn campus.
THE COLLEGE OF SCIENCES AND MATHEMATICS provides programs in the physical sciences, life sciences and mathematics at the undergraduate and graduate levels. The College also offers scientific and mathematical service courses for students enrolled in all of the other colleges and schools. The College includes the departments of Biological Sciences, Chemistry, Discrete and Statistical Sciences, Geology and Geography, Mathematics and Physics. The Arboretum and the Leach Science Center are also included in the College of Sciences and Mathematics.

Undergraduate Degrees

1. Four-year bachelor's degree programs are offered in two areas:
   a) Departmental curricula are available in biomedical sciences, botany, chemistry, biochemistry, geography, geology, laboratory and medical technology, microbiology, molecular biology, marine biology, mathematics, applied mathematics, physics and zoology.
   b) Pre-professional curricula are offered in pre-dentistry, pre-medicine, pre-optometry, pre-physical therapy, pre-pharmacy and pre-veterinary medicine.

Embodied in these curricula are the requirements of the University Core Curriculum.

2. Admission - The academic requirements and demands on majors in sciences and mathematics necessitate a high school preparation of high intellectual quality. The following courses are recommended as minimum preparation: English, four units; mathematics (including algebra, geometry, trigonometry and pre-calculus), four units; chemistry, one unit; biology, one unit; history, literature, social science, two or three units. Both physics and foreign language are highly recommended.

Many COSAM curricula require students to begin with MATH 1610. Students not prepared for MATH 1610 must first take a lower-numbered course. See adviser for details.

Transfers from on-campus may declare a major in the College of Sciences and Mathematics if they: (1) have a cumulative Auburn GPA of at least 2.0 (on all work attempted) and (2) have completed at least 10 hours of Auburn University course work in the desired major with at least a 2.0 GPA in all such courses. Courses in the major are those carrying the appropriate prefix(es) of the intended curriculum. Students not meeting these standards may enroll in the Undeclared Sciences and Mathematics (UNSM) curriculum if they have not reached senior standing. Students in the UNSM curriculum may declare a Sciences and Mathematics major after satisfying the above requirements. A student who enters the UNSM curriculum because he or she is not qualified to declare a major cannot remain in UNSM for a maximum of one year or until senior standing is reached. After this, if the student is still not qualified to declare a major, he or she will be disenrolled from the College of Sciences and Mathematics.

Graduate Degrees

Master of Science and Doctor of Philosophy degrees are offered in the College of Sciences and Mathematics. Degree programs are described in this Bulletin.

Web Page

Further information about the College of Sciences and Mathematics can be found at: http://www.auburn.edu/cosam/

Minors

MATHEMATICS MINOR

18 semester hours in Minor

Courses required: Cr. Hr.
MATH 2650 Differential Equations ........................................ 3
MATH 2660 Linear Algebra .................................................. 3

Four additional courses labeled MATH at the 6000 level ....... 3 (each)

MATH 2650 and/or MATH 2660 may be replaced by any course at the 6000 level which is labeled MATH upon departmental approval. In addition, MATH 3100 may replace any one of the above courses.

PHYSICS MINOR

15 semester hours in Minor

Courses required: Cr. Hr.
PHYS 2000 Introductory Quantum Physics and Relativity ...... 3
PHYS 2100 Intermediate Mechanics ........................................ 3
PHYS 3100 Intermediate Electricity & Magnetism ................. 3
PHYS 3200 Statistical Thermodynamics ............................... 3
PHYS 4100 Fundamentals of Quantum Mechanics ................ 3

General Sciences and Mathematics Curriculum (UNSM)

This curriculum is primarily for freshmen who have not decided on a specific major field of study and for transfer students having deficiencies which preclude their acceptance in a degree program. Freshmen entering this curriculum must declare a major by the end of their first year. Transfer students must complete a specific approved program to clear their admission to a major field of study.

The General Curriculum (UNSM)

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TOTAL HOURS - 32

Departmental Curricula

Departmental curricula leading to the Bachelor of Science degree include botany, chemistry, biochemistry, biomedical sciences, geology, microbiology, molecular biology, marine biology, laboratory and medical technology, mathematics, applied mathematics, physics and zoology.

Botany

The botany major is for students interested in various careers in the plant sciences. Students may pursue either the Ecology and Evolution Track or the Cellular and Molecular Track

Curriculum in Botany/
Ecology and Evolution Track (BTNY, ECEV)

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TOTAL HOURS - 32

Minors

MATHEMATICS MINOR

18 semester hours in Minor

Courses required: Cr. Hr.
MATH 2650 Differential Equations ........................................ 3
MATH 2660 Linear Algebra .................................................. 3

Four additional courses labeled MATH at the 6000 level ....... 3 (each)

MATH 2650 and/or MATH 2660 may be replaced by any course at the 6000 level which is labeled MATH upon departmental approval. In addition, MATH 3100 may replace any one of the above courses.

WEB PAGE

Further information about the College of Sciences and Mathematics can be found at: http://www.auburn.edu/cosam/

Minors

MATHEMATICS MINOR

18 semester hours in Minor

Courses required: Cr. Hr.
MATH 2650 Differential Equations ........................................ 3
MATH 2660 Linear Algebra .................................................. 3

Four additional courses labeled MATH at the 6000 level ....... 3 (each)

MATH 2650 and/or MATH 2660 may be replaced by any course at the 6000 level which is labeled MATH upon departmental approval. In addition, MATH 3100 may replace any one of the above courses.
### Curriculum in Chemistry (CHEM)

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<td>BIOL 4950</td>
<td>Undergraduate Seminar</td>
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<td>BIOL 6120</td>
<td>Systematic Botany</td>
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<td>BIOL 6130</td>
<td>Plant Physiology</td>
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<td>BIOL 6140</td>
<td>Plant Ecology</td>
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<td>BIOL 6141</td>
<td>Biology Elective</td>
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**TOTAL HOURS — 120**

Biology Electives: see adviser for approved course listing. Students must either pass the computer competency test or take COMP 1000 as one of their electives.

### Chemistry

These curricula, accredited by the American Chemical Society, prepare students for careers in pure and applied chemistry with a dual emphasis on classroom and laboratory experience. A flexible senior year allows students to tailor the program to individual professional goals. Graduates are prepared to enter the profession immediately or continue for advanced degree programs. The senior research program introduces students to modern advanced techniques and approaches to chemical research in an area of their interest by having them complete an individual research project in conjunction with a faculty adviser.

### Curriculum in Botany/Cellular and Molecular Track (BTNY, CMLB)

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**TOTAL HOURS — 120**

Biology Electives: see adviser for approved course listing. Students must either pass the computer competency test or take COMP 1000 as one of their electives.

### B.A. Curriculum in Chemistry

This curriculum provides a strong background in chemistry while allowing students to specialize in areas of interest. It is especially well suited for students leaning towards medical sciences while allowing more flexibility than that allowed in the American Chemical Society accredited biochemistry curriculum. The program allows for great versatility in the junior and senior years allowing the curriculum to be tailored to individual goals. The curriculum prepares students for professional careers in chemistry or biochemistry and advanced degree programs in chemistry, biochemistry and medically related fields.
Geography

This curriculum in geography promotes geographic literacy as an indispensable element in any educational program. It focuses on spatial relationships and the view of the Earth as the home of humankind. Geography readies students for careers in public services, consulting companies, state or federal agencies, utilities and other professions, as well as for graduate studies in geography.

Curriculum in Geography (GEOG)

| FR | ENGL 1100 1120 English Composition I & II | 3 |
|    | MATH 1610 Calculus I & II | 4 |
|    | CHEM 1100 1120 General Chemistry I & II | 3 |
|    | BIOL 1100 1120 General Biology I & II | 4 |
|    | GEOL 1200 General Geology I | 3 |
|    | CHEM 1200 Chemical Application I | 1 |
|    | CHEM 1200 Chemical Application II | 1 |
|    | ENGL 2200 Great Books I | 3 |
|    | BIOL 3000 Cell Biology | 3 |
|    | BIOL 4000 General Microbiology | 3 |
|    | MATH 2200 Calculus III | 3 |
|    | BIOL 4000 General Microbiology | 3 |
|    | CHEM 1100 1120 General Chemistry I & II | 3 |
|    | GEOL 1100 1120 Physical Geology | 4 |
|    | GEOL 1100 1120 Historical Geology | 4 |
|    | MATH 2600 Linear Differential Equation | 3 |
|    | SO PHYS 1600 1610 Eng. Physics I & II | 4 |
|    | CHEM 1030 1040 Fundamentals of Chemistry I & II | 3 |
|    | BIOL 1100 1120 General Biology I & II | 3 |
|    | BIOL 3000 Cell Biology | 3 |
|    | BIOL 4000 General Microbiology | 3 |
|    | CHEM 1030 1040 Fundamentals of Chemistry I & II | 3 |
|    | GEOL 1100 1120 Physical Geology | 4 |
|    | GEOL 1100 1120 Historical Geology | 4 |
|    | MATH 2200 Calculus III | 3 |
|    | BIOL 3000 Cell Biology | 3 |
|    | BIOL 4000 General Microbiology | 3 |
|    | CHEM 1100 1120 General Chemistry I & II | 3 |
|    | GEOL 1100 1120 Physical Geology | 4 |
|    | GEOL 1100 1120 Historical Geology | 4 |

TOTAL HOURS — 122

Geology

This curriculum provides a background in the geosciences and opportunity to specialize in an area of interest (i.e., environmental geology, paleontology) through elective major or related courses. It is designed for those interested in preparation for graduate studies or employment in the field of geology.

Curriculum in Geology (GEOG)

| FR | CHEM 1030 1040 Fundamentals of Chemistry I & II | 3 |
|    | BIOL 1020 Principles of Biology | 4 |
|    | MATH 1610 Calculus I & II | 4 |
|    | ENGL 1100 1120 General English | 3 |
|    | BIOL 1100 1120 General Biology I & II | 3 |
|    | CHEM 1030 1040 Fundamentals of Chemistry I & II | 3 |
|    | GEOL 1100 1120 Physical Geology | 4 |
|    | GEOL 1100 1120 Historical Geology | 4 |
|    | MATH 2200 Calculus III | 3 |
|    | BIOL 3000 Cell Biology | 3 |
|    | BIOL 4000 General Microbiology | 3 |
|    | CHEM 1030 1040 Fundamentals of Chemistry I & II | 3 |
|    | GEOL 1100 1120 Physical Geology | 4 |
|    | GEOL 1100 1120 Historical Geology | 4 |
|    | MATH 2600 Linear Differential Equation | 3 |
|    | SO PHYS 1600 1610 Eng. Physics I & II | 4 |
|    | CHEM 1030 1040 Fundamentals of Chemistry I & II | 3 |
|    | BIOL 1100 1120 General Biology I & II | 3 |
|    | BIOL 3000 Cell Biology | 3 |
|    | BIOL 4000 General Microbiology | 3 |
|    | CHEM 1030 1040 Fundamentals of Chemistry I & II | 3 |
|    | GEOL 1100 1120 Physical Geology | 4 |
|    | GEOL 1100 1120 Historical Geology | 4 |
|    | MATH 2200 Calculus III | 3 |
|    | BIOL 3000 Cell Biology | 3 |
|    | BIOL 4000 General Microbiology | 3 |
|    | CHEM 1100 1120 General Chemistry I & II | 3 |
|    | GEOL 1100 1120 Physical Geology | 4 |
|    | GEOL 1100 1120 Historical Geology | 4 |

TOTAL HOURS — 126

Students either pass the computer competency test or take COMP 1000 as one of their electives.

Laboratory Technology and Medical Technology

These curricula, leading to the degree of Bachelor of Science in Laboratory Technology or Bachelor of Science in Medical Technology, prepare students for medical laboratory careers in fields such as public health, bacteriology, environmental testing, industrial quality control, research and forensic science. Graduates may choose to qualify as certified medical technologists. This is accomplished by successfully completing a 12-month training period (rotating hospital internship) in an accredited School of Medical Technology and passing a national certifying examination.
Curriculum in Laboratory Technology (LABT)

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<td>General Chemistry Lab I &amp; II</td>
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<tr>
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TOTAL HOURS — 120

Curriculum in Medical Technology (MEDT)

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TOTAL HOURS — 120

Curriculum in Mathematics (MATH)

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TOTAL HOURS — 120

Applied Mathematics

The Department of Mathematics offers three options in the field of Applied Mathematics. The option in Applied Mathematics is suitable for students who are preparing for graduate work in mathematics as well as for those anticipating careers supported by significant applied mathematics such as the traditional fields of engineering, physical science or computer science and the more recent allied fields of biological, behavioral or managerial sciences. The option in Discrete Mathematics prepares students for graduate work in mathematics or theoretical computer science, and for careers in industry supported by modern applied mathematics dealing with problems in graph theory, operations research, discrete optimization, computer science, communications and information sciences. The option in Actuarial Science prepares students for a career in the insurance industry and other businesses relying on the expertise of actuaries, but is at the same time flexible enough to allow its graduates to enter graduate programs in Mathematics and related areas.

Students should consult the College of Science and Mathematics to determine appropriate technical electives for the emphasis of their choice. Students who desire more flexibility or emphasis on the liberal arts should pursue the MATH curriculum.

Option in Applied Mathematics (AMTH)

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TOTAL HOURS — 120

Math Requirement: see adviser for approved course listing.

Applied Math Requirement: see adviser for approved course listing.

Core/Nature Science: see adviser for approved course listing.
### Options in Applied Discrete Mathematics (ADSM)

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**TOTAL HOURS - 120**

### Curriculum in Microbiology (MICB)

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**TOTAL HOURS - 120**

### Option in Actuarial Science (ACTU)

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**TOTAL HOURS - 122**

Students either pass the computer competency test or take COMP 1000 as one of their electives.
### Curriculum in Molecular Biology (MOLB)

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** TOTAL HOURS - 120 **

### Zoology

This curriculum prepares students for graduate study and a variety of careers in animal biology. The student has the choice of several options depending on the student’s particular interest.

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** TOTAL HOURS - 123 **

### Physics

Physics majors acquire a firm foundation for careers in physics and related fields and excellent preparation for further study. Through the judicious use of electives, this curriculum provides not only a thorough understanding of physics, but also the ability to solve problems in other fields of interest to the student.

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### Zoology/Conservation & Biodiversity Track (ZOOL, CONS)

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**TOTAL HOURS - 122**

Students either pass the computer competency test or take COMP 1000 as one of their electives.

### Zoology/Ecology, Evolution & Behavior Track (ZOOL, ECEV)

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**TOTAL HOURS - 122**

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### Curriculum in Marine Biology (MARB)

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**TOTAL HOURS - 122**

Anat/Cell/Phy Elective: see adviser for approved course listing.

Diversity Elective: see adviser for approved course listing.

### Curriculum in Biomedical Sciences

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**TOTAL HOURS - 122**

Biology Elective: see adviser for approved course listing.

Students either pass the computer competency test or take COMP 1000 as one of their electives.
Professional Curricula

Pre-Health professional curricula are offered in pre-dentistry, pre-medicine, pre-optometry, pre-physical therapy, pre-pharmacy and pre-veterinary medicine. Advisers are available in each curriculum to guide the students concerning admissions requirements to the professional schools. The department in which students major will advise them where applicable. Completion of these curricula does not assure admission to a professional school. Competition for admission to professional schools is keen; the number of qualified applicants exceeds the number of places available.

Pre-Dentistry and Pre-Medicine

These programs are designed to prepare students for medical and dental schools and lead to a Bachelor of Science degree in one of several majors offered through the College. The requirements are very exacting and demand high scholastic competence and performance.

Students in pre-dentistry or pre-medicine should take the national Dental Aptitude Test or the Medical College Admission Test at least a year in advance of the date of entry to professional school, and follow with applications to the professional schools of their choice. Early in the junior year, the student should seek information from the chairman of the Pre-Health Advisory Committee concerning procedures to follow to obtain the necessary committee evaluation and recommendation to professional school. Forms and instructions are available in the office of the Dean of Sciences and Mathematics. Most American medical schools recommend that medical and dental school applicants have (1) an academic year each of freshman biology, general chemistry, organic chemistry, and physics; (2) breadth in the educational experience; and (3) in-depth experience in a single discipline. Auburn University students accomplish the above by enrolling in a core of courses as outlined in the following curriculum model. Each student then elects a major from the College of Sciences and Mathematics. The College offers majors in biomedical sciences, chemistry, microbiology, physics and zoology. Students must select a major in the College of Sciences and Mathematics or another college. The College offers majors in biomedical sciences, chemistry, microbiology, physics and zoology. Students should confer with the College for specific course requirements. Students may also choose to major in a curriculum in another college or school, but they must work with the director for Pre-Health Professions in COSAM for information on the application process.

Pre-Optometry

This program leads to a Bachelor of Science degree and prepares students for the rigorous demands of American optometry schools.

Students must select a major in the College of Sciences and Mathematics or another college. The College offers majors in biomedical sciences, chemistry, microbiology, physics and zoology. Students should confer with the College for specific course requirements. Students may also choose to major in a curriculum in another college or school, but they must work with the director for Pre-Health Professions in COSAM for information on the application process.

Curriculum in Pre-Optometry (POPT)

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At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.

Student must either pass the computer competency test or take COMP 1000 as one of their electives.

Curriculum in Pre-Dentistry and Pre-Medicine

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At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.

Student must either pass the computer competency test or take COMP 1000 as one of their electives.
Pre-Physical Therapy

This program prepares students applying to schools of physical therapy at the master’s level and leads to a bachelor’s degree in one of the majors offered in the College of Sciences and Mathematics or another college. The College offers majors in biomedical sciences, chemistry, microbiology, physics and zoology. Students should confer with the College for specific course requirements. Students may also choose to major in a curriculum in another college or school, but they must work with the director for Pre-Health Professions in COSAM for information on the application process. Students should write for an official bulletin from each of the professional schools of their choice during their freshman year and discuss with the director any special requirements of those schools.

Curriculum in Pre-Physical Therapy (PPHS)

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Pre-Veterinary Medicine

Students in the Pre-Veterinary Medicine (PVET) curriculum must select a major by the end of their sophomore year. Students in Sciences and Mathematics may select microbiology (MICB, PVET) or zoology (ZOOL, PVET) as majors. Pre-Veterinary options in the College of Agriculture include animal and dairy science (ANDS, PVET) and poultry science (POUL, PVET). A pre-vet option in wildlife (WILD, PVET) sciences also exists in the School of Forestry and Wildlife Sciences. The minimum requirements for admission to the College of Veterinary Medicine at Auburn University are incorporated into the curriculum models for all these majors.

It is possible to gain admission to the College of Veterinary Medicine by completing only the minimum requirements listed. However, it is preferable to select and major and earn a baccalaureate degree. If a student is admitted to the College of Veterinary Medicine prior to completion of the full four years, he or she may obtain a B.S. degree by successfully completing the first three years of some of the Pre-Veterinary curricula and the first year of veterinary school. Students should consult their advisors regarding which curricula offer this option.

Application for admission to the College of Veterinary Medicine must be submitted to the Dean of that College. A minimum GPA of 2.5 is required for application; D grades in required courses are unacceptable. All minimum requirements, including courses repeated due to time limitations, must be completed by the end of the spring term preceding the date of admission, and all advanced required courses in physical and biological sciences (organic chemistry and physics) must be completed within six calendar years prior to the anticipated entrance date. Competition for admission to the professional schools is keen with the number of qualified applicants exceeding the number of places available. For additional information, see College of Veterinary Medicine section and the Pre-Veterinary Medicine curricula in the College of Agriculture.

Curriculum in Pre-Veterinary Medicine (PVET)

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At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.

Pre-Pharmacy

This program meets the requirements for admission to the Auburn University School of Pharmacy, which is fully accredited by the American Council on Pharmaceutical Education. Complete information about the professional curriculum in pharmacy may be found in the School of Pharmacy section.

To be considered for admission, the applicant must complete the basic two-year requirements below and must have a 2.5 (C GPA) based on all courses attempted as well as a 2.5 (C science index) (GPA on the biological and physical science courses and mathematics). A grade of D in any required course will not be accepted.

Curriculum in Pre-Pharmacy (PPHR) *

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At the end of the sophomore year, or in the fall of the junior year, the student must declare a major.

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* The requirements for admission to the Harrison School of Pharmacy are currently under revision. It is anticipated that students entering the School beginning Fall Semester 2005 will be required to complete approximately 83 semester hours of prescribed pre-requisite courses. Students who intend to apply for admission to the Harrison School of Pharmacy class entering Fall Semester 2005, or for subsequent entering classes, are advised to contact the School’s Office of Academic and Students Affairs (334-844-8348 for information necessary prepharmacy course work.

Student must either pass the computer competency test or take COMP 1000 as one of their electives.
### Curriculum in Pre-Veterinary Medicine Option (MICB, PVET)

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Students who complete the above 6 semesters and successfully complete the first year of veterinary school may be awarded a B.S. in Microbiology. In the event the first year Veterinary College alternative is not followed, the indicated senior year courses must be successfully completed to receive the B.S. in Microbiology.

### Curriculum in Pre-Veterinary Medicine Option (ZOOL, PVET)

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Students who complete the above 6 semesters and successfully complete the first year of veterinary school may be awarded a B.S. in Zoology. In the event the first year Veterinary College alternative is not followed, the indicated senior year courses must be successfully completed to receive the B.S. in Zoology.

### Biology Electives - see adviser for approved course listing.

Students must either pass the computer competency test or take COMP 1000 as one of their electives.
THE COLLEGE OF VETERINARY MEDICINE offers a fully accredited program of training leading to the degree of Doctor of Veterinary Medicine. The degree requires four years in the professional curriculum after completion of a pre-professional curriculum which may take four years or more for the average applicant.

Admission

Each year, approximately 90 students are admitted to the four-year program for the doctorate in veterinary medicine. The largest percentage of students admitted are residents of Alabama, although some spaces are available for non-Alabama students. Most of these are from Kentucky by contract through the Southern Regional Education Board (SREB), but 10 non-Alabama students not under a contract program with Auburn University may be accepted. Alabama and SREB students must have a minimum GPA of 2.5 on a 4.0 system on all course work attempted. A grade of D on any required course will not be accepted. At-large (non-Alabama and non-SREB) students must have a minimum GPA of 3.0 on a 4.0 scale. At-large applicants must be citizens of the United States and will be required to pay non-resident university fees. As part of the admissions process, the Committee on Admissions and Standards of the College of Veterinary Medicine may require a personal interview, a reading comprehension test or an examination on any required course. The College of Agriculture, the College of Sciences and Mathematics and the School of Forestry and Wildlife Sciences offer Pre-Veterinary curricula and are responsible for pre-veterinary counseling. In addition to academic requirements, candidates are expected to have animal experience and to have worked with a veterinarian.

All non-resident/non-contract applicants must apply through the Veterinary Medical College Application Service (VMCAS). Additional information, including an electronic application, is available from the American Association of Veterinary Medical Colleges at http://www.aavmc.org/. Alabama and Kentucky residents have the option of using an Auburn-specific application. Kentucky students should contact their Kentucky pre-vet adviser or the Kentucky Council on Postsecondary Education to obtain an application and to verify their residency status. Alabama students may contact the College of Veterinary Medicine, Office of Academic Affairs.

Minimum Requirements for Pre-Veterinary Medicine

1. A bachelor’s degree or completion of the Core Curriculum as stated in the General Information section in this Bulletin.
2. Specific Course Requirements: Minimum pre-veterinary requirements for Alabama residents are those listed for the pre-veterinary curriculum in either the College of Agriculture, College of Sciences and Mathematics or the School of Forestry and Wildlife Sciences. Non-Alabama and SREB applicants must have acceptable equivalents which have been approved by the College of Veterinary Medicine. Individuals taking the pre-veterinary curriculum are expected to declare an academic major no later than their second year of enrollment.
3. All transfer courses must be equivalent in hours and content. Courses will not be waived on the basis of degrees or “practical experience.” Pass-Fail or Satisfactory- Unsatisfactory grades are not acceptable in required courses. Consideration will not be extended to anyone with an overall or required course GPA of less than 2.5 or who is not a bona fide resident of Alabama or Kentucky at the time of application (Non-resident/non-contract students must have a GPA of 3.0 or better).
4. Time Limitation: All required courses in the advanced physical and biological science categories must have been completed within six calendar years prior to the anticipated date of enrollment in the College of Veterinary Medicine.
5. Standardized examination: Applicants must complete the Graduate Record Examination (verbal and quantitative) within six calendar years prior to the anticipated date of enrollment. Results of the GRE must be officially reported to the Office of Academic Affairs, College of Veterinary Medicine by January 1.

Application Procedure

Admission to the College of Veterinary Medicine must be gained through formal application made by October 1 preceding the fall semester in which admission is desired. All applicants must be citizens of the United States.

Application packets are available from the College of Veterinary Medicine, Kentucky pre-vet advisers, or the Association of American Veterinary Medical Colleges. A supplemental application and a processing fee of $35.00 are required of all applicants. An additional $25.00 is required of all who have not previously attended Auburn University.

The final selection of students is made by the Committee on Admissions and Standards of the College of Veterinary Medicine, Auburn University. The right is reserved to accept or reject any applicant.

Under the Regional Plan for Veterinary Training, the College of Veterinary Medicine currently serves two states: Alabama and Kentucky. The Land-Grant institution in each state participating under the SREB plan maintains counseling and guidance service for students desiring admission to the College of Veterinary Medicine. Students attending other institutions should contact the Land-Grant School adviser in their state for information concerning admission requirements.

Scholastic Requirements

All applicants and students in the professional program are subject to the academic and disciplinary regulations of the College of Veterinary Medicine in addition to those of Auburn University.

Any student who earns less than a 2.25 GPA for any term will be placed on academic probation. A student who fails to earn a 2.25 GPA in each of the succeeding two terms of enrollment may be dropped from the rolls of the College of Veterinary Medicine for scholastic deficiency. In addition, a student who does not have a veterinary college cumulative average of 2.25 at the end of any academic year may be required to withdraw from the College of Veterinary Medicine.

A student who makes a grade of F on any course may be required to withdraw from the College of Veterinary Medicine until such time as the course is offered again. Such a student may be required to repeat certain other courses in the curriculum for that term.

Clinical courses are unique in that the art and skills developed in them can be acquired only through full participation in the laboratory. Attendance in these courses is required except in case of illness or other extenuating circumstances as may be judged by the involved instructor. Grading in these clinical laboratory courses is primarily by subjective evaluation. When a course involves student rotation through several disciplines or sections, the student must receive a passing grade in each area before a passing grade can be given for the course.

The responsibility for counseling is shared by the faculty of this College and the Department of Clinical Psychology.

Non-Scholastic Requirements

Applications may receive provisional acceptance after they submit the application form and current academic documents. However, they must complete and return a medical examination report form provided by the University at least three weeks before the term opens.
Health Insurance: Students enrolled in the professional curriculum are required to provide evidence of health insurance coverage. Information about student insurance is available in the College of Veterinary Medicine, Office of Academic Affairs.

Required Withdrawal

The faculty of the College of Veterinary Medicine reserves the right to require the withdrawal at any time of any student who in the judgment of the admissions and standards committee is not profiting from the instruction offered, who is neglectful, irregular, dishonest or indifferent in the performance of required duties and studies or whose character or conduct is inconsistent with good order of the veterinary college or with the standard of the veterinary profession.

Requirements for Graduation

To be eligible for the D.V.M. degree, candidates must complete all of the required courses in the order listed in the curriculum in veterinary medicine along with at least four hours of elective credit, with a minimum overall GPA of 2.25. In addition, each senior must participate in a clinicopathologic conference (CPC) to fulfill their oral communication requirement. Following completion of all academic work, each student is required to serve a preceptorship of eight weeks with an approved veterinarian. A certificate of satisfactory completion of a preceptorship is required for graduation.

A graduation fee must be paid at the beginning of the term of graduation and all indebtedness due the institution must be paid prior to graduation.

Curriculum in Veterinary Medicine

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<td>VMED 5240</td>
<td>Principles of Vet Immunology</td>
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<td>Principles of Vet Infectious Disease...</td>
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<td>VMED 5260</td>
<td>Veterinary Pharmacology</td>
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<tr>
<td>VMED 5310</td>
<td>Introduction to Surgery</td>
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<td>VMED 5510</td>
<td>Hemolymphatic/Integument Sys</td>
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<tr>
<td>VMED 5520</td>
<td>Cardiovascular System</td>
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<td>Respiratory Sys</td>
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<td>VMED 5540</td>
<td>Alimentary System</td>
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<tr>
<td>VMED 5910</td>
<td>Intro to Anesthesia</td>
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Electives: 1—3

P3

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<td>VMED 5311</td>
<td>Surgery Practicum</td>
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<td>VMED 5320</td>
<td>Clinical Vet Nutrition</td>
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<td>Multispecies Medicine</td>
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<td>Critical Care, Emerg Med &amp; Onc</td>
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<td>Veterinary Toxicology</td>
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<td>VMED 5360</td>
<td>Production Medicine</td>
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<td>VMED 5590</td>
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<td>VMED 5601</td>
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Electives: 1—3

P4

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<td>VMED 5611</td>
<td>Clinical Rotations Electives</td>
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<td>VMED 5801</td>
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<td>VMED 5950</td>
<td>Clinicopathologic Cont.</td>
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TOTAL HOURS - 157

Rotations will be set up in blocks of two 2-week rotations. There are 24 2-week rotations that each student must complete. 19 are required rotations and 5 are elective rotations that he/she must select from an approved list.

Graduate Programs

The Master of Science and Doctor of Philosophy degrees in Biomedical Sciences are offered in a college-wide program in the College of Veterinary Medicine.
Points of Contact
The Graduate School is open 7:45-11:45 A.M. and 12:45-4:45 P.M., Monday through Friday.
Telephone: (334) 844-4700. Fax: (334) 844-4348.
E-mail: gradadm@auburn.edu Web: www.grad.auburn.edu
Mailing Address: 106 Hargis Hall, Auburn University, AL 36849-5122.
Graduate assistantships: Call the head or chair of the department in which the student wishes to enroll.

Graduate Assistantships
Graduate assistant appointments are temporary. Continuation depends upon availability of funds, level of enrollment, and research needs. Salaries are paid in accordance with the budget policies and payroll procedures of the University. The Board of Trustees is obligated to pay certain fixed charges against the institution and thereafter pay salaries in full insofar as funds are available. If for any reason beyond the control of the Board of Trustees funds are not available, salaries will be prorated.

Each graduate assistant must be in a degree-seeking program and registered in the classification of MST, EDS, PHD, EDD, or GPR. The student also must be registered for at least one course (during each academic term of the assistantship), must satisfy the minimum course load specifications of the individual departments and must be making satisfactory progress toward the degree.

Work loads for graduate assistants are defined on the basis of a normal teaching load or the equivalent time in other duties as determined by each department head and the dean of the school or college in which the assistant is employed. For example, a one-third work load is one-third of a normal teaching load. Graduate students may hold multiple assistantships and the assistantships may come from different units on campus, but together they cannot add up to more than a 100 percent appointment. Maximum course loads for graduate assistants are determined by individual departments. It is recommended that graduate students working more than half-time not carry a full academic load.

Graduate students enrolled in academic degree programs are guided by plans of study approved by their major professors/advisers. Each plan of study includes but is not limited to didactic course work which addresses the requirements established by the Graduate Faculty for each graduate degree program. For thesis and dissertation students, the plan of study also includes research/thesis and research/dissertation hours which reflect the academic research requirements for the degree program and the involvement of the faculty in working with the students in mastering those requirements. Accordingly, requirements that graduate students register for hours not included in the plan of study as a condition of employment or to enhance credit hour production for administrative purposes are inappropriate. Similarly, requiring hours on the plan of study beyond the degree requirements established by the Graduate Faculty for such administrative purposes is also inappropriate unless the additional requirements are required by University policy.

International graduate students on F1 visas cannot hold a greater than 50 percent work appointment. International graduate students on F2 visas cannot hold a work appointment. Multiple assistantships for international graduate students cannot add up to more than a 50 percent work appointment.

International graduate teaching assistants who are assigned to scheduled lecture or laboratory sections must first be certified in spoken English proficiency. Certification may be attained through a minimum score of 50 on the Test of Spoken English (TSE) offered by the Educational Testing Service or approval by the director of the English as a Second Language Program (ESL). Applicants who hold a baccalaureate degree from an accredited institution whose instruction is in English may be exempted from this requirement.

Non-Alabama resident graduate assistants may receive an out-of-state tuition waiver if they are on at least a 25 percent graduate assistantship and are paid a minimum monthly stipend each year by the Provost. Such graduate assistants who have been on assistantship for at least two consecutive semesters will automatically have their out-of-state tuition waived for the next semester whether or not they are on assistantship that semester.

Graduate Fellowships
Auburn University provides in-state tuition fellowships to most of its students holding graduate assistantships. Though administered through the Graduate School, applicants should contact the specific academic departments concerning eligibility and availability.

Oak Ridge Associate Universities
Auburn University has been a sponsoring institution of the Oak Ridge Associated Universities (ORAU) since 1946. ORAU is a private, not-for-profit consortium of 82 colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) with principal offices located in Oak Ridge, Tennessee. Founded in 1946, ORAU provides and develops capabilities critical to the nation’s technology infrastructure, particularly in energy, education, health and the environment. ORAU works with its member institutions to help faculty and students gain access to federal research facilities; to keep members informed about opportunities for fellowship, scholarship and research appointments; and to organize research alliances among our members in areas where their collective strengths can be focused on issues of national importance.

ORAU manages the Oak Ridge Institute for Science and Education (ORISE) for DOE. ORISE is responsible for national and international programs in science and engineering education, training and management systems, energy and environment systems and medical sciences. ORISE’s competitive programs bring students at all levels, K-12 through postgraduate, and university faculty members into federal and private laboratories. Other ORAU activities include the sponsorship of conferences and workshops, the Visiting Scholars program and the Junior Faculty Enhancement Awards. Contact Dr. Bryan A. Chin, (334) 844-4784, for more information about ORAU programs.

General Regulations
Regulations governing the Graduate School equal or exceed the standards of the Conference of Southern Graduate Schools and the Commission on Colleges and Universities of the Southern Association of Colleges and Schools. Regulations listed here represent the minimums of the Graduate School. However, individual departments may impose more stringent requirements and students will be governed by them.

Application for Admission
To apply for graduate study, one must submit to the Office of Graduate Admissions:

1. A formal application. Applications for admission may be made online at www.grad.auburn.edu or forms may be obtained from the Graduate School offices at 106 Hargis Hall, Auburn University, Auburn, AL 36849-5122. Domestic applications must be accompanied by a fee of $25; international applications must be accompanied by a fee of $50. These fees may be paid online via credit cards or by checks or money orders (made payable to Auburn University).

2. Two official transcripts of all undergraduate- and graduate-level study from each school previously attended. An applicant who, because of current enrollment, cannot provide final transcripts at the time of application, must submit transcripts of all completed study, as well as incomplete transcripts from the current institution. Applicants do not need to provide transcripts for credits earned at Auburn University.

3. Standardized Graduate Record Examinations (GRE) general test scores. Management, Finance, Marketing, Business Administration, and Accounting applicants must submit scores on the Graduate Management Admission Test (GMAT). Management will accept the GRE or GMAT. The Master of Business Administration program will allow the substitution of the GRE for the GMAT under some circumstances. International applicants must also submit Test of English as a Foreign Language (TOEFL) scores. In addition to the GRE General Test, the following departments require the GRE Subject Test for admission to their doctoral programs: Discrete and Statistical Sciences, English, Mathematics and Biological Sciences. Applications and dates for these tests may be obtained at many colleges and universities; by writing the Educational Testing Service, P.O. Box 6000, Princeton, NJ 08541-6000; by telephoning (609) 771-7670 for the GRE; (609),
Admission to any graduate degree program is granted by the Dean of the Graduate School upon the recommendation of the department of proposed study. Applicants and all other relevant materials must be received by the Graduate School at least forty-five days before the first day of class of the semester in which the student wishes to begin graduate study. International applicants should submit all required materials at least ninety days before the first day of class of the semester in which the student wishes to begin graduate study. Deadlines set by the Graduate School are listed in the front of the Auburn University Bulletin. However, most academic units make admission decisions several months in advance. Thus, applicants should check with the department to which they seek admission to determine when materials should be submitted. Approval is valid for a maximum of twelve months beyond the entrance date given on the application. If the student does not register during this period, a new request for approval must be submitted. Application materials become the property of Auburn University and may not be returned to the applicant or forwarded to other institutions.

Admission Requirements

Departments make admissions decisions based on the compatibility of the applicant’s goals with departmental resources, the availability of spaces for new students, and a holistic evaluation of the applicant’s potential for success in the program. Other considerations might typically include standardized test scores, grades and/or GPAs, letters of recommendation, writing samples, research or applied experience, and interviews. To be considered for admission, the applicant must satisfy the following requirements:

1. The applicant must hold a bachelor’s degree from an accredited U.S. institution, or the equivalent from an international institution.
2. The applicant must be in academic good standing at the institution last attended.
3. The applicant must submit standardized examination scores (GRE, GMAT, and/or TOEFL). Applicants with an earned doctorate (Professional, Ed.D., Ph.D.) from an accredited institution whose instruction is in English may be exempted from this requirement.
4. The successful applicant normally will meet one of the following: a) a grade point average (GPA) of at least 2.75 on all undergraduate course work at an accredited United States institution in fulfillment of the requirements for a baccalaureate degree; b) a GPA of at least 3.0 on the last 60 semester hours of undergraduate course work at an accredited United States institution in fulfillment of the requirements for a baccalaureate degree; c) a GPA of at least 3.0 on all graduate course work at an accredited United States institution in fulfillment of the requirements for a graduate degree; or d) an acceptable GRE or GMAT score as determined by the program to which the applicant applies.
5. Applicants whose native language is not English must submit TOEFL scores of at least 550 on the written test, or 213 on the computer-based test.
6. The applicant must be recommended for admission by the graduate faculty in the applicant’s area of study. Departments may (and frequently do) establish higher standards than those described here, and may require that applicants submit additional materials. Applicants should contact the department to which they seek admission for information about additional requirements.

Final evaluation of application files will not occur until all of the above requirements have been met. Applicants will be notified by the Dean of the Graduate School when an admissions decision has been made. Some departments, operating with a limited number of spaces for students each year, make final decisions for the fall semester in early spring.

Admission of Transient Graduate Students

A graduate student in good standing in an accredited college or university may be admitted as a transient when faculty and facilities are available. To be eligible, the student must submit a special Graduate Transient Form prior to the beginning of the semester for which transient status is requested. The form, available from the Graduate School or on the web at www.grad.auburn.edu, must bear the signature of the student’s graduate dean or his/her designee. Transient status is granted for one semester only and does not constitute admission or matriculation as a degree candidate.

Student Classifications

For administrative purposes, Auburn University students are assigned to a class level. Those that apply to graduate students are:
- MST - Students who hold full admission to Master’s programs.
- EDS - Students who hold full admission to Specialist in Education programs.
- EDD - Students who hold full admission to Doctor of Education programs.
- PHD - Students who hold full admission to Doctor of Philosophy programs.
- GND - Special admission for non-degree purposes for students who meet all admissions requirements to Graduate School or who hold master’s degrees from accredited institutions and seek professional improvement leading to AA certification or other non-degree objectives.
- GPR - Students who meet requirements for provisional admission except that they have not taken the GRE or GMAT. This classification is for one semester only, and satisfactory scores must be submitted by the end of that semester. This classification cannot be used by international students, who must submit satisfactory scores on all required examinations before they are admitted.

Non-Graduate Students and Graduate Work

An Auburn University student who will receive a bachelor’s degree from this institution may register for graduate courses provided that the following conditions are met: the student has at least a 3.0 GPA, is within 30 semester hours of graduating, has the written consent of the instructor of each graduate course, and obtains approval in advance from the Graduate School. A maximum of 6 semester hours of undergraduate course work taken in this option later may be applied toward a graduate degree at Auburn University with the approval of the student’s advisory committee. This classification is for one semester only, and satisfactory scores must be submitted by the end of that semester. This classification cannot be used by international students, who must submit satisfactory scores on all required examinations before they are admitted.

Undergraduate Courses, S/U Option and Auditing Courses

A graduate student may register for undergraduate courses (1000-4000-level). For students enrolled in Graduate School, grades earned in undergraduate courses will not be used in calculation of the GPA for either retention or graduation, but will appear on the graduate transcript. This policy took effect with the posting of grades fall 1998. For courses taken before fall 1998, grades earned in undergraduate courses may be used in calculation of the GPA for retention, but not for graduation. A graduate student may elect any course to be graded under the Satisfactory (S)-Unsatisfactory (U) option, except for courses required on the Plan of Study, if the major professor so recommends. Students are not allowed to select this option after the 15th class day. Courses listed on the Plan of Study must be graded A, B, C, D, or F except for those designated as S/U. Similarly a graduate student may elect to audit any course not on the Plan of Study. The student may not change from audit to credit after classes begin, but may change from credit to audit before the 15th class day. All use of the S/U and audit option require approval of the Graduate School.
Transfer of Credit from Other Institutions

Graduate credit taken in residence at another approved graduate school may be transferred to Auburn University. No prior commitment is made concerning whether transfer credit will be accepted. A student must earn at least 24 semester hours, or half of the total hours required for a master’s degree, whichever is greater, at Auburn University. A program that requires 30 hours of credit will be limited to 6 semester hours of transfer credit. No such limitation is applied to doctoral degrees except 18 semester hours must be earned as a graduate student at Auburn University in graded course work at the 7000-level or above. The credit must be acceptable to the student’s advisory committee and be pertinent to the student’s Plan of Study. No transfer credit will be approved without an official transcript. No course on which a grade lower than B was earned may be transferred. Additionally, credit will not be allowed if the combined GPA on graduate work taken at other schools is less than 3.0 on a 4.0 scale, nor may transfer credit be used to improve the GPA on courses taken at Auburn University. All transferred credit to be counted toward a master’s or specialist degree must have been earned within five years of the date the Auburn degree is awarded. There is no such time limit on credit for doctoral degrees.

Two-Campus Studies

A student seeking a graduate degree at Auburn University, Auburn University at Montgomery, the University of Alabama, the University of Alabama at Birmingham, or the University of Alabama at Huntsville may take up to half the course work at another of these institutions. The courses taken must be approved in advance by the student’s Advisory Committee and the respective graduate deans. All credit must be earned at the two institutions in which the student is working, and none may be transferred from another institution.

Registration and Graduation Requirements

Every student expecting credit toward a graduate degree must be registered with the Graduate School, and no student is considered a candidate for a degree unless properly registered. A student must be registered in the term in which degree requirements are completed. Students who have completed all course requirements but who lack other requirements (non-theory final exam, internship, etc.) must register for the term in which those requirements are completed. The student also must register in any semester during which the staff or the facilities of the university are used for work on a thesis or dissertation, for the taking of oral examinations, or for removal of an “incomplete” grade. Thesis and dissertation students needing thesis or dissertation final approval and submission and the final examination, or non-thesis graduate students needing to complete projects, would register for 7990 Research and Thesis, 8990 Research and Dissertation, or 7980 Project, as applicable. Non-thesis graduate students requiring only a final examination would register for GRAD 7000. Students who have in a previous term completed all requirements for the degree, upon receipt of a “certificate of completion” form from the Graduate School, will not be required to register in a future term if their graduation is delayed or postponed.

Due Process

Each graduate student’s progress toward a degree will be monitored by the student’s advisory committee. If a graduate student is deemed not to be making satisfactory progress toward the degree, the student may be dropped from the Graduate School. Issues of professional and personal development may be considered in determining satisfactory progress toward the degree.

Graduate credit taken in residence at another approved graduate school may be transferred to Auburn University. No prior commitment is made concerning whether transfer credit will be accepted. A student must earn at least 24 semester hours, or half of the total hours required for a master’s degree, whichever is greater, at Auburn University. A program that requires 30 hours of credit will be limited to 6 semester hours of transfer credit. No such limitation is applied to doctoral degrees except 18 semester hours must be earned as a graduate student at Auburn University in graded course work at the 7000-level or above. The credit must be acceptable to the student’s advisory committee and be pertinent to the student’s Plan of Study. No transfer credit will be approved without an official transcript. No course on which a grade lower than B was earned may be transferred. Additionally, credit will not be allowed if the combined GPA on graduate work taken at other schools is less than 3.0 on a 4.0 scale, nor may transfer credit be used to improve the GPA on courses taken at Auburn University. All transferred credit to be counted toward a master’s or specialist degree must have been earned within five years of the date the Auburn degree is awarded. There is no such time limit on credit for doctoral degrees.

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No student will be permitted to graduate who does not have an approved Plan of Study on file in the Graduate School or who fails to submit a graduation check request to the Graduate School prior to the semester of expected graduation. Graduation day is the official last day of each semester and, therefore, is the deadline for approved plans of study and graduation checks for graduation the following semester. It is the responsibility of graduate students to check records for compliance with graduation requirements. Students who have completed a Plan of Study and graduation check for a previous term must notify the Graduate School of pending graduation before the 15th class day of subsequent semesters. Graduate degrees are awarded at the end of each semester. Candidates wishing to graduate in absentia must inform the Registrar’s Office.

A graduate student may carry a maximum course load of 16 hours per semester. (14 in the summer term). This includes undergraduate courses, but does not include 7990 (Research and Thesis) and 8990 (Research and Dissertation) when required of all graduate students in a department each semester. Graduate students must carry nine hours per semester or enroll in GRAD 7900/8900 with concurrent enrollment for a minimum of one hour of 7990/8990 to be classified as full-time students. Enrollment in GRAD 7900/8900 requires the completion of a certification available at the Graduate School or on the web at www.grad.auburn.edu. Master’s (thesis option only) students are eligible for up to three semesters of GRAD 7900; doctoral students for up to six semesters of GRAD 8900.

Transfer to a Different Degree Program

For a student to transfer from one department to another requires a new application for admission and the usual application fee. Changes in application and the student’s Plan of Study is allowed in obtaining the cumulative graduate GPA (CGGPA). No grade below C (including unsatisfactory grades for courses taken under the S/U option) is acceptable for credit toward a graduate degree. Each graduate course in which a grade below C is received must be repeated at Auburn University whether or not it is listed on the student’s Plan of Study. Both the original grade and the grade for the repeated course will be counted in calculating the CGGPA. Course credits transferred from another institution may not be used to satisfy this requirement. Courses retaken will not count against the nine-hour limit beyond the student’s Plan of Study in obtaining the minimum CGGPA.

Academic Standing

Only grades in Auburn University courses approved for graduate credit will be used in determining the overall GPA for continuation in the Graduate School. If at the end of any semester the cumulative graduate GPA (CGGPA) falls below 3.0, the student will be placed on academic probation. If the CGGPA remains below 3.0 after the next nine credit hours of graduate enrollment (both graded and ungraded), the student will be placed...
on academic suspension. The student may be readmitted only after comple-
tion of a remediation plan recommended by the academic unit and ap-
proved by the Dean of the Graduate School. No course work taken as part 
of the remediation plan may count toward the student's degree or CGGPA. 
Graduate-level courses for which grades below C were earned may not be 
repeated during the remediation period.

Incomplete
A grade of "incomplete" must be removed within the following six 
months or it will be recorded permanently as an F and the course will 
have to be repeated. This applies regardless of the student's enroll-
ment status. A student not enrolled during the following six months is 
not exempt from this rule. No student may graduate until "incomplete" 
and "no record" grades are removed, and the removal must be com-
pleted at least three weeks before the date of graduation, regardless of 
whether the course is included on the Plan of Study.

Graduate Study and University Employees
An Auburn University faculty member or employee may pursue a 
graduate degree outside the school or college of employment with the 
approval of the head or chair of the employing department and the dean 
of the employing school or college. Inquiries should be made to the 
Dean of the Graduate School.

Correspondence Work Unacceptable
Study by correspondence shall not be counted toward a graduate 
degree.

Research Involving Humans
Auburn University established the Institutional Review Board for the 
Use of Human Subjects in Research (IRB) to evaluate research for 
compliance with the guidelines and policies of the U.S. Department of 
Health and Human Services, the Public Health Service, the Food and 
Drug Administration and other federal, state and local regulations. All 
research in which human subjects are used, whether by faculty, staff or 
students, must be approved in advance by the IRB, regardless of the 
source of funding, lack of funding or any other consideration. Research 
involving human subjects not approved in advance may be disallowed 
and may incur severe penalties for non-compliance with institutional 
policy. Information and review forms may be obtained from the Admin-
istrator for Special Programs, 307D Samford Hall, (334) 844-5966.

Activities Involving Animals
Auburn University's Animal Resources Program requires compliance 
with the Animal Welfare Assurance negotiated with the Office of Pro-	ection from Research Risks/National Institutes of Health (OPRR/NIH). 
A major part of that Assurance involves the Institutional Animal Care 
and Use Committee (IACUC) that ensures compliance with the Assur-
ance, the policies of the U.S. Department of Health and Human Ser-
dvices, the U.S. Department of Agriculture and all other federal, state 
and local regulations concerning care, treatment and use of animals. 
All activities, whether teaching, research, production or display of ani-
mals, and whether or not the activity is funded, must be approved in 
advance by the committee. The use of animals for any purpose that is 
not approved in advance by the IACUC may involve severe penalties 
for non-compliance with institutional policy and could jeopardize the 
University's Animal Welfare Assurance filed with the OPRR and the 
NIH. Information may be obtained from the Director of Animal Resources, 
(334) 844-5667.

The Master's Degree Program
The minimum requirements for most master's degrees can be satis-
fied in one academic year of two semesters or nine months. In practice, 
however, many students need three semesters or longer. Certain de-
partments have special requirements as outlined in this Bulletin. In ad-
dition, those students who hold assistantships or fellowships, those who 
engage in time-consuming work off-campus, or those with scholastic 
deficiencies of any sort cannot meet all requirements in the minimum 
time. Also, research is unpredictable and frequently requires more time 
than anticipated. Certain departments offer a master's degree under 
two plans, referred to as the Thesis Option and the Non-Thesis Option.

The Master of Science
The Master of Science is offered in Aerospace Engineering, Agri-
cultural Economics, Animal Sciences, Biological Sciences (Botany, Micro-
biology and Zoology), Biomedical Sciences (Anatomy, Physiology and 
Pharmacology; Large Animal Surgery and Medicine; Pathobiology; Ra-
diology; and Small Animal Surgery and Medicine), Chemical Engineer-
ing, Chemistry, Civil Engineering, Communication Disorders, Computer 
Science and Software Engineering, Consumer Affairs, Counseling and 
Counseling Psychology, Curriculum and Teaching, Discrete and Statisti-
cal Sciences, Economics (thesis and non-thesis option), Educational 
Foundations Leadership and Technology, Electrical and Computer En-
gineering, Finance (thesis and non-thesis option), Fisheries and Allied 
Aquacultures, Forestry and Wildlife Sciences, Geology (thesis and non-
thesis option), Health and Human Performance, Horticulture, Human 
Development and Family Studies, Industrial and Systems Engineering, 
Integrated Textile and Apparel Science (thesis and non-thesis option), Man-
agement (thesis and non-thesis option), Materials Engineering, Mathemat-
ics, Mechanical Engineering, Nutrition and Food Science, Pharmaco-
logical Sciences, Pharmacy Care Systems, Physics (thesis and non-
thesis option), Plant Sciences (Agronomy and Soils, Entomology, and 
Plant Pathology), Poultry Science, Rehabilitation and Special Educa-
tion, and Sociology (thesis and non-thesis option).

The Master of Arts
The Master of Arts is offered in Communication (thesis and non-thesis 
option), English (thesis and non-thesis option), History (thesis and non-
thesis option), Sociology (thesis and non-thesis option) and Spanish.

Special or Professional Master's Degrees
These special or professional degrees are offered: Master of Account-
tancy, Master of Aerospace Engineering, Master of Agriculture (Agri-
cultural Economics, Agronomy and Soils, Animal Sciences, Entomol-
yogy, Horticulture, Plant Pathology, and Poultry Science), Master of Ap-
pplied Mathematics, Master of Aquaculture, Master of Building Construc-
tion, Master of Business Administration, Master of Chemical Engineer-
ing, Master of Civil Engineering, Master of Communication Disorders, 
Master of Community Planning, Master of Computer Software Engi-
neering, Master of Education (Counseling and Counseling Psychology, 
Curriculum and Teaching, Educational Foundations Leadership and 
Technology, Health and Human Performance, and Rehabilitation and 
Special Education), Master of Electrical Engineering, Master of For-
estry, Master of French Studies, Master of Hispanic Studies, Master of 
Industrial Design (thesis and non-thesis option), Master of Industrial 
and Systems Engineering, Master of Landscape Architecture, Master of 
Management Information Systems, Master of Materials Engineering, 
Master of Mechanical Engineering, Master of Probability and Statistics, 
Master of Public Administration, Master of Technical and Professional 
Communication, and Master of Biological Studies.

Advisory Committee
The student works under the direction of an advisory committee com-
posited of three members recommended by the appropriate department 
head or chair. Two must be members of the graduate faculty. This 
committee will approve the student's program of study, conduct required 
examinations and direct the required field project or thesis. Students in 
a teaching field (e.g., music education, science education, foreign lan-
guage education) work under a committee composed of at least two 
members from the College of Education and one member from a re-
lated academic field.

Courses for Graduate Students
At least one-half of all credit hours toward the minimum degree re-
quirement must be earned in 7000- and 8000-level courses, which are 
courses for graduate students only. The remainder may be in 6000-
level courses.

Plan of Study
Early in the graduate program, each student should confer with the 
appropriate departmental advisor or major professor to select courses 
and discuss research interests. Then a Plan of Study should be pre-
pared and submitted to the Graduate School. The Plan of Study form is 
available on the web at www.grad.auburn.edu or in the Graduate School.
For full-time students, the Plan of Study must be submitted no later than the end of the first semester in Graduate School. For part-time students, the Plan of Study must be submitted before registration for the fourth course taken in Graduate School. Notification of all changes must be provided before the beginning of the final semester. One to three changes may be made by using the simplified “Change in Existing Plan of Study Form” available at the Graduate School or on the web. Four or more changes require a new Plan of Study. The student is responsible for carrying out the planned program and for asking the major professor to make necessary changes.

No student will be permitted to graduate who fails to submit a Plan of Study and a graduation check to the Graduate School prior to the semester of expected graduation. Graduation day is the official last day of each semester and, therefore, is the deadline for submitting Plans of Study and graduation checks for graduation the following semester.

Language Requirement
Some departments require a reading knowledge of one foreign language. These requirements are outlined in the departmental statements later in this section. Arrangements to take the foreign language examination should be made with the student’s major professor and the head or chair of the department. The student must apply at the Graduate School by the deadline for each semester listed in the calendar.

Residency Requirement
A master’s degree student under the thesis option must spend one semester, or a ten-week term, on campus as a full-time student. This requirement concerns academic residency only; it has nothing to do with residency for fee purposes. There is no residency requirement for master’s degree students under the non-thesis option.

Time Limit
All graduate work toward a master’s degree must be completed within a period of five calendar years.

Master’s Degree Options
The following general regulations are minimum requirements. The professor or committee in charge of a student’s work may require more than the specified minimum in order to achieve a well-rounded program. All programs require a minimum of 30 semester hours and at least 50 percent must be at the 7000-level or above.

The Thesis Option
The Master of Arts, Master of Science and Master of Industrial Design are offered under the thesis option. Majors and Minors Subjects: A student under the thesis option must earn a minimum of 30 semester hours, of which at least 21 semester hours must be in a major area of concentration. Depending on departmental requirements or the wishes of the student’s advisory committee, the remainder of the course work may be taken within the major field or in a separate but closely related area. Specific requirements are set forth in this Bulletin.

If a student has not met all undergraduate pre-requisites in any field chosen for major or minor work, these should be scheduled as soon as possible, preferably before graduate work begins. The major professor will indicate these on the student’s Plan of Study.

The topic selected for the thesis must be approved by the student’s major professor and advisory committee. The student conducts the research and prepares the thesis under the direction of the major professor. The course entitled “Research and Thesis” is number 7990 in all departments. The student must register for a minimum of four credit hours of this course but may register for as many hours as desired. No more than six hours may be counted toward meeting degree requirements. The student may register for one or more hours at a time. No grade is assigned for this course.

The Guide to the Preparation and Submission of Theses and Dissertations, which contains information about requirements for the thesis, is available in the University Bookstore or on the web at www.grad.auburn.edu. Submission of a thesis is defined as the time at which the first complete draft of such is submitted to the major professor for review. The Graduate School accepts only theses prepared according to the Guide. The Graduate School Calendar on page 5 lists the deadline for acceptance of final copies of theses by the Graduate School each semester. “Final copies” means that the thesis is perfected and ready for binding. A format check may be obtained at the Thesis and Dissertation Office in the Graduate School. If final copies are found to need corrections, the student’s graduation may be delayed at least one semester. Auburn University reserves the right to make copies of the thesis, but the student retains all publication rights.

All candidates under the thesis option must pass a comprehensive examination covering the major and minor field, as well as the research and thesis. This usually is a two-hour oral examination, but the student’s advisory committee also may require a written examination. Members of the Graduate Faculty not on the advisory committee may attend any oral examination as visitors. The major professor will schedule the oral examination not later than the deadline indicated in the Graduate School Calendar. Successful completion requires the unanimous support of all members of the advisory committee. If a student fails the examination, one re-examination may be given on recommendation of the advisory committee and approval by the Dean of the Graduate School. Further examinations will be allowed only under exceptional circumstances and with the approval of the Graduate Council.

The Non-Thesis Option
Information on special or professional master’s degrees not requiring a thesis may be found in this Bulletin. Students in these programs must pass a comprehensive examination just as do students under the thesis option. The examination covers the major and minor and any research and special project involved. Credit hours for 7990 Research and Thesis cannot be counted toward graduation requirements for non-thesis degree programs. If a student fails the examination, one re-examination may be given on recommendation of the advisory committee and approval by the Dean of the Graduate School. Further examinations will be allowed only under exceptional circumstances and with the approval of the Graduate Council.

Summary of Procedures for Master’s Degree Program
The student should:
1. Obtain application forms from the Graduate School and apply for admission by submitting completed forms and other required materials as outlined in this Bulletin.
2. Apply for an assistantship, if pertinent, with the department involved.
3. Become familiar with requirements for the desired degree as outlined in this Bulletin.
4. Consult with departmental adviser and become oriented to departmental procedures.
5. Plan schedule of study for the first semester with adviser.
6. Establish an advisory committee through the department head or chair and departmental adviser; usually done during the first semester of course work.
7. Prepare a proposed Plan of Study in consultation with the advisory committee. Submit a plan approved by the committee and department head to the Graduate School no later than the second semester.
8. Consult with the adviser on approval for the thesis plan, if pertinent, and become familiar with the Guide to the Preparation and Submission of Theses and Dissertations, available in the University Bookstore and on the web (www.grad.auburn.edu).
9. Fulfill language requirements, if any.
10. Request graduation check in the Graduate School no later than the last day of the semester (graduation day) prior to the semester of graduation.
11. Notify the Graduate School of the intent to graduate no later than the fifteenth class day of the semester of graduation.
12. Prepare thesis manuscript, if pertinent.
13. Arrange for final oral examination with advisory committee.

Second Master’s Degree
For a second master’s degree, the student fulfills all major requirements applicable to any other master’s degree, including the thesis, if appropriate. The student may, on recommendation of the advisory committee, transfer credit hours from the previous master’s degree. The student must earn at least 24 semester hours, or half of the total hours required for the master’s degree, whichever is greater, in the second master’s program at Auburn University.
The Specialist in Education Degree

This degree is designed for professionals in education and human services areas who want increased competence in a field of specialization. Areas of specialization are offered in the various departments in the College of Education.

Admission

Scholarship, interpersonal orientation and potential for leadership are considered in the screening procedure. Appropriate experience in teaching or a leadership position in education or a human services area is requisite. All work beyond the baccalaureate must have been of high quality with a GPA of at least 3.0 on a 4.0 scale. Students holding a master's degree from Auburn University are not required to resubmit GRE scores.

Advisory Committee

The student works under the direction of an advisory committee composed of three members recommended by the appropriate department head or chair. All must be members of the graduate faculty and at least two must be Level Two. This committee will approve the student's program of study, conduct required examinations and direct the required field project. Students in a teaching field (e.g., music education, science education, foreign language education) work under a committee composed of two members from the College of Education and one member from a related academic field.

Requirements for Degree

A minimum of 30 semester hours beyond the master's degree must be taken in a program approved by the student's advisory committee. The Plan of Study should be submitted to the Graduate School no later than the second semester of study. Professional educators pursuing sixth-year certification are responsible for adapting their Plans of Study to requirements in the states in which they will need advanced certification. A relevant field project, approved in advance by the student's committee, must be completed under the supervision of the major professor. A final written report on the field project will be submitted to the advisory committee by the student. The advisory committee will conduct a final examination on the area of specialization and the field project. The student has five calendar years to complete the degree.

No student will be permitted to graduate who fails to submit a Plan of Study and graduation check to the Graduate School prior to the semester of expected graduation. Graduation day is the official last day of each semester and, therefore, is the deadline for submitting Plans of Study for graduation the following semester.

Doctoral Degrees

The Doctor of Philosophy is offered in Aerospace Engineering, Animal Sciences, Biological Sciences (Botany, Microbiology and Zoology), Chemical Engineering, Chemistry, Civil Engineering, Computer Science and Software Engineering, Consumer Affairs, Counseling and Counseling Psychology, Curriculum and Teaching, Discrete and Statistical Sciences, Educational Psychology, Electrical and Computer Engineering, English, Fisheries and Allied Aquacultures, Forestry and Wildlife Sciences, Health and Human Performance, History, Horticulture, Human Development and Family Studies, Industrial and Systems Engineering, Management, Materials Engineering, Mathematics, Mechanical Engineering, Nutrition and Food Science, Physics, Plant Sciences (Agronomy and Soils, Plant Pathology, and Entomology), Poultry Science, Psychology, Public Administration and Public Policy, and Rehabilitation and Special Education, plus interdepartmental programs in Biomedical Sciences (Anatomy, Physiology, and Pharmacology; Large Animal Surgery and Medicine; Pathobiology; Radiology; and Small Animal Surgery and Medicine), Economics (Agricultural Economics and Forestry), Integrated Textile and Apparel Science (Consumer Affairs and Textile Engineering), and Pharmaceutical Sciences (Pharmacal Sciences and Pharmacy Care Systems).

The Doctor of Education is offered in the following departments: Counseling and Counseling Psychology; Educational Foundations, Leadership and Technology; and Health and Human Performance.

Admission

Prospective candidates for the degrees of Doctor of Philosophy and Doctor of Education are admitted under the same procedures and requirements outlined in the General Regulations elsewhere in this Bulletin. A student must be admitted to a specific doctoral program, but admission does not mean admission to candidacy for the degree, which occurs only after satisfactory completion of the general oral examination.

Advisory Committee and Plan of Study

After the student has enrolled in the doctoral program, an advisory committee should be selected by the student, major professor and department head or chair. The advisory committee is responsible for developing the student's Plan of Study and conducting the doctoral general and final examinations. It should consist of at least three members of the faculty. At least two, including the major professor, must be members of the Graduate Faculty. The formal appointment of the advisory committee occurs when the Plan of Study is approved by the Graduate School.

The Plan of Study should be prepared by the student and the advisory committee and filed with the Graduate School as soon as feasible. It should not be delayed beyond the second semester of doctoral work. The Graduate School requires that changes may be warranted, and a form is available for amendments as required by student needs, research interests and course availability.

Residency Requirement

A significant part of the Doctor of Philosophy or Doctor of Education program is the residency year. This can be satisfied by the student's completing a minimum of 18 semester hours of on-campus course work during two consecutive semesters following classification as a doctoral student (EDD or PHD designation). At least 9 of these 18 hours shall be in graded (e.g., A,B,C) course work. During this residency year, the doctoral student shall enroll for a minimum of 9 hours each semester, no fewer than 3 hours of which shall be in graded (e.g., A,B,C) course work. During a single summer, one 10-week term or its equivalent may count as one semester for residency purposes. The residency requirement may not be satisfied by residence during summer semesters only. Interruption of a student's program for the summer semester does not constitute a break in continuity. The Dean of the Graduate School is authorized to approve alternative residency options in exceptional cases and on an individual basis. The proposed schedule for accumulation of residency may not be submitted to the Graduate School by the department prior to the initiation of the residency year. A form is available at the Graduate School. Several alternative residency options are available for students in Education. Students should check with their advisors.

General Doctoral Examination

A general examination, often called the "preliminary examination," is required of all applicants for the degrees of Doctor of Philosophy and Doctor of Education. It consists of written and oral testing by the student's advisory committee in the student's major and minor. The written portion of the examination does not require approval in advance by the Graduate School. The oral portion, however, does require such approval. Arrangements for the oral examination must be made by application to the Graduate School at least one week in advance of the examination. The primary purpose of the general examination is to assess the student's understanding of the broad body of knowledge in a field of study. The examination also affords the advisory committee an opportunity to review the student's proposed research and understanding of research methods and literature in the chosen field. If the general examination reveals deficiencies in any of these areas, the advisory committee may recommend remedial work, reexamination, or discontinuation of doctoral study.

The general oral examination should be conducted immediately after the successful completion of the written examination and well before the final examination. At least one complete semester (preferably more than one) must intervene between the general oral and final examinations. The two examinations thus cannot be taken either in the same semester or in consecutive semesters. Some departments have
specific requirements for conducting these examinations, and the student should become familiar with these. Successful completion of the oral examination requires unanimous support of the student's advisory committee. If the general oral examination is failed, a re-examination may be given on recommendation of the committee and approval by the dean of the Graduate School. Further examinations require exceptional circumstances and approval by the Graduate Council.

The student becomes a candidate for the degree on successful completion of the general examination and has four calendar years there after to complete all additional requirements. If unable because of reasons beyond the candidate's control to complete the requirements on time, the student may petition the Dean of the Graduate School for an extension. Otherwise, the student will revert to the status of an applicant and must petition the Dean of the Graduate School to retake the general oral examination.

Final Examination

After the first draft of the dissertation has been completed and has been approved by the student’s advisory committee, it is submitted to the Graduate School. An outside reader (representing the University's graduate faculty and the Graduate School) will be appointed to review the dissertation. However, the student’s adviser may request appointment of the outside reader at any time rather than waiting until after the dissertation is drafted. When the Graduate School has approved the dissertation, the student may apply for the final examination on a form obtained from the Graduate School. The application must be filed with the Graduate School at least one week in advance of the final examination. The examination is administered by the student's advisory committee. The representative of the university's graduate faculty, the outside reader, also attends and participates. The examination, which generally is oral but may be both oral and written, includes the major and minor fields and a defense of the dissertation. Successful completion requires unanimous support of all members of the committee, including the outside reader. Any member of the Graduate Faculty may attend.

If a student fails the final examination, a re-examination may be given on recommendation of the advisory committee and approval by the Dean of the Graduate School. Further examination requires exceptional circumstances and approval of the Graduate Council. In addition to successful completion of all examinations, final copies of the dissertation must be submitted to the Graduate School before the degree is conferred (see Graduate School calendar on page 5 for deadline).

The Doctor of Philosophy Degree

The Doctor of Philosophy is conferred in recognition of the mastery of a special field of learning as shown by the satisfactory completion of a prescribed course of study and investigation, the successful passing of general examinations covering the major and minor fields, the preparation of an acceptable dissertation reflecting high achievement in scholarship and independent original investigation, and the passing of a final examination on the dissertation and related subjects. The degree is a research degree. It is not conferred merely upon fulfillment of technical requirements, but awarded in recognition of the ability to think and work independently, originally, and creatively in a chosen field. Some departments have special requirements for the degree, and the student will be governed by those, including the ones listed in departmental statements under Courses of Instruction elsewhere in this Bulletin.

Language Requirement

Language requirements for graduate degrees vary with departments. The Department of Foreign Languages offers proficiency courses in a number of languages. The department also offers reading proficiency examinations for those students who wish to demonstrate proficiency without taking a course. Such students must apply to the Graduate School for these examinations by the deadline listed in the Graduate School calendar on page 5.

Course Requirements

The Graduate School requires a minimum of 30 semester hours of graded (e.g., A, B, C) graduate course work (7000-level and above) beyond the bachelor’s degree, at least 18 hours of which must be completed as a graduate student at Auburn University. A doctoral student must also complete 30 semester hours of additional course work (may include ungraded courses, 6000-level courses, 7990 and 8990). However, some departments require more, and requirements may vary according to a student’s background and interests. A maximum of 4 hours of 7990 (Research and Thesis) from a completed master’s program may be counted.

All doctoral students must complete a minimum of 10 hours of 8990. Enrollment in 8990 may take place at any time the student and the advisory committee deem appropriate. During any one semester, the number of hours of 8990 in which the student enrolls should reflect the amount of time being spent on the dissertation and the degree to which university resources are being utilized. Students may enroll, during any one semester, for as few as one hour or as many as 16 hours of 8990. The requisite 10 hours of 8990 should be included in the Plan of Study. No grade is assigned.

The Dean of the Graduate School is authorized to approve alternatives to these course work requirements in exceptional cases and on an individual basis.

Dissertation

A dissertation is required of all candidates for the degree of Doctor of Philosophy. It shall constitute an original contribution to knowledge. The student conducts the research and prepares the dissertation under the direction of the major professor. Only dissertations prepared according to The Guide to the Preparation and Submission of Theses and Dissertations, available at the University Bookstore and on the web at www.grad.auburn.edu, are accepted by the Graduate School. Submission of a dissertation is defined as the time at which the first complete draft of such is submitted to the major professor for review. All dissertations must be microfilmed by University Microfilms International of Ann Arbor, Michigan, which publishes the abstract in Dissertation Abstracts. The student is required to pay for this service. Auburn University reserves the right to make copies of the thesis, but the student retains all publication rights.

The Doctor of Education Degree

The Doctor of Education is a professional degree conferred in recognition of ability and achievement in some special field or fields of education. This is shown by satisfactory completion of a prescribed course of study, application of scientific principles in classroom teaching, administration, the supervision of instruction, or other aspects of educational programs; preparation of a dissertation demonstrating ability to investigate an education problem with originality and independence of thought; successful completion of examinations showing a satisfactory grasp of a field of specialization and its relation to allied subjects; and recognized leadership in a specialty as shown by at least three years of successful experience.

Course Requirements

The major is divided into general professional education, area of specialization and other approved courses. General professional education includes courses in such areas as research methodology and statistics; evaluation of learning, individuals, or programs; human behavior, development, or learning; and social or political perspectives on education. The College of Education requires a minimum of 30 semester hours of graded (e.g., A, B, C) graduate course work (7000-level and above) beyond the bachelor’s degree, at least 18 hours of which must be completed at Auburn University. A doctoral student must also complete 30 semester hours of additional course work (may include ungraded courses, 6000-level courses, 7990 and 8990). However, some programs require more, and requirements may vary according to a student’s background and interest. A maximum of 4 hours of 7990 (Research and Thesis) from a completed master’s program may be counted.

All doctoral students must complete a minimum of 10 hours of 8990. Enrollment in 8990 may take place at any time the student and the advisory committee deem appropriate. During any one semester, the number of hours of 8990 in which the student enrolls should reflect the amount of time being spent on the dissertation and the degree to which university resources are being utilized. Students may enroll, during any one semester, for as few as one hour or as many as 16 hours of 8990. The requisite 10 hours of 8990 should be included in the Plan of Study. No grade is assigned.

The Dean of the Graduate School is authorized to approve alternatives to these course work requirements in exceptional cases and on an individual basis.
Dissertation
A dissertation is required of all candidates for the degree of Doctor of Education. It shall be a critical study of a significant education problem, an original work in a significant field of education, or a creative work involving new and original procedures for the improvement of education. The student conducts the research and prepares the dissertation under the direction of the major professor. Only dissertations prepared according to The Guide to the Preparation and Submission of Theses and Dissertations, available at the University Bookstore and on the web at www.grad.auburn.edu, are accepted by the Graduate School. Submission of a dissertation is defined as the time at which the first complete draft of such is submitted to the major professor for review. All dissertations must be microfilmed by University Microfilms International of Ann Arbor, Michigan, which publishes the abstract in Dissertation Abstracts. The student is required to pay for this service.

Summary of Procedures for Doctoral Degree Programs
The student should:
1. Obtain application forms from the Graduate School and apply by submitting all required materials to the Graduate School by the deadlines published in this Bulletin. The Graduate School forwards the application to the appropriate departmental screening committee. The department head or chair then makes a recommendation to the Dean of the Graduate School, who sends a letter notifying the applicant of the decision.
2. Apply for an assistantship, if applicable, through the department involved.
3. Become familiar with the requirements for the doctoral degree as published in this Bulletin.
4. Consult with the departmental adviser and become familiar with departmental procedures.
5. Plan a schedule of study for the first semester with adviser.
6. Submit a proposed schedule for fulfilling the residency requirements. Forms are available at the Graduate School or on the web at www.grad.auburn.edu.
7. Establish an advisory committee through the major professor and department head or chair. Official appointment of the advisory committee occurs when the Plan of Study is approved by the Graduate School.
8. Prepare a Plan of Study approved by the advisory committee and department head or chair and submit to the Graduate School.
9. Complete course work, including language requirements, if any, as detailed in the Plan of Study.
10. Take the general written and oral examinations through the advisory committee. After the written examination, schedule the general oral examination at least one week in advance using a form obtained from the Graduate School.
11. Submit the dissertation proposal for approval by the advisory committee and become familiar with The Guide to the Preparation and Submission of Theses and Dissertations, available at www.grad.auburn.edu or the University Bookstore.
12. Request graduation check in the Graduate School no later than the last day of the semester (graduation day) prior to the semester of graduation.
13. Notify the Graduate School of the intent to graduate no later than the fifteenth class day of the semester of graduation.
14. Prepare dissertation and submit a committee-approved first draft to the Graduate School for review and approval by the outside reader (representative of the graduate faculty).
15. Study recommendations of the outside reader and make appropriate changes in the dissertation.
16. On approval of the dissertation by the dean of the Graduate School, arrange for final oral examination.

Graduate Degrees Offered

Accountancy - M.Ac.
The Master of Accountancy is a professional non-thesis degree program in accounting. Criteria for admission and degree requirements are established by the School of Accountancy. This program is available to individuals with the equivalent of an undergraduate major in accounting.
Requirements for the M.Ac. include 30 semester hours of course work including a capstone course (ACCT 7980). The curriculum offers students the flexibility to tailor the program to meet their specific career objectives. Students take only four core courses and choose three accounting electives and three business electives. The M.Ac. degree can be earned as a traditional, on-campus student or through the video-based outreach program.
Information concerning specific requirements may be obtained by contacting the Director of Graduate Programs, School of Accountancy, at MAC@business.auburn.edu, or telephone (334) 844-6207, or www.mac.business.auburn.edu.

Aerospace Engineering - M.A.E., M.S., Ph.D.
Graduate study in aerospace engineering leads to the degrees of Master Science, Master of Aerospace Engineering and the Doctor of Philosophy. The graduate program prepares students for careers in the aerospace industry, in government laboratories and in academia. Studies for the Ph.D. also are designed to produce research scholars.
Applicants should have a bachelor’s degree in aerospace engineering or its equivalent from an institution of recognized standing, plus satisfactory GRE scores. Degrees in mathematics, physics and certain other engineering disciplines may also be appropriate for entrance into the graduate program. Applications must be approved by the department’s committee on graduate study.
For the Master of Science degree, the student must complete an approved program of at least 30 credit hours in aerospace engineering or closely related supporting subjects, with a minimum of 20 hours at the 7000 level or above. The Master of Science degree requirements include the completion of a thesis under the supervision of a major professor and an advisory committee.
The Master of Aerospace Engineering degree is a non-thesis degree for which the student must complete an approved program of at least 32 hours of course work with a minimum of 22 hours at the 7000 level or above. A suitable project in aerospace engineering, culminating in a final written report approved by the student’s advisory committee, may be substituted for three credit hours of course work. An oral presentation is also required for the M.A.E. degree.
For the Doctor of Philosophy degree, the student must complete a minimum of 61 credit hours beyond the bachelor’s degree. A plan of study will be arranged on an individual basis and students may elect to specialize in the general areas of aerodynamics, astrodynamics, control theory, flight dynamics, propulsion, structures or structural dynamics. A written qualifying examination and a general doctoral examination, with both written and oral parts, are required of all doctoral candidates. An oral defense of the doctoral dissertation is also required of each student.
There is no language requirement for the master’s or Ph.D. degree.

Agricultural Economics - M.S., M.Ag., Ph.D.
The Master of Science and Master of Agriculture are offered in both Agricultural Economics and Sociology (Rural). Also, the non-thesis Master of Agriculture is available in either Agricultural Economics or Rural Sociology. The Doctor of Philosophy in Agricultural Economics is offered through the interdepartmental doctoral program in Economics. Admission to any of the masters degree programs requires a bachelors degree from an accredited institution with courses in economics (agricultural) or sociology (rural), as appropriate to the desired degree. All students must have the equivalent of 15 credit hours in courses closely related to the student’s masters degree program area. Such courses might include economic theory, quantitative methods and statistics, and/ or closely related subjects acceptable to the major professor and advisory committee.
The M.S. in Agricultural Economics requires a minimum of 30 semester hours of graduate credit, including four credit hours of thesis research. At least 20 hours must be taken in the department for the major and the remaining six may be in closely related and approved areas. The program of study, including course work and the thesis, will be planned in the student’s special field of interest which may be farm management, agricultural marketing, production economics, prices and pricing, resources and the environment, agricultural finance, agricultural policy or other approved areas.
Graduate study in rural sociology in either the M.S. or M.A. degree is available through the interdepartmental graduate program in sociology. The interdepartmental program involves rural sociologists from the De-
Department of Agricultural Economics and Rural Sociology and sociologists and anthropologists from the Department of Sociology, Anthropology and Social Work. More information can be found in the Sociology section under Interdepartmental Programs and from the Rural Sociology program.

The Master of Agriculture in either agricultural economics or rural sociology requires no thesis but the student must complete a minimum of 32 graduate credit hours, 18 of them in the major, as approved by the major professor and the advisory committee. A final oral examination given by the advisory committee is also required.

The M.B.A. in agribusiness or natural resources and environmental management is offered in a program coordinated between the College of Business and the Department of Agricultural Economics and Rural Sociology. Requirements include 36 graduate credit hours, consisting of 24 hours in business and 12 hours in agricultural economics or a closely related field, as approved by the director of the M.B.A. program and the major professor in agricultural economics.

The Ph.D. is offered through the interdepartmental doctoral program in economics administered jointly through the Department of Agricultural Economics and Rural Sociology and the School of Forestry and Wildlife Sciences. Students must complete 30 graduate credit hours beyond the M.S. degree, or 60 graduate credit hours beyond the bachelor's degree, plus a minimum of 10 hours of dissertation research. Students must also pass a general doctoral examination that includes a written qualifying examination in the areas of microeconomics, macroeconomics and quantitative methods followed by an oral examination on the student's field of specialization and proposed research. The final oral examination covers disciplinary subjects and defense of the dissertation.

Agronomy and Soils - M.S., M.Ag., Ph.D.

Graduate training in this department enables outstanding students to achieve a high level of scholarly attainment in the soil, crop and environmental sciences. Within these broad areas, research training and experience may be gained in the specialized fields of soil fertility and plant nutrition; soil chemistry; soil genesis, morphology and classification; soil mineralogy; soil physics; soil microbiology; plant breeding and genetics; weed science; forage, fiber and grain crop production; crop ecology; environmental quality; and turf management.

There is no specific schedule of courses for graduate students in this department. The course of study is determined by the student and advisory committee. Students are encouraged to take courses offered by other departments, especially those offered in chemistry, entomology, plant pathology, plant physiology, physics, botany, statistics, zoology, and horticulture.

There is no foreign language requirement.

Three degrees are offered: the Master of Science, earned only under the thesis option; the Master of Agriculture earned under the non-thesis option; and the Ph.D., which requires a dissertation. The department also participates in the interdisciplinary minor in environmental studies.

Graduate students in a program requiring a thesis or a dissertation will register for at least one hour of AGRN 7990 or AGRN 8990 per semester. Research Associates who also are graduate students are exempt from this requirement but must complete 10 hours of 7990 in the master’s program or 20 hours of 8990 if in a Ph.D. program.

Anatomy, Physiology and Pharmacology

(See Biomedical Sciences)

Animal Sciences - M.S., M.Ag., Ph.D.

Graduate study in animal sciences is directed toward the master's and doctoral degrees. The Master of Agriculture (M.Ag.) is offered as a non-thesis degree and prepares students for careers in secondary education and agribusiness. Graduate programs leading to the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees provide advanced education and technical training in preparation for careers in public and private sectors related to animal science and technology, food science and technology, animal biotechnology, agribusiness and university-level research and education. Areas of specialization include animal nutrition, biochemistry and molecular biology, microbiology, behavior, growth biology, meat science and muscle biology, quantitative genetics and reproductive biology. Interdepartmental minor programs in cell and molecular biosciences, ecology and environmental sciences are also available.

The M.Ag. degree requires successful completion of a minimum of 30 credit hours, 21 of which must be in the agricultural or related sciences. Additional courses may be required for individual students.

Admission to the M.S. degree program requires that the student have the bachelor's degree or evidence satisfactory progress toward attainment of the bachelor's degree in animal sciences or a related area. Applicants lacking suitable preparatory course work in the basic sciences will be required to correct deficiencies by satisfactorily completing additional courses. The M.S. requires a minimum of 30 credit hours of graduate work, including at least 21 credit hours in the major field of study. The remainder may be in a minor area selected by the student and upon approval by the advisory committee. A research-based thesis is required.

Admission to the Ph.D. degree program usually requires that the student have a master’s degree from a recognized graduate program. However, evidence of exemplary potential may be considered as a criterion for admission with a bachelor’s degree. The doctoral program emphasizes original, scholarly research and includes significant advanced course work. The Ph.D. degree requires a minimum of 60 credit hours beyond the bachelor's degree and a dissertation describing original research. There is no foreign language requirement, but knowledge of a foreign language may be recommended by the student's advisory committee.

All graduate students are expected to be engaged in service to the department's research and education programs as deemed appropriate by the academic adviser and department head. All students receiving departmental assistantships must be registered as full-time students each term, and all M.S. and Ph.D. students must register for at least one credit hour of thesis or dissertation research each term. Classified (FLSA-exempt) research associates holding full admission status in the Graduate School for work toward a graduate degree are exempt from this requirement, but must complete 10 hours of thesis research in a M.S. program or 20 hours of dissertation research in a Ph.D. program following completion of a master’s degree. A Ph.D. degree program undertaken by classified (FLSA-exempt) research associates but not preceded by a master's degree must include 30 hours of dissertation research credit.

Biological Sciences - M.S., Ph.D.

The Department of Biological Sciences offers graduate training leading to the M.S. and Ph.D. degrees in biological sciences; a non-thesis master's degree is optional. Candidates for advanced degrees should have an undergraduate degree in an appropriate area from an accredited institution, with adequate training in biology, chemistry, physics and mathematics. Qualified students lacking pre-requisite subjects can be admitted, but may be required by the departmental graduate studies committee to make up the pre-requisites. A satisfactory score on the general GRE is required (suggested minimums of 500 on verbal and quantitative tests).

A major of at least 30 and 60 semester hours may be taken for the M.S. and Ph.D. degrees, respectively. M.S. and Ph.D. students must present at least one departmental seminar on their research during the semester of their oral or final examination. There is no foreign language requirement.

Interdisciplinary minors may be taken in biochemistry, cell/molecular biology, ecology, environmental studies and plant, animal, or microbial molecular biology.

Building Science - M.B.C.

The Department of Building Science offers a unique, individualized course of study leading to the Master of Building Construction degree for a select number of students seeking advanced education in construction management. This non-thesis masters program with an emphasis on technology prepares students for senior management positions in the industry and requires successful completion of a minimum of 35 semester hours of academic credit, including a core of 15 hours of BSCC graduate course work. The M.B.C. program is designed to be completed in one calendar year by students holding an accredited undergraduate degree in construction or related disciplines. The program will accept, under special circumstances, exceptional students having an accredited undergraduate degree in an unrelated discipline, but additional course work will be required.
Business Administration - M.B.A., M.S., Ph.D.

Graduate programs in Business are fully accredited by the Association to Advance Collegiate Schools of Business (AACSB) and include the Master of Business Administration, the Master of Accountancy, the Master of Management Information Systems, the Master of Science and the Doctor of Philosophy in Management.

Application for admission to graduate programs in business should be made directly to the Graduate School. The application should be accompanied by test scores on the Graduate Management Admission Test (GMAT), except for applications to the M.S. in Economics which should be accompanied by test scores on the Graduate Record Examinations (GRE). Supplemental application forms are also required for the M.B.A. program.

The M.B.A. is a broad managerial program that prepares students for leadership or management positions in the competitive environment of public and private enterprises. It is an integrative program that is responsive to the changing business environment and is based on the six themes of leadership: quality, global perspective, entrepreneurial spirit, technology, and ethics and social responsibility.

The M.B.A. program consists of 36-42 credit hours. These include integrated core classes and electives, that allow students the flexibility to choose an area of concentration, some of which are Production/Operations Management, Management Information Systems, Finance, Marketing and Health Care Administration. Foundation course work, or the equivalent, is required in the areas of accounting, economics, finance, management, marketing, calculus and statistics. The program can be completed in three semesters and a summer of full-time study.

An M.B.A. degree can be earned: as a traditional, on-campus student; through the video-based outreach program; or through one of the Executive program options. The Video Outreach program has maximum flexibility. The Executive program includes several short campus residency periods, an international study trip and a lockstep, 21-month format. Electives are chosen to provide specialized options for physicians, senior general managers with at least eight years of full-time experience or younger technical managers with undergraduate degrees in engineering or computer science. The Outreach and Executive programs allow individuals working anywhere in the U.S. to complete their degrees while maintaining full-time employment.

Additional information and applications may be obtained by contacting the M.B.A. program office in Lowder 503, calling (334) 844-4060, or on the web at www.mba.business.auburn.edu.

For programs in accountancy, economics, finance, management and marketing, see individual department listings.

Chemical Engineering - M.Ch.E., M.S., Ph.D.

The Chemical Engineering Department offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy. Specialized courses and research training are provided in a wide variety of specialties within chemical engineering or related interdisciplinary areas. Some of these specialties include: surface science, biochemical engineering, catalysis, pulp and paper engineering, environmental engineering, waste conversion, computer-aided process design and simulation, novel bioseparations systems, chemical kinetics and reactor design, biomedical engineering, process control and optimization, thermodynamics, advanced energy research, mass and energy transfer, electrochemical engineering, polymer engineering, interfacial phenomena, process synthesis, material science, and space science. Additionally, individualized interdisciplinary programs which cross the traditional departmental boundaries are encouraged. These may include collaborative work in chemistry, engineering disciplines, physics, mathematics, agriculture, forestry, biology, microbiology, genetics and health sciences or other areas.

The applicant must hold a bachelor’s degree or its equivalent from an institution of recognized standing and must have the pre-requisite undergraduate experience in areas of study relevant to the proposed graduate program. If the applicant’s undergraduate degree is other than chemical engineering, an individualized plan of study will be developed to impart the critical skills inherent in the bachelor’s chemical engineering program. All applicants will be evaluated on an individual basis by the Chemical Engineering Graduate Committee.

The Master of Science degree may be earned only under the thesis option. There is no language requirement for this degree. A total of 30 semester hours of work is necessary, including formal courses, seminars and directed reading. Students select three of the following core courses: CHEN 7100, CHEN 7110, CHEN 7200 and CHEN 7250. Each student may include six hours of research and thesis as a part of the 30 hours.

The Master of Chemical Engineering, a non-thesis degree oriented toward engineering design and practice, is also offered. It has no residency requirement and can be earned entirely through the Engineering Outreach Program. The degree requires 32 semester hours with a minimum of 16 at the 7000 level. In-depth understanding is provided through a minimum of 21 graduate course hours in the major, chemical engineering, plus eleven graduate course hours in technical electives from engineering, science, mathematics, or business which are tailored individually to the student’s background and interests. There are three core courses: CHEN 7100, CHEN 7200 and CHEN 7250.

The Doctor of Philosophy provides for advanced course work and emphasizes original, creative research. A dissertation embodying the results of this research represents the major portion of the requirements for this degree. A minimum of 60 semester hours of graduate work past the bachelor’s degree is necessary. Each student may include 10 hours of research and dissertation as a part of the 60 hours.

Four calendar years beyond the bachelor’s degree or three past the master’s degree usually are needed to complete the Ph.D.

The written General Examination must be taken by those seeking a Ph.D. It is offered each year and students are encouraged to take it in their first year of graduate study. It consists of two parts: a written examination based on undergraduate course work, and a graduate course work evaluation based on CHEN 7100, CHEN 7110, CHEN 7200, and CHEN 7250.

There is no language requirement for the Ph.D.

Chemistry - M.S., Ph.D.

Graduate study in chemistry leads to the M.S. and Ph.D. Degrees. Entering students must take four of the five required core courses: CHEM 7100, CHEM 7200, CHEM 7300, CHEM 7500 and BCHE 7200, with the consent of their adviser. Entering students must submit a plan of study which details the courses which will be taken. This is done with the assistance of the major professor and with the consent of the student’s advisory committee. For the M.S. the plan of study will consist of a minimum of 30 hours, including the core courses listed above, 12 hours; CHEM 7990, 4 hours; CHEM 7750, 1 hour; CHES 7950, 4 hours. For the Ph.D. 60 hours of courses must be completed. These must include the core courses listed above, 12 hours; CHEM 8990, 10 hours; CHEM 7750, 2 hours; CHEM 7950, 6 hours. The rest of the courses usually are taken in the major area. Directed Study, CHEM 7930, may be taken for a maximum of 21 hours. M.S. students must pass three cumulative examinations; Ph.D. students must pass 5 cumulative exams and an oral general examination. All graduate students must orally present their research and defend their theses or dissertations in the final oral examination.

Civil Engineering - M.C.E., M.S., Ph.D.

The Department of Civil Engineering offers graduate-level instruction and research programs leading to the degrees of Master of Civil Engineering, Master of Science and Doctor of Philosophy. The objectives of these programs are to provide qualified students an opportunity for advanced training and specialization and to enable them to gain experience in conducting engineering research and in the interpretation and communication of their findings. The department offers programs in construction engineering and management, environmental engineering, geotechnical engineering, hydraulics/hydrology, pavements and materials, structural engineering and transportation engineering. Course work may be taken outside the department in supportive disciplines such as applied statistics, building science, computer science or mathematics, provided there is justification for doing so.
All applicants must have earned a baccalaureate degree in civil engineering - B.C.E., B.S. or B.S.C.E. - or a closely related area and must have completed such formal training as to warrant advanced study in the major and minor fields. There is no formal foreign language requirement. A thesis is required of all candidates for the M.S. A minimum of 30 semester hours of graduate-level course credit must be completed satisfactorily. At least six of the 30 hours must be in CIVL 7980 and at least 24 hours must be in graduate course work other than CIVL 7980. Candidates must pass a comprehensive examination covering the course work, research and thesis.

Admission requirements for the Master of Civil Engineering are basically the same as those for the M.S. The program consists of a minimum of 30 semester hours of graduate-level courses. At least three of the 30 hours must be in CIVL 7980 and at least 27 hours must be in graduate course work other than CIVL 7980. Candidates must pass a comprehensive examination covering the course work and the engineering project involved.

Ph.D. program applicants must have earned the master’s degree in civil engineering or a related area, or must have completed at least a year of study at the graduate level. Performance in either case must have been of such quality as to justify admission to the doctoral program.

The Ph.D. is conferred in recognition of mastery of a specific field of knowledge and a contribution to that engineering discipline through the doctoral dissertation. The degree is a research degree, requiring not only completion of certain technical requirements but proof of the candidate’s ability to work independently within an engineering research environment.

A doctoral student must complete a written comprehensive examination with a follow-up oral critique administered by the student’s advisory committee. The examination may not be taken sooner than one year after the student begins doctoral course work. Additional course work may be prescribed to strengthen deficiencies where examination results indicate a lack of significant academic preparation or the student may be denied the right to continue in the program. One retake may be permitted but no earlier than one year after initial failure. Upon successful completion of the examination, the student becomes a candidate for the Ph.D.

After successfully completing the comprehensive examination, the doctoral candidate will defend the selected dissertation topic, which must represent a significant contribution to state-of-the-art knowledge. This may be included in the oral critique of the comprehensive examination if the advisory committee agrees. Once the committee approves the research topic, the doctoral candidate may proceed with the research and dissertation. When it is completed, the candidate will defend the completed dissertation before the advisory committee and the outside reader appointed by the Graduate School.

Communication - M.A.

The graduate program offers the Master of Arts. Applicants must hold a bachelor's degree from accredited institutions. The M.A.-thesis requires 31 hours beyond the bachelor’s degree, including a thesis. Applicants must hold a bachelor’s degree from accredited institutions. The M.A.-non-thesis requires 30 hours, including appropriate field experience, but does not require a thesis. Students entering either program without previous work in Communication must earn an additional 9 credit hours at the graduate level.

The Communication major requires 31 semester hours in Communication for the M.A.-thesis and 30 for the M.A.-non-thesis, including COMM 7000, COMM 7010, and COMM 7020. Students must pass a written qualifying examination covering COMM 7000, COMM 7010, COMM 7020, and basic research methods at the completion of these three courses to continue their program. All students must pass comprehensive examinations. There is no foreign language requirement.

Communication Disorders - M.C.D., M.S.

The Department of Communication Disorders offers programs in Speech-Language Pathology and Audiology. Both are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association (ASHA).

Two degree options are available; neither has a language requirement. The Master of Science requires a minimum of 41 hours of graduate course work, including CMDS 7990, Thesis. CMDS 7940, Field Experience, is optional, depending on clinical experience. The Master of Communication Disorders (M.C.D.) requires a minimum of 41 hours (audiology) or 43 hours (speech-language pathology) of graduate course work and appropriate field experience. This is a non-thesis degree but it does require the passing of a comprehensive examination.

Master’s-level candidates who enter the Communication Disorders programs having majored in another field at the undergraduate level must make up certain pre-requisites. This is to ensure an adequate background for the graduate-level courses and that the student will meet ASHA academic requirements. Generally, 10 such courses are prescribed by the student’s adviser.

Enough latitude exists that a plan of study may be designed according to the student’s career interests; however, the curriculum planned must conform with ASHA academic requirements and Alabama Board of Education certification requirements, if applicable. Students then are prepared for careers in school systems, clinics, hospital/rehabilitation centers, physicians’ offices, private practice and for pursuing the doctoral degree.

Community Design and Planning - M.C.P.

Graduate study in the community planning program leads to the professional degree, Master of Community Planning (MCP). The program is devised to prepare students with a background in the environmental design fields for careers in the practice of community design and planning in both the public and private sectors. The field of community design and planning is both an art and a science, for it demands design creativity, technical competence and procedural sensitivity in the search for better communities. Graduates must be skilled at describing and analyzing urban processes and conditions; at designing and evaluating creative alternatives to shape future growth and development; and at devising and recommending appropriate mechanisms for the implementation of their proposals.

The program concentrates primarily on the physical development of cities and towns. Within this broad focus, there are two areas of emphasis which include urban design, historic preservation, land planning and development, and site design. There are study options available with the professional degree programs in architecture and landscape architecture, and with the graduate degree program in public administration (each of which requires separate application). Entering students must hold a degree from an accredited institution and have acceptable GRE scores; there is no language requirement. Students will normally complete the required work in two academic years. Studies include a core sequence of required courses, required seminars on focused topics within the field, elective work selected in consultation with the faculty, and an individual design synthesis project undertaken during the final year.

Computer Science and Software Engineering - M.Sw.E., M.S., Ph.D.

Graduate study in the Department of Computer Science and Software Engineering (COMP) leads to the non-thesis Master of Software Engineering degree (M.Sw.E.) or research oriented Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in computer science and software engineering. All applications are reviewed by the COMP Graduate Admissions Committee.

To enter the M.S. or the M.Sw.E., the student must hold a bachelor’s degree or its equivalent from an institution of recognized standing. The student also must have the pre-requisite undergraduate experience in areas of computer science and/or software engineering. If the student has deficiencies in the pre-requisites, he or she will be required to take appropriate undergraduate courses. All applicants must submit Graduate Record Examination scores for the general test. The M.S. program requires 30 semester credit hours, including six credit hours for research and thesis. The M.Sw.E. program requires 33 semester credit hours, including three credit hours for the software engineering design project. There is no language requirement.

For the Ph.D. program, the applicant must hold a master’s degree or have successfully completed a minimum of one academic year of graduate study, from an institution of recognized standing in an area related to the proposed doctoral study. All applicants must submit GRE scores for the general test. The student will take a written qualifying examination...
tion soon after gaining admission to the program. Additional examinations, as described in the general Graduate School requirements, are given throughout the program, culminating with the defense of the dissertation. There is no language requirement for the Ph.D. The program typically includes at least one academic year of course work and one year of research beyond the master’s level.

**Consumer Affairs - M.S., Ph.D.**

Graduate study in the Department of Consumer Affairs, College of Human Sciences, leads to the Master of Science and the Doctor of Philosophy Degrees. Major focus areas are apparel, interiors, and textiles. The department emphasizes integration of basic and applied knowledge from multiple fields to enhance professional skills for careers in textile and apparel product development and design; production management; retail management; merchandising in textile and apparel retail or design firms, design of interior spaces; quality control; and college teaching and research. A foreign language is not required. Entrees with limited undergraduate backgrounds in their chosen area may need to complete some undergraduate courses. Graduate teaching and research assistantships are available.

The M.S. in Consumer Affairs - Apparel or Interiors offers a Thesis and a Non-Thesis Option. Individually designed focus areas incorporate courses in Consumer Affairs and other departments. Designated specialization tracks include consumer behavior; forecasting; marketing; production management; retail management; interior design; international design and product development; and entrepreneurship. Students are encouraged to complete an internship with industry.

The Thesis Option requires a minimum of 30 semester hours, including at least four hours of CAHS 7990 Research and Thesis. Required courses include CAHS 7050, CAHS 7950, CAHS 7990 (2 hour minimum each semester during research thesis), CAHS 7100 or CAHS 7670 or CAHS 7690, a course in statistics at the graduate level, plus three hours outside the department.

The Non-Thesis Option requires a minimum of 36 semester hours, including CAHS 7050, CAHS 7950, CAHS 7980, CAHS 7100 or CAHS 7670 or CAHS 7690 and a course in statistics at the graduate level plus three hours outside the department. A Final Comprehensive Written Exam is required.

The M.S. and the Ph.D. in Integrated Textile and Apparel Science are offered as joint degrees with the Department of Consumer Affairs, College of Human Sciences and the Department of Textile Engineering, College of Engineering. (See Interdepartmental Graduate Degrees) Students may apply for admission and/or assistantships in either department. Graduate committees include faculty from both departments.

The M.S. in Integrated Textile and Apparel Science requires 30 or more semester hours of graduate courses. Thesis and Non-Thesis Options are available. This is a companion degree to the Ph.D. in Integrated Textile and Apparel Science.

The Ph.D. requires a minimum of 60 semester hours of graduate courses plus a minimum of 10 semesters of Research and Dissertation. After completion of the integrated core courses, students choose either a textiles track, an apparel track, or an integrated track.

**Counseling and Counseling Psychology - M.Ed., M.S., Ed.S., Ed.D., Ph.D.**

Master's, specialist and doctoral degrees are offered in the Counseling and Counseling Psychology Department. Areas of specialization are in school counseling (CPS), school psychology (CSP), community agency counseling (CCA), counselor education (CED) and counseling psychology (COP).

Master's degree programs prepare students for entry-level professional positions as counselors in a variety of human service agencies such as public schools, community mental health centers, drug and alcohol treatment programs and university counseling centers.

The specialist and doctoral degree programs provide advanced preparation in the delivery of counseling and psychological services and prepare students for supervisory and leadership roles in schools, universities, and human service agencies. The doctoral programs also require that students demonstrate skills in independently conducting research through the dissertation.

Following completion of course work, students in all programs must pass a comprehensive written and/or oral examination covering all program content. All departmental programs require extensive extramural internships in placements related to the area of professional preparation.

The master’s degree programs in school counseling and community agency counseling are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). The doctoral degree program in counselor education is accredited by CACREP. The master's and specialist degree programs in school psychology and school counseling are approved by the Alabama State Department of Education and by the National Council on Accreditation of Teacher Education (NCATE). The counseling psychology doctoral degree program is accredited by the American Psychological Association (APA).

To be considered for admission for any of the department's programs, an applicant must submit application materials directly to the Graduate School. Concurrently, applicants submit an application supplement to the department. Provided that general Graduate School admission requirements are met, the department admissions committee considers all submitted materials and determines whether to issue an invitation for an admissions interview. All admissions decisions to doctoral programs in the department occur in the spring semester. Application materials for doctoral studies in counseling psychology should be received by the department by January 15. Feb. 1 is the application deadline for counselor education and school psychology doctoral programs.

Admissions decisions for master’s and specialist degrees occur in the spring semester for applicants who will begin their studies in the fall. Completed applications for fall admissions to master’s and specialist programs have a March 15 deadline. The department does not make admissions decisions for spring or summer terms.

Applicants are advised that, for some of the programs, the faculty typically prefer GRE scores which exceed the minimum set by the Graduate School. Moreover, credit hour requirements for master’s degree programs in the department exceed the Graduate School minimum. Similarly, the Graduate School requirements for the Ph.D. and Ed.D. degrees are typically exceeded by doctoral programs in the department. More specific details about the requirements, assistantships and policies for each of the programs are contained in materials available from the department and on the web at www.auburn.edu/ccp.

**Curriculum and Teaching - M.Ed., M.S., Ed.S., Ed.D., Ph.D.**

Graduate programs in the Department of Curriculum and Teaching prepare teachers and leaders in early childhood, elementary, middle school, secondary, music, reading, and career and technical education. Secondary education teaching fields are English language arts, foreign languages, mathematics, science, and social science. Career and technical education teaching fields are agriscience and business. Graduate study leads to Master of Education, Master of Science, Specialist in Education, Doctor of Education, and Doctor of Philosophy degrees and to fifth- and sixth-year certification in Alabama.

Admission to graduate programs in the Department of Curriculum and Teaching is competitive in respect to past achievement, scholarship, potential, and professionalism. Those seeking admission to graduate programs must have a bachelor’s or master’s degree from an accredited college or university. Admission to doctoral programs requires competitive GRE scores, current resume, statement of purpose, letters of recommendation, and approval by the Department. The typical combined GRE score at the doctoral level is above 1000 with a score of above 450 on each subtest. Admission to the Specialist in Education programs and the master’s programs requires competitive GRE scores, letters of recommendation, and approval by the Department. Typically, students admitted to the Specialist in Education degree programs and the master’s programs have GRE Verbal Subtest scores above 400 and Quantitative Subtest scores above 400. Students wishing sixth-year certification should consider completing a Specialist in Education degree program in the appropriate area of specialization. Although Alabama awards sixth-year certification (Alabama AA certification) without the Ed.S. degree, some nearby states do not.

Traditional master’s degree programs leading to Alabama A certification require at least 30 semester hours of course work. Plans of study for secondary education majors must include at least 15 hours in their respective teaching fields; plans of study for career and technical education majors must include at least nine hours in their respective teaching fields. M.Ed. and M.S. options are available for all areas of specialization in the department. M.S. programs require a thesis; M.Ed. programs do not.
The Fifth-Year Program for Teacher Certification is available for individuals with bachelor’s degrees in certain appropriate fields who did not complete requirements for certification to teach. Fifth-Year Programs are currently offered in music education, in four secondary education teaching fields (English language arts, foreign languages, mathematics, and science), and in two career and technical education fields (agriculture and business). To be eligible for admission to programs in music education and secondary education, students must have earned a bachelor’s degree (or its equivalent) in the appropriate teaching field. Applicants must have a GPA of at least 2.75 on all undergraduate work attempted and competitive GRE verbal and quantitative subtest scores. All Fifth-Year programs include courses in the teaching field, professional courses, and a one-semester internship. Students must complete a minimum of 40 hours of graduate course work in addition to appropriate undergraduate deficiencies. Full-time graduate students should allow at least four semesters for completing Fifth-Year Programs. Upon satisfactory completion of Fifth-Year Programs, students are awarded M.Ed. degrees and are eligible for Alabama A certificates. Entrance into the Fifth-Year Programs in Secondary Science is once a year. The Fifth-Year program in Science is a cohort group beginning each summer semester with an application deadline of March 15.

Specialist in Education degree programs require at least 30 semester hours beyond the master’s degree, including professional course work in professional education and the teaching field. Candidates must also complete a field project. Students who complete Ed.S. degree programs are eligible for sixth-year certification (Alabama AA certificate).

Doctor of Philosophy programs are offered in early childhood, elementary, secondary English language arts, secondary mathematics, secondary science, secondary social science, music, and reading education. A Doctor of Education program is offered in career and technical education. All Ph.D. programs require at least 80 semester hours beyond the bachelor’s degree; the Ed.D. program in career and technical education requires at least 60 semester hours beyond the bachelor’s degree. Research methods and statistics and foundations of education courses are components of all doctoral programs. The remaining hours are divided between the area of specialization and approved support courses. Plans of study for students in secondary education must contain at least 30 semester hours of graduate courses in their selected teaching fields. Students in secondary education who are employed in or wish to seek employment in post-secondary education are advised to complete at least 40 semester hours in their teaching field. Doctoral students must register for at least 10 semester hours of doctoral research while completing a dissertation.

Discrete and Statistical Sciences - M.A.M., M.P.S., M.S., Ph.D.

Admission is based on Graduate Record Examination scores, undergraduate GPAs and recommendations from former teachers. Admission is not restricted to mathematics majors. Admission to the Master of Probability and Statistics program is open to a wide range of undergraduate majors in which statistics is applied. Students entering this program should have had the equivalent of STAT 3600-3610.

The Master of Probability and Statistics degree requires a thesis and an oral defense. Details of this program may be found in this Bulletin under “Master’s Degree Program.” Master of Science in Mathematics and well as Statistics are offered. The department currently offers the following non-thesis master’s degrees:

- The Master of Applied Mathematics with concentration in discrete mathematics will give students a strong foundation in several fundamental areas of discrete applied mathematics, such as information theory, coding theory, graph theory, design theory, enumeration, complexity theory and cryptography. The courses to be taken for the degree are chosen by the student and the student’s advisory committee within certain constraints.

- The Master of Probability and Statistics degree provides a solid foundation for careers involving applications of statistics. Each candidate must complete courses in linear models, multivariate analysis and regression analysis. Candidates also must complete a project. An interdisciplinary graduate minor in statistics is also available for interested students.

Detailed course requirements for the Ph.D. are available from the department. They are designed to make sure students have a strong foundation in and understanding of a broad body of knowledge related to their field of study. At least one oral and two written preliminary examinations are required of Ph.D. students. The written examinations are to be on subjects selected with the advice and consent of the student’s advisory committee and normally are taken during the second year after admission to the Ph.D. program.

Qualified students may be appointed as graduate teaching assistants in the department. These assistantships provide the opportunity for students to obtain teaching experience under the supervision of experienced staff members. Appointments are subject to periodic review for evidence of satisfactory teaching performance and progress toward a degree.

The Baskerville Fellowship is a full academic year fellowship which is awarded each year to a qualified student in the Division of Mathematics. The department occasionally has Graduate Research Assistantships in conjunction with departmental research programs.

Economics - M.S.

Graduate study in economics leads to the M.S. degree. The graduate program prepares students for careers in business, teaching, government agencies and advanced study in economics at doctorate-granting institutions. The program permits flexibility to accommodate a range of student goals and concentration in specific areas of economics.

Applicants must hold a bachelor’s degree or its equivalent from a recognized institution and present a minimum of 20 semester hours of undergraduate course work in economics, including Principles of Economics, Statistics and Intermediate Economic Theory. Students lacking pre-requisite courses may be required to take more than the 30 hours required for the M.S. degree. All applicants must submit Graduate Record Examinations scores. Admission to graduate work in Economics shall be determined by the department’s Graduate Committee.

The candidate for a Master of Science may select either a thesis or non-thesis option. Students choosing the thesis option are required to complete at least 24 semester hours of course work in economics at the 6000-level or above, plus 6 hours of ECON 7990, Research and Thesis, plus the thesis. An oral defense of the thesis is required. There is no language requirement for the M.S. The non-thesis option, participation in which must be approved by the Graduate Committee, requires 24 hours of course work in economics at the 6000-level or above, and additional 6 hours of course work in economics at the 6000-level or above, and passing grades on written comprehensive examinations in Microeconomic Theory, Macroeconomic Theory, and Econometrics.


Those seeking full admission to graduate programs in the Department of Educational Foundations, Leadership and Technology must have a bachelor’s or master’s degree from an accredited college or university and submit Graduate Record Examination scores for verbal and quantitative subtests. Students who hold master’s degrees from accredited institutions and have completed at least 20 semester hours of graduate GPA of at least 3.0 may enroll for course work leading to sixth year certification.

The department offers degrees at the master’s level in the areas of Adult Education, Library Media, Administration of Elementary and Secondary Education, Administration of Higher Education, and Administration of Supervision and Curriculum. Specialist degrees are also available in Adult Education, Library Media, and Administration of Elementary and Secondary Education. The department offers a Doctor of Education (Ed.D.) in the areas of Adult Education, Administration of Elementary and Secondary Education, Administration of Higher Education, and Administration of Supervision and Curriculum. A Doctor of Philosophy (Ph.D.) option is offered in Educational Psychology with two specializations or emphases from which a candidate may choose: learning and measurement/research.

Master’s degree programs require a minimum of 33 semester hours, including course work in foundations of education (six hours), electives (six hours) and the area of specialization, including a practicum. These programs may be planned to meet Alabama A certification.

Six-year programs may result in a Alabama AA certification. They require a minimum of 33 semester hours beyond the master’s degree, including EDLD 8940 - Directed Field Experiences, AED 8980 - Field Project, or EDM 7940 - Directed Field Experience. Specialists in Education degrees are not required to complete Alabama AA Certification; however, the Ed.S. degree requirements for the Administration of Elemen-
Electrical and Computer Engineering - M.E.E., M.S., Ph.D.

Electrical and Computer Engineering (ECE) offers graduate programs of instruction and research leading to master's and doctoral degrees. Instruction is offered and research facilities are available to support graduate study in control systems, digital signal processing and communications, electromagnetics modeling and analysis, microelectronics, power systems, digital systems, and computer engineering. Additionally, individualized programs that cross the traditional boundaries of engineering, mathematics and the sciences can be accommodated.

For admission at the master's level, the applicant must hold a bachelor's degree and its equivalent from an institution of recognized standing. Master's degree programs are available to graduates of engineering curricula and, in cases of exceptional academic credentials, to graduates of mathematics and science curricula. The M.S. program is the only master's degree program open to on-campus students.

An applicant for admission to the Ph.D. program must hold a master's degree, or have taken a minimum of one academic year of graduate study, from an institution of recognized standing in an area of study related to the proposed doctoral work.

All applicants must submit Graduate Record Examination scores for the General Test.

Applications for admission are reviewed by the departmental graduate faculty. Decisions are based upon the applicant's potential for success in advanced-level study as indicated by letters of reference, GRE scores and previous academic achievement.

The master's degree programs of study require a minimum of 30 semester hours of work, which must include courses in at least three of the major research areas in ECE, and no more than 3 semester hours of independent study. The M.S. degree program includes 4 to 6 semester hours of research and thesis. M.S. students must spend at least one semester of full-time study in residence. The M.E.E. program does not require a thesis. M.E.E. students must pass a comprehensive examination before completion of the program, covering their graduate course work and fundamental undergraduate material in ECE.

Students admitted to the doctoral program will take a written qualifying examination soon after entering, covering fundamental undergraduate material in ECE and first-year graduate material in the major area of study. Additional examinations are given throughout the program. The program generally consists of a minimum of 60 semester hours of course work beyond the bachelor's level, including at least 10 hours of research and dissertation. A minor of at least 9 semester hours in a closely related field outside of the major area of study, either within or outside of ECE, is required.

English - M.A., M.T.P.C., Ph.D.

The Department of English offers programs leading to the Master of Arts, Master of Technical and Professional Communication, and the Doctor of Philosophy. The graduate program prepares students for careers in teaching and research, writing, editing, business, and other professions seeking broadly educated individuals skilled in analysis and communication. In addition, individuals holding a teaching certificate may, with an additional graduate course in Communication, earn Alabama Class A or AA certification under a state-approved Strengthened Subject Matter Option program in English/Language Arts.

For admission to the M.A. program, the student must normally have a bachelor's degree from an accredited institution with the equivalent of 24 semester hours of credit in upper-division English courses and satisfactory scores on the general portion of the GRE. Qualified applicants with undergraduate degrees in related disciplines will also be considered. Applicants should also submit three letters of recommendation, a sample of their writing and a statement of purpose. Applicants lacking the required undergraduate courses must typically make up these deficiencies before they can be admitted to the degree program. For the M.A., students may select a thesis or non-thesis option. The thesis option requires a minimum of 30 credit hours, including at least four hours of thesis credit. The non-thesis option requires a minimum of 30 credit hours of course work. With the approval of their advisory committee, students in either option may take up to six hours in a minor field. Special concentrations are possible in creative writing (with a creative thesis in poetry or fiction) and in rhetoric and composition. Students must take a four and one-half- or six-hour written examination over a departmental reading list. Thesis-option students also take a one-hour oral examination over the completed thesis. Students in master's options must demonstrate a reading knowledge of one foreign language.

For admission to the Master of Technical and Professional Communication program, the student must normally have a bachelor's degree from an accredited institution, satisfactory scores on the general portion of the GRE, and excellent writing skills. The M.T.P.C. requires a minimum of 30 credit hours, consisting of four required courses (ENGL 6000 Technical and Professional Editing, ENGL 6010 Document Design in Technical and Professional Communication, ENGL 6030 Topics in Technical and Professional Communication, and ENGL 7010 Technical and Professional Communication: Issues and Approaches), nine hours of elective courses in English approved by the student's advisory committee, and nine hours in a coordinated minor approved by the student's advisory committee. Students must compile a portfolio of work accepted by the student's advisory committee and pass an oral examination over the major and minor.

For admission to the Ph.D. program, the student must normally have a master's degree in English and satisfactory scores on both the general portion of the GRE and the subject test. Applicants should also submit three letters of recommendation, a sample of their scholarly writing and a statement of purpose. The Ph.D. requires a minimum of 60 credit hours beyond the B.A., including 10 hours of dissertation credit. Students with an M.A. in English from other institutions usually need only eight or nine additional courses. After completing course work, students take general doctoral examinations, both written and oral, over three of the four areas. These areas might include one historical period, a genre, a major author, language and linguistics, or a problem in literary theory, British or American literature. There are no required courses or area distribution requirements; however, students should be able to demonstrate a broad knowledge of English studies at their examinations. After passing these examinations, students write and defend a dissertation. Doctoral students must demonstrate a reading knowledge of two foreign languages or advanced proficiency in one foreign language.

The department offers financial aid in two forms, fellowships and assistantships. Graduate Teaching Assistantships are generally available for the most qualified students. The typical teaching appointment is just under half-time. Assistantships are renewable, provided that students teach satisfactorily and make adequate progress toward the degree. A few outstanding applicants also receive first-year fellowships. Review of applications for financial aid will begin on Jan. 15.

Entomology - M.S., M.Ag., Ph.D.

Graduate Degree Program study in entomology emphasizes basic and applied aspects of the science of entomology and leads to the degrees of Master of Science, Master of Agriculture and Doctor of Philosophy. Admission is based primarily on a combination of GPA and Graduate Record Examination scores. The graduate program prepares students for careers in teaching, research and extension with a variety of academic, governmental, state, private and industrial opportunities. Master of Science (M.S.) For a major in entomology at the M.S. level, the student should have a baccalaureate degree from a recognized institution with pre-requisite training in zoology, botany, chemistry, physics, and mathematics. Qualified students lacking mandatory courses may be admitted but will be required by the student's advisory committee to make up any deficiencies.

The M.S. program in entomology is available to qualified undergraduates who wish to pursue a master's level program that requires a thesis. Importance is placed on both classroom and research training. Students holding baccalaureate degrees in agriculture or the biological sciences may find this degree program helpful to their professional develop-
opment and career goals. The educational goals and objectives of the M.S. degree program are to produce graduates who are fundamentally trained in the scientific principles and general knowledge of entomology and related sciences and who are able to apply these principles to successfully solve problems of an entomological nature or employ this knowledge at an advanced level of study.

The M.S. requires a minimum of 30 semester hours, including 13 core semester hours (ENTM 6200, Insect Physiology; ENTM 7220, Insect Morphology; and ENTM 7300, Systematic Entomology), one hour of ENTM 7950 (Seminar), and a thesis. A graduate-level course in statistics is also required. A minimum of 21 semester hours must be taken in entomology and a specialty area of at least 10 semester hours may be selected from related subject matter fields. There is no language requirement for the M.S. degree.

Master of Agriculture (M.Ag.). The M.Ag. program with a specialization in entomology is available to qualified undergraduates who wish to pursue a master’s level program that does not require a thesis. Importance is placed on both classroom and practical training with emphasis on a graduate internship that permits individual mentoring. Students holding baccalaureate degrees in agriculture, the biological sciences, and some aspects of business may find this degree program helpful to their professional development and career goals.

The M.Ag. with a specialization in entomology carries the same entrance requirements as the M.S. but is a non-thesis degree; an internship (ENTM 7920) and a course in statistics are strongly recommended. The M.Ag. requires a minimum of 32 semester hours, 21 of which must be in entomology, including 13 core semester hours (ENTM 6200, Insect Physiology; ENTM 7220, Insect Morphology; and ENTM 7300, Systematic Entomology) and related courses with the remainder taken from a variety of subject areas determined in consultation with the student’s advisory committee. A comprehensive examination is required after all courses are completed. There is no language requirement for the M.Ag. degree.

Doctor of Philosophy (Ph.D.). The purpose of the Ph.D. program in entomology is to produce graduates who are fundamentally trained in the scientific principles and general knowledge of entomology and related sciences and who are able to employ this knowledge at an advanced level of study and to apply these principles to successfully solve problems of an entomological nature.

The Ph.D. program requires 61 semester hours of course work, including 13 core semester hours (ENTM 6200, Insect Physiology; ENTM 7220, Insect Morphology; and ENTM 7300, Systematic Entomology), two hours of ENTM 8950 (Seminar), and a dissertation based on the student’s original research. A graduate-level course in statistics is also required. Of the 61 semester hours, 30 must be graded (eg. A, B, C) graduate courses 7000 and above, 20 of which must be completed under the 09 classification at Auburn University while registered in the Ph.D. program. A doctoral student must also complete 30 hours of additional course work (may include ungraded courses, 6000-level courses, 7990, 8990). There is no language requirement for the Ph.D. degree.

Finance - M.S.B.A.

The M.S.B.A. program offers specialized training to graduate students desiring a more intense background in the field relative to the general preparation provided by an M.B.A. The objective of the program is to prepare students for careers in their chosen profession or for further graduate work. The program has a thesis and non-thesis option (the non-thesis option requires additional course work). The program of study is determined by the student and the student’s advisory committee based on the student’s background and areas of interest.

Fisheries and Allied Aquacultures - M.Ag., M.S., Ph.D.

Graduate study in the Department of Fisheries and Allied Aquacultures leads to the degrees of Master of Aquaculture, Master of Science and Doctor of Philosophy. The program prepares students for productive careers in the private and public sectors in aquaculture, aquatic ecology, and fisheries biology and management. Students desiring admission for graduate study should have a degree from a recognized institution and should have adequate course work in biology, zoology, botany, chemistry, physics, and mathematics. Qualified students lacking an adequate background in these areas may be admitted but may be required to correct deficiencies after they enroll at Auburn.

The non-thesis Master of Aquaculture degree is offered to students seeking broad practical training and preparing for a career in aquaculture management. The degree requires successful completion of a minimum of 39 semester credit hours which includes a 3 to 6-month internship. A minimum of 9 credits must be taken from other departments, 6 of which are required in business-related courses.

The Master of Science degree combines classroom study and an introduction to scientific research. A minimum of 30 semester credit hours of course work beyond a bachelor’s degree and a thesis are required. At least 9 hours must be taken from other departments.

Admission to the Doctor of Philosophy degree program usually requires that the student have a master’s degree from a recognized graduate program. The doctoral program emphasizes original, scholarly research and includes significant advanced course work. The Ph.D. degree requires a minimum of 60 semester credit hours beyond the bachelor’s degree and a dissertation describing original research. A minimum of 30 hours must be graded (7000-level and above), of which 20 must be taken at Auburn University.

All graduate students are expected to be engaged in service to the department’s research and education programs as deemed appropriate by the academic adviser and department head. All students receiving departmental assistantships must be registered as full-time students each semester, and all M.S. and Ph.D. students must be registered for at least one credit hour of thesis and dissertation research each semester.

Forestry - M.F., M.S., Ph.D.

Graduate study in forestry leads to Master of Forestry (M.F.), Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees. Two M.F. options are available. One, for students with undergraduate degrees in forestry, involves primarily advanced course work and can be completed in one year. A second M.F. program, for individuals with baccalaureate degrees in fields other than forestry, is a two-year program which begins with a 10 week Summer Field Practicum. The M.S. program, which involves research and a thesis, and normally requires two years for completion, can be tailored for students with degrees in forestry, the biological sciences, physical sciences, economics, engineering and business. Outstanding M.S. students, particularly those interested in careers emphasizing research, education, and scholarship, often study for the Ph.D.

M.S. and Ph.D. degrees are offered in the fields of forest biology and ecology, forest measurements, forest management/economics, timber harvesting/forest operations and forest products. A Ph.D. in economics is also offered through the interdepartmental program in economics which is administered jointly by the Department of Agricultural Economics and Rural Sociology and the School of Forestry and Wildlife Sciences. An urban forestry minor, administered in cooperation with the Department of Horticulture, is available for M.F., M.S. and Ph.D. degrees.

In addition to meeting admission requirements of the Graduate School, applicants to graduate study in Forestry are evaluated and recommended for admission by the graduate faculty of the School of Forestry and Wildlife Sciences on the basis of a holistic examination of their scores on the Graduate Record Examination (GRE), their previous academic record, experience, and recommendations. While the following are not absolutes, the faculty generally expect a minimum GPA of 3.0 in previous academic course work and minimum scores of 450 on the verbal and 550 on the quantitative element of the GRE. Applicants not holding a B.S. in forestry may be required to take necessary background courses. These needs are determined by the student’s advisory committee and approved by the dean with due consideration for the student’s previous training and experience. There is no foreign language requirement for any of the graduate degrees.

Forestry M.S. and Ph.D. students must complete Research Methods (FORY 7510). All Forestry graduate students (M.F., M.S. and Ph.D. candidates) are also required to enroll for Practicum in College Teaching (FORY 7910) and to assist with one course during their tenure. They must also enroll for Graduate Seminar (FORY 7950); M.F.s once, M.S. and Ph.D. candidates twice.

The M.F. degree for students with an undergraduate degree in forestry requires a minimum of 31 semester hours (at least 16 or which must be at the 7000-level). The M.F. degree for students with baccalaureate degrees in fields other than forestry requires a minimum of 71
semester hours (35 hours of specified undergraduate course work plus 36 hours of required graduate course work). Requirements for both M.F. programs include a M.F. paper. The M.S. requires a minimum of 30 semester hours, including at least 21 in a major area of concentration. A minimum of 4 but no more than 6 credits in Research and Thesis (FORY 7990) should be included in the student’s plan of study. Students are required to submit a thesis proposal and a thesis based on original research.

The Ph.D. program requires a minimum of 61 hours beyond the B.S. At least 36 hours approved by the student’s advisory committee must be taken in graded (e.g., A, B, C) graduate course work at the 7000-level and above. The requisite 10 hours of Research and Dissertation (FORY 8990) (but no more) should be included in the plan of study. Students are required to submit a dissertation proposal and a dissertation based on original research. The M.F. paper, M.S. thesis or Ph.D. dissertation are each major elements of the respective programs.

Additional information on forestry graduate programs and degree requirements can be found in the School’s Graduate Student Guide (www.forestry.auburn.edu/graduate/sgguide.html).

French - M.Ed.

Graduate studies in French are available through the master’s degree options offered by the Department of Curriculum and Teaching in the College of Education. Three options include the traditional M.Ed., the traditional M.S. and the Fifth-Year Program for Teacher Certification. These graduate degrees lead to Alabama A Certification. Requirements for admission and description of degree program of studies are detailed among graduate offerings of the Department of Curriculum and Teaching.

Geology - M.S.

Graduate study in Geology leads to the Master of Science degree. The graduate program is oriented toward providing a sound practical background in preparation for employment in industry or government service or for further academic pursuits. The curriculum provides broad training in geology through a series of core courses with the opportunity for specialization through electives, thesis research and/or directed studies.

For a major in geology at the master’s level, the student must have a bachelor’s degree in geology from an accredited institution with 40 semester hours in geology, satisfactory scores on the Graduate Record Examinations general test and three letters of recommendation. Undergraduate course deficiencies may be made up during the student’s first year in the degree program.

The thesis option M.S. degree in geology requires a minimum of 30 semester hours including 12 hours of required 7000-level geology courses; 9 hours of 7000-level geology elective courses; 3-5 hours of approved 6000 or 7000-level geology or supportive electives, of which no more than 3 can be GEOL 7800 (Directed Study); and 4-6 hours of thesis. Students electing the non-thesis option must complete a minimum of 40 hours, including 12 hours of required 7000-level geology courses; 24 hours of formal geology elective courses (at least 15 hours at the 7000-level); and 4 hours of 6000 or 7000-level geology or approved supportive electives, all or a portion of which may be GEOL 7800 (Directed Study). Both options require (1) satisfactory completion of a summer field course or comparable field experience prior to beginning the second year of residence and (2) demonstrated working knowledge of a computer language or computer based geographic information system (G.I.S.) before graduation.

Health and Human Performance - M.Ed., M.S., Ed.S., Ed.D., Ph.D.

Graduate study in the Department of Health and Human Performance leads to the degrees of Master of Education (M.Ed.), Master of Science (M.S.), Specialist in Education (Ed.S.), Doctor of Education (Ed.D.) and Doctor of Philosophy (Ph.D.). The advanced programs prepare students for careers in teaching and research in education, industry, government and social and human services.

For a major in Health and Human Performance at the master’s level, the student must have a bachelor’s degree from an accredited institution and satisfactory Graduate Record Examinations scores. Applicants without appropriate undergraduate degree preparation and course requirements may be asked to register in an appropriate undergraduate program before admission to the degree program or may be required to complete specific undergraduate courses prior to degree completion. Areas of specialization for the master’s program include biomechanics, exercise physiology, health promotion, motor development, motor skill learning, sport and exercise psychology, and pedagogy.

Graduate students interested in completing a minor in Sports Management must complete one course in the following areas: sports studies, fiscal management, educational leadership and psychology. Six hours beyond the degree requirements are required for the sport management minor.

The Ed.S. degree is a terminal degree and students interested in doctoral study should not enter this program. The master’s degree, satisfactory GRE scores, a statement of goals and references are required.

The Ed.D. degree program requires a master’s degree, satisfactory GRE scores, a statement of goals and references. Candidates must demonstrate competency in general foundations of education and research with a specialization in teaching and learning in physical education.

Requirements for the Ph.D. program include the master’s degree, satisfactory GRE scores, a statement of goals and references. Areas include biomechanics, exercise physiology and motor behavior.

History - M.A., Ph.D.

Graduate study in History leads to the degrees of Master of Arts and Doctor of Philosophy. The graduate program prepares students for careers in teaching, business, government and research.

For admission to the M.A. program, the student must have a bachelor’s degree from an accredited institution with 27 semester hours of history and a satisfactory GRE score. Applicants lacking course requirements must make up deficiencies before or after admission to the degree program. The M.A. requires a minimum of 31 hours (of which 21 must be in seminar courses, including HIST 7700) and a thesis. The M.A. program offers a specialization in archival studies, including practical training. The M.A. degree (non-thesis) is awarded to students in the doctoral program who have not previously earned the master’s upon passing the General Examination for admission to candidacy for the Ph.D.

For admission to the Ph.D. program, the bachelor’s degree with 27 semester hours of history and a satisfactory GRE score are required. The program requires a minimum of 65 semester hours beyond the bachelor’s degree (of which 43 must be at the 7000 or 8000 level exclusive of thesis or dissertation credit), including HIST 8700, 8710 and a dissertation. Candidates must demonstrate excellence in their major field of history and competence in two minor fields of history on their general examinations. In addition, students must take a minimum of 12 hours of course work outside their major and minor fields, six of which may be in a discipline other than history. Major fields in history include (1) United States to 1865 (2) United States since 1865 (3) Europe 1500-1815 (4) Europe since 1789 (5) History of Technology. Latin American history is offered as a minor field. A specialization in archival studies is also offered for graduate students who wish to prepare for careers in public history as professional archivists.

There is no language requirement for the master’s degree. The Ph.D. requires a reading knowledge of at least one foreign language as determined by the student’s doctoral committee. Language competency should be demonstrated before the student begins the second year of the doctoral program.

Horticulture - M.S., M.Ag., Ph.D.

Graduate study in Horticulture is directed toward the Master of Science and Doctor of Philosophy degrees. Graduates are prepared for careers in teaching, research, business, production, public service or extension. Master’s level programs are available to students with undergraduate degrees in horticulture and those from other fields seeking opportunities in horticulture-related careers. For the M.S. program, students must have a bachelor’s degree in horticulture or a related area from an accredited university and have satisfactory GRE scores. Applicants from related areas will be required to correct any undergraduate course deficiencies. The M.S. requires a minimum of 30 credit hours of graduate work, including at least 21 credit hours in the major field of
study. The student’s plan of study is individually tailored by the student, major professor and advisory committee to meet the student’s career goals. A thesis based on research by the student is required.

The Master of Agriculture is a non-thesis option which requires successful completion of 32 credit hours, 21 of which must be in agricultural sciences. Additional courses may be required for individual students and are determined by the major professor and advisory committee. There is no specific schedule of courses for M.S. or M.Ag. students or a foreign language requirement for any graduate students in horticulture.

Graduate students in a program requiring a thesis or dissertation will register for at least one hour of HORT 7990 or 8990 respectively, per semester. Doctoral candidates must follow all Graduate School and departmental requirements concerning course work. However, the advisory committee may require additional course work. The doctoral program emphasizes original and creative research with a required dissertation.

Human Development and Family Studies - M.S., Ph.D.

The Department of Human Development and Family Studies offers graduate instruction leading to the Master of Science degree with concentrations in child development, family relations and marriage and family therapy; and the Doctor of Philosophy with a focus on interpersonal competence and relationship dynamics within the context of the family. The Department emphasizes the integration of knowledge from various fields for the purpose of understanding and developing professional skills for careers in college or university teaching and research, teaching and supervision in programs for young children, parent education, marriage and family therapy, community service, Cooperative Extension, government, business and industry. To promote training and research, the Department operates the Auburn University Early Learning Center, Harris Early Learning Center of Birmingham and the Center for Marriage and Family Therapy. The marriage and family therapy option is accredited by the American Association for Marriage and Family Therapy Commission on Accreditation for Marriage and Family Therapy Education. Both the Auburn University Early Learning Center and Harris Early Learning Center of Birmingham are accredited by the National Academy of Early Childhood Programs, a division of the National Association for the Education of Young Children.

For admission, a background in the social and behavioral sciences is highly desirable and should include course work in human development, family relations, anthropology, sociology, psychology and statistics. Students without adequate preparation in these areas may be accepted upon the condition that they register for any additional courses deemed necessary by the department's graduate advisory committee. Applicants for admission to the Ph.D. program should hold a master’s degree. There is no language requirement for the M.S. or Ph.D. degrees.

The M.S. requires a minimum of 30 semester hours, including at least 21 in the major field, a thesis and a final oral examination covering the thesis research and other fundamental work. A minor in an allied or supporting area of study is encouraged. Students interested in completing the three-semester Marriage and Family Therapy Practicum are required to take and pass a clinical qualifying examination.

The Ph.D. program requires a minimum of 80 hours beyond the B.S. and consists of a theoretical and substantive emphasis in family and child relationships, a supporting emphasis that will provide a multidisciplinary understanding of children and families, a research and statistics component and an empirical dissertation.

Graduate research may focus on relationship studies at any stage of the life cycle, including parent-child, family, marital, non-marital, peer, friendship, family-child care-work and mentor-protege. Graduate assistantships are available to students who have achieved superior rank in their previous academic work.

Industrial Design - M.I.D.

The department offers the Master of Industrial Design degree which is accredited by the National Association of School of Art and Design (NASAD). The applicant must have a bachelor’s degree in industrial design or its equivalent from an institution of recognized standing. Applicants with a baccalaureate from other disciplines such as engineering, management, psychology, architecture and life sciences, may be admitted to the graduate program under condition that a minimum of 40 credit hours in industrial design will be completed at the undergraduate level. Normally, students are admitted to the 40 credit hour undergradu-
Materials Engineering - M.Mtl.E., M.S., Ph.D.

Materials Engineering offers graduate programs of instruction and research leading to the degrees of Master of Materials Engineering, Master of Science and Doctor of Philosophy. All applicants must submit GRE scores for the General Test. Students completing all degree programs are expected to have knowledge in the following areas: mechanical properties; materials structure; materials thermodynamics; kinetics; and electrical, optical and magnetic properties of materials. There is no foreign language or minor requirements for all degrees.

The M.Mtl.E. is intended for those who expect to enter the engineering profession at an advanced level or are practicing engineers wishing to gain additional fundamental knowledge in the field of materials. Emphasis is on professional development. Those students lacking the necessary background may be required to take additional work. The requirements for the degree are 33 credit hours including a final engineering report. The topic of the report will be agreed upon by the student and the advisory committee. Applicants must have a baccalaureate degree in engineering or science from an institution of recognized standing. Students must pass a qualifying examination prior to taking the final general comprehensive examination required by the Graduate School.

The M.S. is intended for those who seek advanced knowledge in materials science or engineering for a career in research or other professional practice. The applicant must have a baccalaureate degree or its equivalent in an engineering or scientific discipline from an institution of recognized standing. Those lacking the necessary background will be required to take additional work to ensure the continuity of their educational and professional experience. The M.S. program consists of 30 credit hours selected from areas of study appropriate to the objectives of the applicant and includes a thesis. Students must pass a qualifying examination prior to taking the final comprehensive examination required by the Graduate School.

The Ph.D. program requires that students pass qualifying oral examinations with a greater proficiency than master’s students prior to taking the comprehensive examinations. The program, arranged on an individual basis, will consist of a minimum of 60 credit hours, including dissertation, beyond the B.S. degree with at least 30 hours of 7000-level courses. The program of study is determined by the student and the student’s advisory committee based on the student’s background and areas of interest.

The M.M.I.S. Program offers advanced preparation for graduate students in Management Information Systems. This is a non-thesis program that requires the completion of a minimum of 30 semester hours selected by the student and advisory committee and the completion of a project chosen by the student and approved by the committee.

Mathematics - M.S., M.A.M., Ph.D.

The department offers programs leading to the Master of Science and Doctor of Philosophy in pure and applied mathematics and the non-thesis Master of Applied Mathematics. Actuarial science courses which cover the material in the first 10 actuarial exams are regularly taught. The internationally known faculty works in areas of algebra, analysis, geometry, linear algebra, logic, numerical analysis, probability, set theory and topology. Many faculty maintain applied research programs associated with several government and industrial laboratories. One faculty member holds the Associate of the Society of Actuaries designation. Admission to the program is based on a student’s undergraduate record, letters of recommendation from former teachers, GRE scores and graduate GPA (for doctoral students). The GRE subject test is recommended but not required. A bachelor’s degree in mathematics is not required, but new students are expected to have had rigorous courses in analysis and algebra. Some students who have not had these courses but otherwise are highly qualified are admitted with the understanding that they will make up this work early in the program of study.

The department follows the guidelines for graduate degrees set forth in this Bulletin. Also, doctoral students must satisfy a departmental preliminary examination requirement to continue their GTA.

Course work in mathematics may be transferred from other institutions, subject to university limitations.

Most students in the program are supported financially during their studies through Graduate Teaching Assistantships. The Baskerville Fellowship ($3,000) is awarded two out of three years to a qualified student in the Department of Mathematics. The department occasionally has Graduate Research Assistantships in conjunction with departmental contractual research programs. The department also has a limited number of Tuition Fellowships.

The department requires that all international GTAs who have responsibility for teaching a class be proficient in English. A score of at least 50 on the Test of Spoken English is required.

Mechanical Engineering - M.S., M.M.E., Ph.D.

The Mechanical Engineering Department offers graduate programs of instruction and research leading to the degrees of Master of Mechanical Engineering, Master of Materials Engineering (see separate listing of graduate program in Materials Engineering), Master of Science and Doctor of Philosophy. Educational and research facilities are available to support graduate study in engineering mechanics, experimental mechanics, robotics, vibrations, dynamical systems, engineering design, engineering acoustics, computer-aided design, materials science and thermal/fluid sciences. All applicants must submit Graduate Record Examination scores for the General Test.

Non-Thesis Option: The M.M.E. is intended for those who expect to enter the engineering profession at an advanced level. Emphasis is placed on professional development. Applicants are expected to have a baccalaureate degree in mechanical engineering or a closely related field from an accredited curriculum.

Requirements for the degree consist of a major of 21 credit hours as a minimum and a coordinated minor of 9 credit hours selected from areas of study appropriate to the applicant’s objectives. There is a required faculty supervised project culminating in a final comprehensive oral examination.

 Thesis Option: The M.S. applicant must have a baccalaureate or its equivalent in an engineering or scientific discipline from an institute of recognized standing. The degree requires a major of 21 credit hours in mechanical engineering courses, including a thesis (seven credit hours) and a minor of 9 credit hours selected from allied areas of study. The minor may consist of a sequence of courses in mathematics, physics, or other related areas. All candidates must pass an oral defense of their thesis including a comprehensive examination covering the major and minor subjects.

P.h.D. students will select their major courses from those at the 7000-8000-level unless there are special requirements for more basic courses. The program, arranged on an individual basis, usually consists of a minimum of one academic year of course work and one of research beyond the master’s level. The student should prepare to be examined
in all areas of mechanical engineering. The Ph.D. also requires a minor of at least 9 credit hours in a closely related field such as mathematics, physics, or other engineering disciplines.

The foreign language requirement, if any, is decided by the student’s advisory committee as deemed appropriate. This requirement may be satisfied either by an examination administered by the Foreign Languages Department or by passing a two-semester proficiency sequence. A minimum grade of B is required.

**Nutrition and Food Science - M.S., Ph.D.**

The Department of Nutrition and Food Science offers graduate study leading to the Master of Science and the Doctor of Philosophy degrees with emphasis in either food science, nutrition, or hotel and restaurant management. The combination of these respective areas within a single department facilitates integrative studies addressing normal and clinical nutrition, food and health issues, food safety and technology and food service, as well as hospitality management. For the M.S. degree, the student may specialize in human, community, clinical or sports nutrition, food service management, food science, or hotel and restaurant management. The department emphasizes the integration of knowledge from various fields for the purpose of understanding and developing professional skills for careers in higher education, government and food, healthcare and hospitality industries.

For admission to the M.S. or Ph.D. programs, the student must have a bachelor's degree from an accredited institution and a satisfactory GRE score. Applicants lacking background requirements in nutrition, food science or biological and physical sciences must make up deficiencies. The M.S. requires a minimum of 30 semester hours and a thesis. A non-thesis option is available in the HRMT emphasis; this option is available through distance education and on campus. The Ph.D. requires a minimum of 60 semester hours beyond the B.S. degree and a dissertation describing original research in the area of nutrition, food science or hotel and restaurant management. Laboratories are available for human, animal, chemical and physical research.

Supporting courses to strengthen the nutrition or food science major may be in biochemistry, physiology, organic chemistry and biostatistics. The HRMT emphasis may take supporting courses in management, marketing, communications and economics. Course requirements for membership or registration in the American Dietetic Association may be met during the graduate program by enrolling in additional required courses. Teaching, research and extension assistantships are awarded competitively to qualified students.

**Pathobiology - M.S., Ph.D.**

(See Biomedical Sciences)

**Pharmacal Sciences - M.S., Ph.D.**

Graduate study in pharmacal sciences leads to the degree of Master of Science. A Doctor of Philosophy in pharmaceutical sciences is offered through an interdepartmental program by the departments of Pharmacal Sciences and Pharmacy Care Systems.

The graduate program prepares students for teaching or research careers in academia, the pharmaceutical industry and public and private research institutes. Students are expected to select one of the following areas of specialization: pharmaceutics, medicinal chemistry or pharmacology and toxicology.

For the M.S. program, students must have a degree in pharmacy or a bachelor's in an allied discipline such as biology, zoology, physiology, chemistry, physics, or psychology. Requirements include completion of at least 30 semester hours and a thesis.

For the Ph.D. program, applicants must have a degree in pharmacy or a bachelor's or master's in an allied discipline. Students are expected to select a major area from one of the three disciplines in the pharmacal sciences. A minor should be selected from a related area within the fields of pharmacy care systems and health systems pharmacy. At least half of the student's work will be completed in the chosen field, including a thesis. The remainder may be selected in other pharmacy fields or may be taken in a related area outside of the School of Pharmacy such as accounting and finance, computer sciences, economics, education, industrial engineering, industrial design, architecture, management, psychology, sociology and communication. The M.S. requires a minimum of 30 semester hours and a thesis. The thesis may be counted toward part of the semester hour requirement. A student may earn a maximum of six credit hours for the thesis.

The student pursuing the Ph.D. will be expected to complete a minimum of 60 semester hours of course work in the chosen field of study. In addition, general examinations and a dissertation are required. A student must earn a minimum of 10 hours credit for the dissertation. A bachelor's degree from an accredited college or university and satisfactory scores on the Graduate Record Examination are required. A pharmacy degree is preferred. There is no additional language requirement beyond verbal and written fluency in English.

**Physics - M.S., Ph.D.**

The Department of Physics offers the Doctor of Philosophy degree to students who have achieved a mastery of the fundamental laws of nature and demonstrated the ability to complete a research project which results in new knowledge in physics. All students complete the basic graduate level courses in Classical Mechanics, Electricity and Magnetism, Quantum Mechanics and Statistical Physics. They demonstrate their mastery of these subjects by passing a General Doctoral Examination which has both a written and an oral component. To increase their knowledge of a broad range of advanced physics topics and to develop expertise in their chosen area of focus, students complete at least 12 additional hours of graded course work with a minimum of nine at the 8000-level. The research project is usually undertaken in one of the research focuses of the Department - plasma physics, condensed matter and surface physics, atomic and molecular physics, radiative physics, space physics, and computational physics. It is completed with the defense of the student’s dissertation. Students are also expected to publish their research in a refereed journal and/or present it at an appropriate professional meeting.

The Master of Science degree is also offered. Successful students complete the same basic graduate level courses as Ph.D. students. Students electing the non-thesis option complete an additional 12 hours of graduate level course work and demonstrate their knowledge and skills through a comprehensive written examination. Students electing the thesis option complete at least an additional 6 hours of graduate level course work and at least 4 hours of thesis work. In addition to defending their thesis, they are encouraged to publish their results at a refereed journal or present them at a scientific meeting.

**Plant Pathology - M.Ag., M.S., Ph.D.**

Graduate study in plant pathology leads to the non-thesis M.Ag., M.S. or Ph.D. degrees. Applicants must have earned a B.S. from an accredited institution with course work in botany, microbiology, agronomy, horticulture, or closely related areas. Satisfactory scores on the GRE and TOEFL tests are also required. All graduate students must complete core courses in plant pathology. For the M.Ag. or M.S., 30 semester credits are required beyond the B.S.; for the Ph.D. candidates, 60 credits are required. M.S. candidates must conduct research for the thesis and pass a final oral examination. Ph.D. candidates must conduct independent research for a dissertation and successfully pass final written and oral defense examinations. No foreign languages are required.

**Poultry Science - M.S., M.Ag., Ph.D.**

Graduate study in poultry science leads to Master of Agriculture, Master of Science and Doctor of Philosophy degrees. Applicants for a graduate degree must have a bachelor's degree from a recognized institu-
tion and a satisfactory GRE score. Working knowledge of chemistry, biology, and agricultural sciences is desirable. The M.S. degree requires a minimum of 30 hours and a thesis. The M.Ag. degree requires a minimum of 30 hours, and no thesis is required. Entry requirements for the Ph.D. degree are similar to those for the M.S. degree, and a preceding M.S. degree is desirable. A minimum of 60 hours beyond the bachelor’s degree and a dissertation are required. A graduate student’s course of study is designed to enable him or her to specialize in various aspects of poultry science.

**Psychology - M.S., Ph.D.**

The Psychology Department offers doctoral degrees in three fields: Clinical, Experimental and Industrial/Organizational Psychology - and a Master’s degree option in Applied Behavior Analysis in Developmental Disabilities. (Note: Graduate degrees in Counseling, Counseling Psychology, Educational Psychology and School Psychology are offered through departments in the College of Education rather than through the Department of Psychology).

The Clinical Psychology program utilizes a scientist-practitioner training model that emphasizes learning both research and clinical methods. Typically, the program requires five years at Auburn in practicum experiences, course work, and individualized research. In addition, a one-year internship at a non-Auburn, APPIC-approved program is required. The Experimental program offers education in the broad range of experimental psychology, including behavior analysis, biological bases of behavior, and comparative studies of the evolution of individual behavior. Linking basic research with its practical applications is encouraged, including considerations of behavioral pharmacology and developmental disabilities. The Industrial/Organizational program prepares students for academic, research and/or applied settings. Electives allow students flexibility in developing their own areas of specialization. Practicum placements provide opportunities to gain research and applied experience.

During the first four semesters of study in the doctoral programs, students complete a sequence of departmental core courses providing a foundation in psychology on which specialization in one of the department’s three programs is based. In doctoral study, students are expected to write and defend an empirically-based master’s thesis. Admission to doctoral candidacy is contingent upon the successful completion of the general doctoral examination. Students must also write and defend a research dissertation. The total number of semester credit hours of graduate work leading to the Ph.D. ranges from 74 to 101.

The Master’s option in Applied Behavior Analysis in Developmental Disabilities trains students to provide programmatic habilitation services to individuals with mental retardation and other developmental disorders with a need for training new skills and ameliorating problem behaviors. This non-thesis degree option integrates foundation and specialized course work with practical experience. It entails three consecutive semesters (12 months) of full-time course work (25 semester hours) and practicum experience (up to 18 semester hours).

**Admissions:** Holders of the bachelor’s degree in any discipline from an accredited institution will be considered for graduate work in psychology. Students are admitted to all programs fall term only. Applicants should visit the department’s web page (www.auburn.edu/psychology), e-mail BRYANTG@AUBURN.EDU or call 334-844-6471 for application and program information. To ensure consideration, the application process should be completed by January 15 for doctoral programs and by March 15 for the Master’s option in Applied Behavior Analysis.

Although an M.S. degree is conferred upon students in the doctoral programs when they have fulfilled intermediate requirements for the Ph.D., the department does not offer terminal master’s degrees in these fields.

**Public Administration and Public Policy - M.P.A., Ph.D.**

The Department of Political Science offers the Master of Public Administration. It is a professional degree program for leadership in public service at all levels of government. The program is accredited by the National Association of Schools of Public Affairs and Administration. Highly qualified students may pursue concurrently the Master of Community Planning through a special arrangement that includes a separate application.

Applicants for the MPA must have a bachelor’s degree or its equivalent from an accredited college or university. The General Test of the Graduate Record Examination is required. The admissions committee will evaluate the undergraduate record, GRE scores, letters of recommendation, a writing sample and any experience in government. The program is not limited to political science majors, but successful applicants who have little background in government institutions and processes may be required to take additional courses.

The program requires 42 semester hours, plus a comprehensive examination. Eight core courses for a total of 24 hours credit are required of all students. Students without substantial governmental experience will take an additional 12 hours of electives in either public administration, broadly conceived, or an approved concentration in a related administrative field or policy area. The final six credit hours consists of either an administrative internship in a governmental agency or participation in a governmental research project. Students without substantial governmental experience will complete an internship, while those who have prior experience will complete a research project and paper.

**M.P.A. DEGREE REQUIREMENTS**

<table>
<thead>
<tr>
<th>A. Pre-requisites</th>
<th>COMPETENCY</th>
<th>MEASURE</th>
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<tr>
<td></td>
<td>English</td>
<td>Verbal GRE of at least 450, writing sample or a course in advanced composition</td>
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<tr>
<td></td>
<td>Math</td>
<td>Quantitative GRE of at least 450 or course in college mathematics</td>
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<td>U.S. Government</td>
<td>Undergraduate course in government or experience</td>
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<td></td>
<td>Statistics</td>
<td>Undergraduate course</td>
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<td></td>
<td>Microcomputer applications</td>
<td>Undergraduate course or demonstrated competence</td>
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Students who have not satisfied these competencies before they enter the program may take them concurrently with MPA courses. It is important to complete the pre-requisites as soon as possible to gain full benefit of the regular MPA courses.

**B. The Core Curriculum - POLI 7000, POLI 7140, POLI 7150, POLI 7260, POLI 7330, POLI 7350, POLI 7360, POLI 7520.**

All classes are three hours.

**C. Electives -** The student must take 12 hours of electives chosen in consultation with the director of the MPA Program. If the option for a non-thesis degree with community planning is chosen, the electives for public administration will be fulfilled by the core courses of community planning.

**D. The Practical Experience -** The remaining six hours of study required by the curriculum are fulfilled in one of two ways. Students without significant prior governmental experience take an internship. Students with direct government experience normally complete an approved research project, although they may take an internship with the approval of the MPA director.

**E. Comprehensive Examination -** The comprehensive examination is a critical part of the MPA program. The comprehensive exam will be offered twice a year - fall and spring. Students who fail the examination are allowed one opportunity to retake it at one of the regularly scheduled examination periods. Typically, the exam is taken during the last term of study. A committee of three faculty members prepares the exam from questions submitted by all faculty who teach core courses. The examination focuses on the following:

1. Factual knowledge of basic institutions, processes and rules affecting public administration.
2. Understanding of the major theoretical concepts of the field.
3. Knowledge of major generalizations of the field.
4. Ability to integrate concepts and generalizations from various subfields and courses.

**Ph.D. in Public Administration and Public Policy**

The Ph.D. in Public Administration and Public Policy is offered jointly by the Auburn University Department of Political Science and the Auburn University at Montgomery Department of Political Science and Public Administration. The curriculum includes four core seminars and two track options.

Only students with master’s degrees from accredited universities or colleges will be considered for the AU and AUM Ph.D. program. Applicants lacking an insufficient background in public administration and public policy will have to take additional courses as determined by the admissions committee. All applicants must take the GRE. Normally, a combined score of 900 is required for admission.

**Ph.D. DEGREE REQUIREMENTS**

| A. Core Courses - The following four core seminars must be taken by all students: Public Administration, Public Policy, Research Methodology I and II. |  |  |
B. Tracks - The Ph.D. program has two tracks, Public Administration and Public Policy. In addition to the four core courses, students are required to take three courses within the track they have chosen. In the Public Administration track, students must take: Public Budgeting, Human Resource Management and Organization Theory. In the Public Policy track, students must take three of the following courses: American Politics and Public Policy, Comparative Politics and Public Policy, International Relations and Public Policy, Political Theory and Public Policy and Public Law and Public Policy.

The other two graduate level courses are selected by the student in consultation with the student’s committee. They may be but need not be selected from this list.

C. Minimum Credit Requirements

Hours of formal Ph.D. course work: .......................... 39
Hours of 7000/8000 formal Ph.D. course work: .......... 33
Minimum hours of formal course work at each campus: ... 9

D. Examinations - Upon completion of course work, students must take a written and oral examination administered by the advisory committee over their course work. For the written part, there will be one general examination covering all four of the core areas and separate examinations on the student’s areas. Students must pass each written examination before scheduling the oral examination. After completion of the dissertation the student must pass a final oral examination which is principally a defense of the dissertation.

Rehabilitation and Special Education - M.Ed., M.S., Ph.D.

Graduate study in Rehabilitation and Special Education leads to the degrees of Master of Education, Master of Science, and the Doctor of Philosophy. Admission to the master’s degree program is based on undergraduate GPA and the general test of the Graduate Record Examination (GRE). Doctoral students must also meet the Graduate School’s GPA and GRE general score requirements. Additional application forms are required by the department. Stipends and fellowships are typically available at both the masters and Ph.D. level for highly qualified students.

Graduate study in Rehabilitation and Special Education leads to the degrees of Master of Education, Master of Science, and the Doctor of Philosophy. Admission to the master’s degree program is based on undergraduate GPA and the general test of the Graduate Record Examination (GRE). Doctoral students must also meet the Graduate School’s GPA and GRE general score requirements. Additional application forms are required by the department. Stipends and fellowships are typically available at both the masters and Ph.D. level for highly qualified students.

Students pursuing a master’s degree in the special education program are required to complete a minimum of 30 semester hours. Completion of the program will require the following:

- A “A” level teacher certification in Alabama. Areas of specialization include: early childhood education (ages birth to 3), collaborative teacher (K-12) with emphasis in learning disabilities, mental retardation, behavior disorders or transitional level.

- Fifth-year programs for education undergraduate majors are available in early childhood special education and collaborative teacher special education. Special education students may select a thesis (M.S.) or non-thesis (M.Ed.) program.

- There are two master’s degree programs in rehabilitation. Students pursuing the master’s degree in vocational evaluation work adjustment are required to complete a minimum of 51 to 52 semester hours (non-thesis vs. thesis). The rehabilitation counselor program, which is accredited by the Council on Rehabilitation Education, requires completion of 66 semester hours and a thesis. Both rehabilitation programs require a full semester of internship under supervision.

- The Ph.D. program is offered in rehabilitation and special education. Students are required to take 15 semester hours of research courses and 9 hours of educational foundations (historical, philosophical, sociological, etc.). The remaining course work is made up of RSED doctoral “core” and support area course work. A minimum of 48 semester hours beyond the master’s degree, excluding the dissertation hours, is needed to complete the program. Prior to submitting a research proposal for dissertation, all RSED students must satisfactorily complete a qualifying paper and a written and oral comprehensive examination. Typically, the program takes three years to complete (two years of course work and one year of independent research).

Spanish - M.A., M.H.S.

Graduate studies in Spanish lead to the Master of Arts (M.A.) or the Master of Spanish Studies (M.H.S.). The graduate program in Spanish prepares students for careers in teaching, government, business, or for doctoral studies.

Candidates wishing to pursue the M.A. in Spanish or the M.H.S. must have a bachelor’s degree from an accredited institution, with at least 38 semester hours of undergraduate Spanish above the freshman level and satisfactory scores on the Graduate Record Examination. International students also must have acceptable scores on the TOEFL.
grams in Physiology and Pharmacology involve biochemical and/or molecular approaches and include Reproductive Endocrinology, Cardiovascular Physiology, Toxicology, Endocrinology, Sensory Neurophysiology, Branched Chain Amino Acid Metabolism and Adrenergic Receptor Pharmacology. The Department of Pathobiology offers graduate study in microbiology, molecular biology, immunology, epidemiology, parasitology, and pathology. The Department of Veterinary Clinical Services graduate programs and the Department of Pathobiology’s pathol-
gy graduate programs are combined with resident training and require the Doctor of Veterinary Medicine degree or its equivalent for entry. All Departments offer specific enrichments including seminars and journal clubs, training in grant writing, participation in scientific meetings and opportunities to present results of research.

A graduate student advisory committee is appointed by the Dean of the Graduate School for each student upon recommendation of the College’s BMS Graduate Program Committee. The student’s faculty ad-
viser usually serves as the chair of this committee, and the remaining members, selected from the graduate faculty, should have expertise relevant to the student’s area of study. The advisory committee develops a plan of study which must be submitted to the College Graduate Program Committee for approval and then to the Dean of the Graduate School. Study programs are designed to meet the student’s needs and interests while featuring research training and assuring a strong background in the fundamentals of cell and molecular biology and bioinformatics. See www.auburn.edu/aubermcbiology.

Auburn University. At least 30 additional hours of graduate level course work (6000-level or above) must be completed. A ten-hour core covering the global, integrated textile business is common to all Ph.D. candi-
dates. Courses required include ITAS 7200, 8950, 8960, 8970, and 8990 Research and Dissertation (a minimum of 10 semester hours). Students must register for at least 2 semester hours of ITAS 8990 each semester they are working on dissertation research. Students must pass a written Qualifying Exam over the required ITAS courses listed above. Students select one of the three tracks: Textile Science, Apparel Scien-
tice, or Textile and Apparel Science. Students must pass a written and an oral General Examination after completing the course work, before proceeding with the dissertation research. A final oral defense of the dissertation is required.

**Pharmaceutical Sciences - Ph.D.**

The graduate program in pharmaceutical sciences offers the termi-
nal degree of Doctor of Philosophy. The primary purpose of the pro-
gram is to establish a functionally integrated research degree program leading to the Doctor of Philosophy with a major in the pharmaceutical sciences and specialization in one of the following disciplines: medi-
cinal chemistry, pharmaceutics, pharmacology-toxicology or pharmacy care systems. The interdepartmental program is administered jointly through the Departments of Pharmaceutical Sciences and Pharmacy Care Systems.

**Sociology - M.S., M.A.**

The interdepartmental graduate program in Sociology offers study and research leading to the degrees of Master of Arts and Master of Science. Anthropologists, criminologists, rural sociologists and sociologists make up the faculty. The program is administered by a three-
member coordinating committee from the Department of Agricultural Economics and Rural Sociology, the Department of Sociology, and the Department of Sociology at Auburn University-Montgomery.

Both thesis and non-thesis options are available. These two degree options are designed to serve the needs of differing types of students. The thesis option is recommended for students who might be inter-

gested in pursuing advanced graduate work and who are interested in gaining research experience. The non-thesis option is designed for individuals who are in mid-career, who wish to learn new skills in order to be more productive professionally, and have no intent on pursuing a more advanced graduate degree.

All students must take SOCY 7000, 7100, RSOC 7700. Students taking the thesis option are required to complete a total of 30 hours. Additionally, a thesis is also required. Students may apply up to six hours of Research and Thesis (SOCY 7990) toward the 30-hour re-


duirements. Students taking the non-thesis option will be required complete a total of 36 hours. Additionally, a major paper is required.

**Graduate Minors**

**Biochemistry and Cell/Molecular Biology**

Auburn University offers a graduate minor in Cell and Molecular Bio-


Economic Development

The Economic Development Minor provides a graduate specialization in the theories and practice of economic development, primarily within the U.S. It is an interdisciplinary minor offered by the faculty of participating departments (Agricultural Economics and Rural Sociology, Community Planning, Economics, and Political Science), with support from the Economic Development Institute and the Alabama Cooperative Extension System’s Community Resource Development Office.

Students may attach the Economic Development Minor to their degrees in Agricultural Economics (M.S. and Ph.D.), Business Administration (M.B.A.), Community Planning (M.C.P.), Economics (M.S.), Public Administration (M.P.A.), Public Administration and Public Policy (Ph.D.), and Rural Sociology (M.S.). To earn the graduate minor, students must complete the program’s basic course, Economic Development and Competition, two elective courses selected from an approved list and a non-credit economic development training course sponsored by the Economic Development Institute, the Alabama Cooperative Extension System and the Economic Development Association of Alabama. Contact the Economic Development Institute for more information.

Environmental Studies

This is an interdisciplinary academic minor administered by the Graduate School in cooperation with participating departments. It is open to any graduate student whose thesis or dissertation is in the environmental area. Participating departments include Aerospace Engineering, Agricultural Economics, Biosystems Engineering, Agronomy and Soils, Animal Sciences, Architecture, Biological Sciences, Chemical Engineering, Civil Engineering, Entomology, Fisheries & Allied Aquacultures, Forestry, Geography, Geology, Horticulture, Landscape Architecture, Pathobiology, Pharmacal Sciences, Physiology & Pharmacology, Plant Pathology, Psychology and Sociology.

Basic guidelines are:
1. The minor is open to any graduate student whose thesis or dissertation is environmentally oriented.
2. The student’s department retains primary control over the student’s program.
3. One committee member must be from outside the student’s department and this member must be involved in environmental research.
4. Each student must take BIOL 3060, or the equivalent and RSOC 7650 (Natural Resources and the Environment) or an equivalent.
5. Each student must take at least three hours of environmental-related course work from outside the student’s “broad group discipline.”
6. Each student must take at least three hours of environmental-related course work from outside the student’s home department but within the student’s “broad group discipline.”
7. Each student must meet the degree requirements of the student’s home department.
8. At the discretion of the student’s advisory committee, graduate-level courses required for this program also may be counted towards the completion of other degree requirements.

For more information, contact Dr. Joe Touchton, Department of Agronomy and Soils, 202 Funchess Hall.

Plant Molecular Biology

Auburn University offers an academic minor in Plant Molecular Biology administered by the Graduate School in cooperation with the participating Molecular and Cellular Biology faculty housed in the three departments listed below. The minor is open to graduate students enrolled in these departments whose thesis/dissertation research addresses related studies and who will benefit from broader training in molecular biology. For more information, contact the following department coordinators:

- Botany and Microbiology: Narendra Singh, Biological Sciences
- Forestry: Mike Golden, Horticulture
- Entomology and Plant Pathology: Sadik Tuzun (Chair)

Sport Management

The purpose of the Sport Management Minor is to provide master’s degree students with the specialized knowledge of the sport industry and to prepare those students to work in sport organizations as administrators and managers. The minor is administered by the Graduate School. Participating departments include Health and Human Performance; Educational Foundations, Leadership and Technology; and Management. Students selecting the minor must satisfy the degree requirements for the master’s degree programs in Health and Human Performance; Educational Foundations, Leadership and Technology; or Business Administration. The Sport Management Minor Committee oversees the program and certifies completion. Minimum requirements are 12 semester hours of graduate course work in sport management, as identified by the Committee. 6 of which must be beyond the minimum hour requirements for the master’s degree. At least 6 hours must be approved course work from departments outside the student’s major department. The student must also complete a minimum of 3 semester hours of work-related experience in sport management (e.g., a practicum course). For additional information, please contact the department head or chair of the participating units.

Statistics

Auburn University offers a graduate academic minor in Statistics administered by the Graduate School in cooperation with the Statistics Coordinating Committee. The objective of the minor is to provide education and training for interested students whose graduate research includes a substantial amount of statistical methodology or data analysis. Students are required to complete 12 hours of statistics course work and demonstrate the ability to apply statistical methodology to problems in research. Participants are required to have one committee member from outside the department who is a member of the Statistics Faculty. For more information, contact Dr. Kevin Phelps, Department of Discrete and Statistical Sciences.

Urban Forestry

The Department of Horticulture (HORT) and the School of Forestry and Wildlife Sciences (SFWS) offer an Urban Forestry minor for graduate students. Urban Forestry is the design, establishment and maintenance of urban forests to enhance the economic value of cities and to provide a healthier environment for people. The minor promotes interdisciplinary studies and trains students for employment in the urban forestry arena. Auburn University, with its strengths in Horticulture, Forestry, Landscape Architecture, Community Planning and Agriculture and its proximity to major urban centers such as Atlanta, Birmingham, Columbus and Montgomery, offers a unique opportunity for urban forestry research and education.

To be eligible for the minor, students must be enrolled in the Master of Forestry, Master of Agriculture, Master of Science or Ph.D. degree program in HORT or SFWS. To complete the minor, students must:
1. Develop an advisory committee including faculty from both SFWS and HORT;
2. Complete a thesis/dissertation research project that pertains to urban forestry, or in the case of Master of Forestry and Master of Agriculture degrees, complete an approved 3 to 4 credit hour directed study in urban forestry;
3. Complete FORY 6550, HORT/FORY 7850 and at least one undergraduate or graduate course in tree identification.
4. Complete at least nine semester hours from a list of approved core courses, at least one of which must be outside of the home department or school.

To obtain additional information, contact the Graduate Program Officer at the Department of Horticulture or the School of Forestry and Wildlife Sciences.

Graduate School
Reserve Officers’ Training Corps

Department of Air Force Aerospace Studies (AFROTC)

COLONEL JOSEPH P. DOUGHERTY
Commander and Professor of Aerospace Studies

The AIR FORCE RESERVE Officer Training Corps (ROTC) is an educational program designed to give men and women the opportunity to become an Air Force officer while completing a degree. The Air Force ROTC program is designed to teach the necessary skills needed to accept the challenging opportunities one will encounter in the Air Force. Many young people often find themselves at graduation wondering what to do with their degree. Air Force ROTC offers a pathway from college to many exciting career possibilities as an Air Force officer: flying, engineering, intelligence, computer systems, aircraft maintenance, management, etc. Interested students should contact the Air Force ROTC department. AFROTC is now an approved minor.

Four-Year Program

The General Military Course (GMC) is the first half of the Four-Year Program and is taken during the freshman and sophomore years. This program allows the student to try out Air Force ROTC without obligation (unless the student is on an Air Force ROTC scholarship). During the first two years, the student will learn basics about the Air Force and the historical development of airpower. During the summer proceeding the sophomore year, the student will compete for the opportunity to attend a four-week Field Training encampment (see Field Training section below for in-depth information). Successful completion of field training is mandatory for entrance into the Professional Officer Course (POC), the junior and senior year of the Four-Year Program. As a junior, the student will learn about various leadership roles and management techniques needed to become an effective Air Force officer. During the senior year, students will learn about foreign policy and national security while preparing them for entrance into active duty. During the POC, the student may be eligible for POCI (POC Incentive, see POCI section for details) $3,450 a year for tuition, fees and books plus, receive a non-taxable monthly allowance.

Curriculum in the General Military Course
AIRF 1010/1020 Introduction to the Air Force
AIRF 2010/2020 The Air Force Way

Two-Year Program

The two-year program bypasses the GMC portion of the Four-Year Program and leads directly into the POC. This route is the best option for junior college transfer students, current college sophomores, college juniors and active duty personnel who have at least two years of school remaining. The student can be completing an undergraduate degree, graduate degree, or working on a combination of the two. Requirements for POC entry include: 1) Attending a five-week Field Training encampment (either the summer prior to entering the two-year program or the summer between the junior and senior year), 2) Passing the Air Force Officer Qualifying Test (AFOQT). ASVAB scores are not used for Air Force ROTC, 3) Passing a medical physical, and 4) Passing the Physical Fitness Test (PFT).

Curriculum in the Professional Officer Course
AIRF 3010/3020 Air Force Leadership & Management
AIRF 4010/4020 National Security/Prep

Leadership Laboratory

As an Air Force ROTC cadet, each student will be required to attend an additional one-hour class period each Thursday known as Leadership Laboratory. Although it is not part of the academic class requirement, it is an essential part of officer training. Leadership Laboratory is a cadet-centered program where the student will learn such things as military customs and courtesies, drill and ceremonies, and proper wear of uniform. On other occasions, the student will have the opportunity to hear excellent guest speakers discuss a variety of interesting stimulating topics. Those interested in a commission must sign up for Leadership Laboratory. AIRF 1011/1021 AFROTC Leadership Lab, AIRF 2011/2021 AFROTC Leadership Lab, AIRF 3011/4011/4021 AFROTC Leadership Lab.

Air Force ROTC Scholarships
Air Force ROTC offers scholarships on a competitive basis to high school seniors and college students. These scholarships can be offered in selected scientific and technical areas as well as in non-technical areas. Contact the Air Force ROTC detachment for the latest on scholarship opportunities.

Air Force Aerospace Studies Minor

The Department of Air Force Aerospace Studies offers a minor under the following conditions. Fifteen semester hours are required, nine of which must be upper-level. A maximum of six hours must be utilized from AIRF 3010, AIRF 3020, AIRF 4010 or AIRF 4020. The remaining nine hours will come from electives determined by the department.

Flight Hours

Pilot candidates will be allowed to receive up to 50 hours of flight time prior to graduating from Auburn or prior to attending undergraduate pilot training. Pilot candidate selection usually occurs during the junior year of Air Force ROTC.

Professional Officer Course (POC)

The Professional Officer Course consists of a four semester course series normally taken during the junior and senior years. Enrollment in the POC is also open to graduate students if they have four semesters of school remaining. Three classroom hours of instruction and a one and-a-half hour Leadership Laboratory are taken per week. Six credit hours may be applied toward graduation. At present, all non-scholarship POC cadets who meet POC eligibility criteria receive $3,450 each year for tuition and books. Additionally, they receive a monthly allowance.

Field Training (FT)

Cadets completing the General Military Course attend four weeks of FT during the summer at a selected Air Force Base (those not having completed the GMC attend five weeks). This rigorous program of leadership training, physical conditioning and academics assesses the cadet’s potential to be an Air Force officer. Cadets also receive survival and firearms training, career information and a military aircraft orientation flight. Cadets receive travel pay and daily pay for FT.

Professional Development Training

Cadets are eligible to compete to attend PDT during their summer months. PDT consists of several different programs, including Army Airborne, USAFA Survival Training, USAFA Soring, USAFA Freefall Parachute Training, Cadet Training Assistant and the British Exchange program. Cadets receive travel pay and daily pay for the majority of these programs. For more information, call 844-4355 or visit our web site (http://auburn.edu/afrotc).

Department of Military Science

LIEUTENANT COLONEL JOHN L. SALVETTI
Professor of Military Science and Commander

The purpose of the Army ROTC program is to select, train and motivate the future leadership of the active Army, Army National Guard and Army Reserve. Initial ROTC courses serve to acquaint Auburn students with the Army and its role in our society; advanced ROTC courses prepare students for service as a commissioned officer. The overall Army ROTC curriculum prepares students to become effective leaders and managers in a variety of challenging fields.

The curriculum is divided into two courses: a General Military Course open to all freshmen and sophomores and an Officer Devel-
opment Course for qualified juniors, seniors and graduate students. Successful completion of both courses and award of a bachelor’s degree constitute the normal progression to gaining a commission as a Second Lieutenant. Courses are available to both men and women students.

Students undecided about pursuing commissions may keep this option open by participating in the General Military Course together with their chosen curriculum. This provides freshmen and sophomores the opportunity to make an educated decision on the advantages of gaining an officer’s commission while incurring no military obligation. Successful completion of the General Military Course or commensurate training, a minimum 2.0 GPA and medical qualifications are prerequisites for enrollment in the Officer Development Course.

General Military Course

The basic program consists of a four semester block of instruction taken during the freshman and sophomore years. Successful completion of MILS 1010, 1020, 2010, 2020 together with a lab (MILS 1011, 1012, 2011, 2012) each semester satisfies the academic requirements for progression to the Officer Development Course. Two credit hours per semester are earned for the lecture and lab. Approval may be obtained to allow completion of all four courses within one academic year.

Curriculum In The General Military Course

Other MILS courses provide unique hands-on adventure training in mountaineering, tactics and wilderness skills. The Professor of Military Science may grant basic program credit for completion of these hands-on training courses. Selected courses are offered fall and spring semesters with two credit hours earned for each course. Elective credits apply toward degree requirements in all schools of the university. The following course is available for Elective credit: MILS 2020 Ranger Operations (Different instruction is offered each semester).

Optional Leadership Training Course

Those academically qualified students who are unable to fulfill the requirements of the Basic Program during their freshman and sophomore years may qualify themselves for admission to the Officer Development Course by successfully completing Leadership Training Course preparatory training. The basic camp option consists of a five-week training period conducted at an active Army post during the summer months. Students desiring to exercise this option are required to submit a formal application and pass a general physical. Students electing the Leadership Training Course program will receive approximately $700 in addition to travel expenses to and from camp. Uniforms, housing, medical care and meals are furnished by the government during the camp. Deadline for applications is May 30. Interested students should contact the Military Science Department at the start of the spring semester, or earlier.

Officer Development Course

Advanced Program - The Advanced Program is designed to develop a candidate’s leadership and management potential, physical stamina, and poise, as well as those personal characteristics desired in an Army Officer. The program’s objective is to produce the highest caliber junior officer fully capable of command and management responsibilities in the modern Army and the business world.

The Officer Development Course consists of a four-semester block of instruction taken during the junior and senior years (MILS 3010, 3020, 4010, 4020). Successful completion of four courses, together with leadership laboratory (MILS 3011, 3012, 4011, 4012) each semester fulfills military science academic requirements for award of an officer’s commission. Three credit hours per semester are earned for the lecture and laboratory. Students currently receive a tax free subsistence allowance of $350 (JR) & $400 (SR) (tax free) and Montgomery GI Bill benefits if qualified.

Students enrolled in the Officer Development Course are also required to successfully complete thirty-two day National Advanced Leadership Camp at Fort Lewis, Washington, during the summer to become eligible for commissioning. Attendance at National Advanced Leadership Camp normally occurs in the summer between the junior and senior years. The purpose of National Advanced Leadership Camp training is to provide each candidate hands-on experience in leadership development positions as well as extensive training in military tactics, techniques and related subjects vital to success as a junior officer. Students attending National Advanced Leadership Camp receive approximately $700 in addition to travel expenses to and from Fort Lewis. Uniforms, housing, medical care and meals are furnished by the government during the camp.

Additional voluntary training at one or more of a variety of active Army service schools is available to selected students during the summer. Students may select attendance at Airborne School, Air Assault School, The Northern Warfare Training Center and Cadet Troop Leadership Training. Students who successfully complete the appropriate course are authorized to wear the coveted Parachutist Badge and Air Assault Badge.

Students who successfully complete the Army ROTC curriculum, and who gain a bachelor’s degree, serve on active duty or with the Army National Guard or Army Reserve. Active duty is for a period of three or four years with the opportunity for qualified officers to apply for extended service. Current salary and allowances for a single Second Lieutenant exceed $34,000. Medical and other benefits are also provided at no cost. The following courses constitute the Advanced Program.

Professional Military Education Requirements

- All Army ROTC cadets are required to complete one semester of selected undergraduate courses in three designated fields of study prior to graduation.
- The fields of study and approved courses are:
  - Written Communication Skills: fulfilled by the Core Curriculum.
  - Military History: HIST 3640 (Alternate course may be taken with the Professor of Military Science approval).
  - Computer Literacy: COMP 1000 through 3700.

Military Science Minor

The Department of Military Science offers a minor under the following conditions. Fourteen semester hours in Military Science (MILS) are required, including 12 at the 3000/4000 level, and a three-hour 3000-level Military History course. See page 16 on limits.

Scholarship Programs

Each year the Army offers a variety of full scholarship programs to those young men and women who have demonstrated outstanding academic scholarship and leadership potential. Four-year scholarships are awarded incoming freshmen through national merit competition. Three- and two-year scholarships are available on a campus competitive basis. Scholarships will pay most or all of the tuition costs for both resident and out-of-state students, textbooks, materials and laboratory fees. In addition, the students receive a $250 to $400 a month tax-free allowance.

Army Nurse Corps Option

Students enrolled in the School of Nursing curriculum leading to the degree of Bachelor of Science in Nursing may simultaneously qualify for commissions as Second Lieutenants in the Army Nurse Corps.

Nursing students qualify for entry into the Officer Development Course through satisfactory completion of either the General Military Course, the Leadership Training Course option or equivalent training.
Nursing students participate in a summer National Advanced Leadership Camp training program and an Army nurse training program. They provide practical and leadership experience in the clinical setting. The focus is to provide nursing cadets an experience which integrates clinical, interpersonal and leadership knowledge and skills. Emphasis is placed on practical experience under the direct supervision of an Army Nurse Corps Officer who acts as the cadet’s preceptor throughout the camp period.

Department of Naval Science

CAPTAIN J.T. MCMURTRIE JR., USN
Commanding Officer and Professor of Naval Science

The mission of NROTC is to develop midshipmen mentally, morally and physically and to commission college graduates as Navy and Marine Corps officers who possess a basic professional potential for future development in mind and character so as to assume the highest responsibilities of command, citizenship and government. All NROTC Programs are open to qualified men and women students. All Naval Science courses, basic and advanced, are open to all Auburn students regardless of affiliation with the NROTC Program.

Types of NROTC Programs

There are four basic programs leading to a commission in the United States Navy or Marine Corps:

A. Four-Year NROTC Navy-Marine Scholarship Program. Entrance to the Navy-Marine Scholarship Program is via nation-wide competition. Applicants typically apply during their senior year of high school or while serving on active duty in the military. Qualifications for enrollment, application blanks and information bulletins are available at high schools, colleges, recruiting stations, and the Auburn NROTC Unit. The Navy pays for tuition, $600 per year for textbooks, and provides a monthly stipend. Freshmen on scholarship receive $250, sophomores $300, juniors $350, and seniors $400 per month. Active duty pay for summer training is approximately $560 per month with living quarters and meals provided. Although the Navy emphasizes engineering and science majors, students may take any Auburn University major leading to a baccalaureate degree. In addition to the requirements of their major, NROTC students must complete 24 semester hours of Naval Science. Summer activities include two at-sea training cruises and one summer period of career orientation lasting from four to eight weeks each. Marine Option students participate in a six-week orientation at Quantico, VA, in lieu of the second at-sea training cruise. Navy Option Scholarship students must complete two calculus and two physics courses. Successful completion leads to commission in the Navy or Marine Corps Reserve. Minimum active duty service is four years. Scholarship students may resign without obligation any time prior to the beginning of the second year in the Program.

B. Four-Year NROTC Navy-Marine College Program. The program also leads to a commission in the Navy or Marine Corps Reserve. It is open to all Auburn students who have less than 30 semester hours through application to the Auburn NROTC Unit. The program is like the Four-Year Scholarship with the following exceptions: The Navy only pays for Naval Science textbooks and a subsistence of $350 per month as a junior and $400 per month as a senior, during the final two years of training. Summer training consists of one at-sea training cruise between junior and senior years. Students desiring commissions in the Marine Corps will participate in a six-week orientation at Quantico, VA, in lieu of at-sea training. Four-year College Program students may resign from the Program at any time during the freshman and sophomore years without obligation. Minimum active duty service is three years (3-1/2 years for Marines). Any Auburn students may enter the college program. Students in both the four and two-year programs may apply for the Scholarship Program through nomination by the Auburn NROTC Unit. These scholarship awards are based primarily on college academic record, physical fitness, and aptitude within the Unit. The scholarship pays all tuition, fees and books.

C. Two-Year NROTC Navy-Marine Scholarship and College Programs. Selections for these programs are made on a national basis from nominations submitted by NROTC Units or Officer recruiters from around the country. Selected applicants attend the Naval Science Institute (NSI) for six weeks during the summer prior to the junior year. Successful NSI completion qualifies students for enrollment in the advanced course (Junior year) of the NROTC Program.

D. NROTC Nurse Corps Option Scholarship Program. Successful completion leads to commission in the Naval Reserve Nurse Corps. Minimum active duty is four years. The Navy pays tuition, fees, all textbooks, all equipment, and uniform items within the BSN degree curriculum. Subsistence pay and active duty pay for summer training is equivalent to the pay provided by the Navy-Marine Scholarship Programs. Students must be enrolled in the BSN program and are required to complete NAVS 1010, 2020, 4010, and 4020 only. Summer activities include one at-sea training cruise and one shore-based hospital training period. Entrance to the NROTC Nurse Corps Option Scholarship Program is via nationwide competition. Applications for Nurse Corps Option Program scholarships may be obtained at the Auburn NROTC Unit. The Nurse option is also available under the Four-Year College Program.

Naval Science Minor

The Department of Naval Science offers a Minor under the following conditions. A student need not be a member of the NROTC Unit. Fifteen semester hours are required, nine of which must be upper-level.* The following courses qualify (all 3000/4000 level courses are considered upper-level courses):

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>NAVS 1010</td>
<td>NAVS 1020</td>
<td>NAVS 2010</td>
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<tr>
<td>NAVS 2020</td>
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<td>NAVS 3030</td>
<td>NAVS 4010</td>
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<td>NAVS 4030</td>
<td>NAVS 4040</td>
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* See p. 16 on limits.

Equipment

Uniforms, Naval Science textbooks and equipment necessary for the NROTC Program are furnished in all four programs.

Curriculum

The Naval Science curriculum consists of the following class hours per week: Freshmen, three hours; Sophomore, three hours; Navy Option Juniors, three hours; Seniors, three hours. All NROTC Program students attend the Naval Science laboratory for two hours per week.

Naval Science subjects carried during the four-year curriculum are listed in this Bulletin. Only 3000/4000 series subjects are applicable to the Two-Year Programs.

Naval Science course hours are considered as part of the normal semester loads. Six hours of Naval Science can be used as electives in any major.
Courses of Instruction

This SECTION lists and describes all undergraduate and graduate courses taught by the departments of the University. The courses are presented by subject area and arranged in departmental order, alphabetically. The subject name (the heading in large type) is followed by the subject area code in parentheses.

The subject name (subject area) together with the course number constitutes the official designation for the course for purposes of registration and official records. The specific course title appears following the course number. The figures in parentheses denote the number of hours of semester credit for the course. Following the credit hours are listed contact hours, the estimate of the actual hours per week a student should expect to be in class. If none are listed, the course will meet each week the number of hours that equals the number of course credit hours. Next appear the prerequisites (required courses to be taken prior to) and co-requisites (required courses to be taken simultaneously with), if applicable.

Courses are numbered according to the following system:

1XXX—Undergraduate courses primarily for freshmen.
2XXX—Undergraduate courses primarily for sophomores.
3XXX—Undergraduate courses primarily for juniors.
4XXX—Undergraduate courses primarily for seniors.
5XXX—Professional school courses and courses for fifth-year students.
6XXX—Graduate courses; open also to advanced undergraduates (Junior or Senior Standing Required).
7XXX—Graduate courses. Not available to undergraduates.
8XXX—Graduate courses. Not available to undergraduates.

XXX3—Undergraduate and Professional Distance Education courses (Graded Option)
XXX6—Graduate outreach courses.

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(Subject area codes in parentheses)

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Accountancy (ACCT)

Dr. Richard H. Tabor - 844-4340

ACCT 2110 PRINCIPLES OF FINANCIAL ACCOUNTING (3). LEC. 3. Pr., Sophomore standing and 2.2 GPA. Basic accounting principles with focus on preparation and use of financial statements. Credit will not be given for both ACCT 2110 and 2910.

ACCT 2210 PRINCIPLES OF MANAGERIAL ACCOUNTING (3). LEC. 3. Pr., ACCT 2110 and 2.2 GPA. A continuation of ACCT 2110, with emphasis on cost accounting, budgeting, and decision-making using managerial accounting information.

ACCT 2910 FUNDAMENTALS OF ACCOUNTING (3). LEC. 3. Pr., Sophomore standing and 2.2 GPA. Principles of financial and managerial accounting. Not open to undergraduates majoring in Business. Credit will not be given for both ACCT 2110 and 2910.

ACCT 2990 BUSINESS LAW (3). LEC. 3. Pr., 2.2 GPA. Introduction to contracts, sales, torts, ethics and the judicial system. Focus is on the business environment.

ACCT 2991 LEGAL ENVIRONMENT OF BUSINESS (3). LEC. 3. Pr., 2.2 GPA. Legal and social environment for business operations with emphasis on contemporary issues.

ACCT 3110 INTERMEDIATE FINANCIAL ACCOUNTING I (3). LEC. 3. Pr., ACCT 2110 and 2.2 GPA. Accounting principles and theory including accounting for current assets, liabilities and investments.

ACCT 3120 INTERMEDIATE FINANCIAL ACCOUNTING II (3). LEC. 3. Pr., ACCT 3110 with a grade of C or better and 2.2 GPA. Continuation of ACCT 3110, with emphasis on fixed assets, capital structure, and cash flows.

ACCT 3210 MANAGEMENT DESIGN & USE OF COST ACCOUNTING INFORMATION (3). LEC. 3. Pr., ACCT 2210 and 2.2 GPA. Coreq., ACCT 3110. A study of how cost data for products, projects, or services are recorded, analyzed, and used for decision making.

ACCT 3510 ACCOUNTING INFORMATION SYSTEMS (3). LEC. 3. Pr., ACCT 3110 and 2.2 GPA. Coreq., MNGT 3140. Introduction to accounting information systems with emphasis on understanding computer-based systems and developing technology skills.

ACCT 3710 SMALL BUSINESS ACCOUNTING AND TAX CONSULTING (3). LEC. 3. Pr., ACCT 2210 or 2910 and 2.2 GPA. Focus on financial statements for closely-held companies and designing strategies for wealth accumulation and asset management.

ACCT 3990 ADVANCED BUSINESS LAW (3). LEC. 3. Pr., ACCT 2990 and 2.2 GPA. Legal principles concerning secured transactions, bankruptcy, trusts and estates, partnership law, property, corporations, accountant’s legal liability, and negotiable instruments.

ACCT 4140 SPECIAL TOPICS IN ACCOUNTING (3). LEC. 3. Pr., ACCT 3120 and 2.2 GPA. A study of current issues in accounting theory and practice. Topics include regulatory and economic and technological developments.

ACCT 4310 CONTROL, ASSURANCE & AUDITING OF ACCOUNTING INFORMATION (3). LEC. 3. Pr., ACCT 3120 and 2.2 GPA. Design of internal controls and assurance services that identify and control business risks.

ACCT 4410 INCOME TAX I (3). LEC. 3. Pr., ACCT 3110 and 2.2 GPA. Principles of federal taxation as it applies to individuals and property transactions.

ACCT 4920 ACCOUNTING INTERNSHIP (3). LEC. 3. SU. Pr., 2.2 GPA. Internship opportunity with an accounting firm, corporation, or governmental entity.

ACCT 4967 HONORS READINGS (1-3). LEC. Pr., Membership in the Honors College; department approval. Course may be repeated for a maximum of 3 credit hours.

ACCT 4997 HONORS THESIS (1-3). LEC. Pr., Membership in the Honors College; department approval. Course may be repeated for a maximum of 3 credit hours.

ACCT 6120 ADVANCED ACCOUNTING TOPICS (3). LEC. 3. Pr., ACCT 3120 and 2.2 GPA. Emphasis on advanced accounting topics including business combinations, governmental accounting, foreign currency transactions, derivatives, and other advanced financial topics.

ACCT 6210/6216 CONTROLLERSHIP (3). LEC. 3. Pr., ACCT 3210 or departmental approval and 2.2 GPA. The impact of ethical, international, environmental, and personnel issues on corporate accounting.

ACCT 6310/6316 ADVANCED ASSURANCE & AUDITING (3). LEC. 3. Pr., ACCT 4310 or departmental approval and 2.2 GPA. Principles of auditing standards, ethics, controls, evidence, sampling, and audit reports.

ACCT 6420/6426 INCOME TAX II (3). LEC. 3. Pr., ACCT 4410 or departmental approval and 2.2 GPA. Tax accounting for individuals, partnerships, corporations, estates and trusts. Extensive use of a tax-service program.

ACCT 6610/6616 GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING (3). LEC. 3. Pr., ACCT 3120 or departmental approval and 2.2 GPA. Accounting for governmental and not-for-profit entities. Focus on effective use of resources.

ACCT 7110/7116 RESEARCH IN ACCOUNTING (3). LEC. 3. Pr., ACCT 6130 or departmental approval. An evaluation, critique, and application of financial accounting theory to current reporting problems using current research tools and resources.

ACCT 7120/7126 INTERNATIONAL ACCOUNTING (3). LEC. 3. Pr., ACCT 6130 or departmental approval. Accounting issues unique to international business activity.

ACCT 7210/7216 ACCOUNTING FOR DECISION MAKING AND CONTROL (3). LEC. 3. Pr., ACCT 3210 or departmental approval. Relationship between management accounting and information systems and analysis of costs.

ACCT 7310/7316 RISK ANALYSIS AND CONTROL (3). LEC. 3. Pr., ACCT 4210 or departmental approval. Analysis of strategic and business process risks and design of effective financial controls.

ACCT 7410/7416 FEDERAL TAX RESEARCH (3). LEC. 3. Pr., ACCT 6420 or departmental approval. Sources of authority used in federal tax research and survey of tax policy issues.


ACCT 7430/7436 TAXES & DECISION MAKING (3). LEC. 3. Pr., ACCT 6420 or departmental approval. Emphasis on identifying, understanding, and evaluating tax planning opportunities.

ACCT 7510/7516 INTEGRATED ACCOUNTING APPLICATION (3). LEC. 3. Pr., ACCT 3510 or departmental approval. Design and analysis of accounting information systems and relational databases.


ACCT 7790/7986 INTEGRATED ACCOUNTING CONCEPTS FOR DECISION MAKING (3). LEC. 3. Coreq., Final semester in Master of Accountancy Program or departmental approval. Capstone course for majors.

Applied Discrete Mathematics (ADMH)

Dr. Kevin T. Phelps - 844-3749


ADMH 4900 INDEPENDENT STUDY (1-3). IND. Study of individual problems or topics of interest to students. Course may be repeated for a maximum of 3 credit hours.

ADMH 4970 SPECIAL TOPICS (1-3). IND. Study of individual problems or topics of interest to students. Course may be repeated for a maximum of 3 credit hours.

ADMH 6000 MATHEMATICAL MODELING (3). LEC. 3. Pr., MATH 1620. Introduction to mathematical models and related techniques. Includes general principles involving discrete deterministic problems and simulations.

ADMH 6100 INFORMATION THEORY (3). LEC. 3. Pr., MATH 2630. Information and entropy, information rate optimization and channel capacity, variable-length codes, data compression (Kraft-McMillan inequality, Huffman’s algorithm), maximum likelihood decoding, Shannon’s Noise Channel Theorem.

ADMH 6140 DATA COMPRESSION (3). LEC. 3. Pr., MATH 1620. Lossless compression methods, including static, dynamic, and higher order Huffman and arithmetic encoding, interval and recency rank encoding, and dictionary methods; lossy transform methods (JPEG).


ADMH 6160 ALGEBRAIC CODING THEORY II (3). LEC. 3. Pr., MATH 6150. Graduate standing. Theory of and implementable algorithms for codes of current practical and theoretical interest. Reed-Solomon, convolutional codes with trellis decoding, Reed-Muller codes, Preparata codes.


ADMH 6180 CRYPTOGRAPHY (3). LEC. 3. Pr., MATH 2680 or MATH 3370. Classical cryptosystems, the Data Encryption Standard, one-way functions and relevant number theoretic problems (factoring, primality testing, discrete logarithm problem), RSA and other public key cryptosystems.

ADMH 6300 THEORY OF DIFFERENCE EQUATIONS (3). LEC. 3. Pr., MATH 2660. Linear difference equations, initial value problems, Green’s functions, boundary value problems, systems, periodic solutions, nonlinear difference equations, models.


ADMH 6770 COMBINATORIAL DESIGNS (3). LEC. 3. Pr., MATH 1620. Latin squares, mutually orthogonal latin squares, orthogonal and perpendicular arrays, Steiner triple systems, block designs, difference sets and finite geometries.

ADMH 6970 SPECIAL TOPICS (1-3). IND. Special topics designed to meet the needs and interest of students. Course may be repeated for a maximum of 9 credit hours.


ADMH 7730 ADVANCED ALGEBRAIC CODING THEORY (3). LEC. 3. Pr., ADMH 6160 or departmental approval. Structure and theoretical properties of codes and related algorithms. Relations to other combinatorial and algebraic objects stressed.

ADMH 7750 ADVANCED TOPICS IN GRAPH THEORY (3). LEC. 3. Pr., ADMH 6750. Topics of current interest and recent research in graph theory. May include edge colorings, algebraic graph theory, network flows, factor theory.

ADMH 7770 ADVANCED COMBINATORIAL DESIGNS (3). LEC. 3. Pr., ADMH 6770. Topics of current interest and research in combinatorial design theory. Areas included: latin squares, embeddings, Wilson’s constructions, quadruple systems, Hadamard designs, graph designs, orthogonal arrays.

ADMH 7950 SEMINAR IN COMBINATORICS (1-3). SEM., SU., Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours.

ADMH 7960 DIRECTED READING (1-3). IND., SU., Pr., departmental approval. Course may be repeated with change in topic.

ADMH 7970 SPECIAL TOPICS (1-3). LEC. Special topics designed to meet the needs and interest of students. Course may be repeated for a maximum of 15 credit hours.

ADMH 7980 SPECIAL PROJECT (1-3). RES., SU., Pr., departmental approval. Non-thesis project in Applied Discrete Mathematics. Course may be repeated for a maximum of 3 credit hours.

ADMH 7990 RESEARCH AND THESIS (1-10). MST. TD. Course may be repeated with change in topic.

ADMH 8960 DIRECTED READING (1-3). IND., SU., Pr., departmental approval. Course may be repeated with change in topic.

ADMH 8980 RESEARCH AND DISSERTATION (1-10). DSR, TD. Course may be repeated with change in topic.

Aerospace Engineering (AERO)

Dr. John E. Cochran - 844-4874

AERO 2200 AEROSPACE FUNDAMENTALS (2). LEC. 1. LAB. 3. Pr., ENGR 1110. Introduction to the fundamental physical concepts required for the successful design of aircraft and spacecraft.

AERO 3040 ELEMENTARY METEOROLOGY (3). LEC. 3. Pr., sophomore standing. Basic principles, causes, effects and phenomena of weather with fundamental techniques of forecasting.

AERO 3110 AERODYNAMICS I (3). LEC. 3. Pr., MATH 2650. Properties of fluids, fluid statics, conservation of mass and momentum, atmospheric properties, two dimensional airfoils, three dimensional wings, drag, and flight performance.


AERO 3130 AERODYNAMICS LABORATORY (2). LEC. 1. LAB. 3. Pr., AERO 3110. Application of fundamental aerodynamic principles to subsonic and supersonic wind tunnel experiments.

AERO 3220 AEROSPACE SYSTEMS (3). LEC. 3. Pr., ENGR 2350, MATH 2650. Modeling of system elements, classical feedback control techniques used in the analysis of linear systems, analysis of systems undergoing various motions connected with flight.


AERO 3310 ORBITAL MECHANICS (3). LEC. 3. Pr., ENGR 2350, MATH 2650. Geometry of the solar system and orbital motion, mathematical integrals of motion, detailed analysis of two-body dynamics and introduction to artificial satellite orbits; Hohmann transfer and patched conics for lunar and interplanetary trajectories.

AERO 3610 AEROSPACE STRUCTURES I (2). LEC. 1. LAB. 3. Pr., ENGR 2070. Fundamental concepts employed in the mechanical testing of engineering materials and structures. Load, stress and strain measurement techniques are utilized to determine material properties and structural response.

AERO 4@@@ PROGRAM ASSESSMENT (0). LAB., SU. Coreq., AERO 4710 or AERO 4730. Academic program assessment covering the areas of aerodynamics, aerospace structures, orbital mechanics, propulsion and vehicle design.

AERO 4140 AERODYNAMICS III (3). LEC. 3. Pr., AERO 3120. Theoretical background essential to a fundamental understanding of laminar and turbulent boundary layers and their relations to skin friction and heat transfer.


AERO 4710 AIRCRAFT DESIGN I (3). LEC. 2. LAB. 3. Pr., AERO 3120, AERO 1110. Introduction to the principles of Class I and Class II fixed-wing aircraft design.

AERO 4720 AIRCRAFT DESIGN II (3). LEC. 2. LAB. 3. Pr., AERO 3110. Application of the principles of Class I and Class II fixed-wing aircraft design through construction of an actual small-scale glider.

AERO 4730 SPACE MISSION DESIGN I (3). LEC. 2. LAB. 3. Pr., AERO 1110. Introduction to the design of space systems including the identification of launch requirements, spacecraft system components, satellite tracking and orbital analysis to achieve a stated scientific objective.

AERO 4770 SPACE MISSION DESIGN II (3). LEC. 2. LAB. 3. Pr., AERO 4730. A continuation of AERO 4730, Space Mission Design I.

AERO 4970 SPECIAL TOPICS IN AEROSPACE ENGINEERING (1-3). LEC. Pr., departmental approval. Investigation of current state-of-the-art technologies in aerospace engineering. Course may be repeated for a maximum of 3 credit hours.
AERO 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College and departmental approval. Directed research and writing of an honors thesis. Course may be repeated for a maximum of 3 credit hours.


AERO 6330/6336 APPLIED ORBITAL MECHANICS (3). LEC. 3. Pr., AERO 3310. Special perturbation techniques: N-body perturbations; general and restricted three-body problems; preliminary orbit determination; C-W equations, targeting and rendezvous; constellation design; mission planning.

AERO 6340/6346 SATELLITE APPLICATIONS (3). LEC. 3. Pr., AERO 3310 or departmental approval. Principles related to the application of satellites to remote sensing, telecommunications, navigation and trajectory determination. Principles of space policy applied to both the unmanned and manned space flight programs.

AERO 6520/6526 ROCKET PROPULSION (3). LEC. 3. Pr., AERO 4510. Analysis of the thermodynamics, gas dynamics and design of liquid and solid propellant rocket engines.


AERO 6750/6756 LEGAL ASPECTS OF ENGINEERING PRACTICE (3). LEC. 3. Pr., PHIL 1020. The role of the law in the manufacture of a product. Ethical issues that may confront designers and engineers.


AERO 7110/7116 AIRFOIL AERODYNAMICS (3). LEC. 3. Pr., AERO 3120. Thin airfoil theory, Joukowski transformations, Karman Trefftz transformations, thick airfoil theory, panel methods and comparison with experimental data.


AERO 7140/7146 COMPUTATIONAL FLUID DYNAMICS (3). LEC. 3. Pr., AERO 1110. Introduction to the application of modern numerical computational techniques to problems arising in fluid dynamics. Emphasis on solving practical problems and understanding the basic physical phenomenon involved.


AERO 7210/7216 FLIGHT DYNAMICS OF HYPERVERsCITY VEHICLES (3). LEC. 3. Pr., AERO 7200 or departmental approval. Development of specialized concepts and methods in dynamics applicable to the modeling of hypersonic flight vehicle motion. Stability concepts and analysis of the stability of steady-state motions of very high speed flight vehicles.
campus project. The nature of the project is to be determined by the student's major professor. Approval of the project and its final written report by the student's advisory committee is required.

AERO 7990 RESEARCH AND THESIS (1-10). MST, TD. Course may be repeated with change in topic.

AERO 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Course may be repeated with change in topic.

Agricultural Economics (AGEC)

Dr. John Adrian - 844-4800

AGEC 2100 MICROCOMPUTER APPLICATIONS IN AGRICULTURE (3). LEC, 3, LAB. Microcomputer technology: hardware and software including languages, electronic spreadsheet, word processing, data-based management, and programmed products; interface with data sources and processing systems.

AGEC 3010 AGRIBUSINESS MARKETING (3). LEC, 3. Pr., ECON 2020 and AGEC 2100 or equivalent. Principles and problems of marketing farm and agribusiness products including marketing methods, channels, structures, and institutions.

AGEC 3050 FARM APPRAISAL (2). LEC. 2. Theory of land values; terminology, processes and procedures for alternative appraisal purposes; factors affecting value; and evaluation of appraisal methods.

AGEC 3080 FUTURES AND OPTIONS MARKETING (2). LEC, 2. Pr., ECON 2020 and AGEC 2100, or departmental approval. Functions, institutions, economic performance, and practices and procedures involved in utilizing futures and options markets to manage market price risks.

AGEC 3920 AGRIBUSINESS AND ECONOMICS INTERNSHIP (1-2). INT, SU, Pr., departmental approval and sophomore standing. Practical experience with agricultural business firms and agencies including finance, farm supply, production, marketing and sales and government. Course may be repeated for a maximum of 4 credit hours.


AGEC 4070 AGRICULTURAL LAW (3). LEC. 3. Recognition of legal problems associated with property ownership, contracts, torts, financing, estate planning and environmental controls and restrictions.

AGEC 4100 AGRICULTURAL COOPERATIVES (2). LEC, 2. Principles and problems of organizing and operating farmers' cooperative buying and selling associations.


AGEC 4930 DIRECTED STUDIES IN AGRICULTURAL ECONOMICS (1-2). IND, Pr., departmental approval, junior standing. Individualized work and study in consultation with a faculty member on a subject of mutual concern. May include directed readings, research, data analysis or a combination of these. Course may be repeated for a maximum of 4 credit hours.


AGEC 4967 HONORS READINGS (1-3). IND, Pr., membership in the Honors College and junior standing. Topics in agricultural economics. Course may be repeated for a maximum of 3 credit hours.

AGEC 4997 HONORS THESIS (1-3). LEC, 3. Pr., membership in the Honors College and junior standing. Directed research and writing of honors thesis. Course may be repeated for a maximum of 3 credit hours.

AGEC 6000 PRINCIPLES OF AGRIBUSINESS MANAGEMENT (3). LEC, 3. Pr., ECON 2020, AGEC 2100, junior standing. Economics and business principles applied to agriculture: business formation, composing and analyzing financial statements, financial analysis and decision-making functions of management, capital budgeting and investment decisions. (Credit will not be given to majors in AGEC, ECON, or business).

AGEC 6010 FARM MANAGEMENT (3). LEC, 3. Pr., AGEC 2100 and ECON 3020, or equivalents. Principles of economics applied to agriculture; uses of farm records to improve management of the farm; developing enterprise budgets and use in preparing a profit-maximizing farm plan.

AGEC 6030 AGRICULTURAL PRICES (3). LEC, 3. Pr., ECON 3020 or equivalent. Math 1610 and MGMT 3010 or STAT 2510. Functions of prices and principles of supply and demand in price determination for agricultural products and markets. Statistical estimation of price and demand relationships.

AGEC 6090 RESOURCE ECONOMICS I (3). LEC, 3. Pr., AGEC 2100 and ECON 3020. Supply, demand, future requirements and availability of natural resources plus institutional framework affecting and conditioning such use through property rights, zoning, taxation, etc.

AGEC 6100 AGRICULTURAL BUSINESS MANAGEMENT (3). LEC, 3. Pr., ECON 2020, AGEC 2100 and AGEC 4040, and ACCT 2120, or departmental approval. Principles and problems in acquiring or starting, organizing, and operating successful agribusinesses: financial and operational efficiency; human resource and public relations; decision-making tools.

AGEC 6120 ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS (3). LEC, 3. Economic principles related to common property, public goods, property rights, externalities and resource scarcity and allocation applied to current issues.

AGEC 6210 ADVANCED AGRIBUSINESS MANAGEMENT (3). LEC, 3. Pr., AGEC 6100, ECON 3020, MATH 1690, STAT 2510 or 2610, senior standing. Case studies, managerial economics.

AGEC 7000 ADVANCED AGRICULTURAL AND ENVIRONMENTAL POLICY (3). LEC, 3. Pr., AGEC 6090 and AGEC 4300, or AGEC 6830. Food and farm problems and related governmental actions from historical, political and analytical viewpoints. Welfare economics and other procedures used to evaluate costs and benefits of existing and proposed governmental programs and actions affecting agriculture, environment and the consumer.

AGEC 7010 ADVANCED FARM MANAGEMENT (3). LEC, 3. Pr., AGEC 6010. Advanced theory and application of farm management principles and economic concepts to agriculture. Planning, implementation, and control of various types of farms for optimum utilization of available resources.

AGEC 7030 ADVANCED AGRICULTURAL PRICES (3). LEC, 3. Pr., AGEC 6030 and ECON 6020. Theory and measurement of farm supply, retail demand and market-margin relationships. Introduction to equilibrium-displacement modeling.

AGEC 7080 PRODUCTION ECONOMICS I (3). LEC, 3. Pr., ECON 6020. Resource allocation and efficiency of production in the firm, between firms, and between agriculture and other industries.

AGEC 7090 RESOURCE ECONOMICS II (3). LEC, 3. Pr., AGEC 4510. Analysis of institutional and economic factors affecting use of natural resources including economic feasibility/conservation, benefit-cost analysis, environmental controls and other interventions.

AGEC 7100 OPERATIONS RESEARCH METHODS IN AGRICULTURAL ECONOMICS (3). LEC, 3. Optimization techniques with emphasis on linear programming and its extensions applied to agriculture. General theoretical background and associated computational procedures are used for presentation of models and modeling techniques.

AGEC 7110 AGRICULTURAL ECONOMIC DEVELOPMENT (3). LEC, 3. Pr., ECON 2020. Conceptual and empirical analysis of economic development with emphasis on the lesser developed areas and countries. Analysis of financial and technical aid to other countries and case studies of development problems.

AGEC 7200 AQUACULTURAL ECONOMICS I (3). LEC, 3. Pr., ECON 3110. Application of economic theories and principles to production, marketing, and consumption of aquacultural enterprises and products. Role of aquaculture in economic development.

AGEC 7250 AQUACULTURAL ECONOMICS II (3). LEC, 3. Pr., AGEC 7200 or departmental approval. Application of advanced economic theory and principles of production, marketing, and consumption of aquacultural products. Analysis of comparative role and competitive position of aquaculture in economic development and resource allocation.

AGEC 7590 INTRODUCTION TO AGRICULTURAL ECONOMETRICS (3). LEC, 3. Pr., MATH 1610, STAT 2610 or equivalent. Regression analysis in economic research. Model specification and estimation plus introduction to detection and correction of violations of assumptions of OLS. Hypothesis testing, dummy variables, heteroscedasticity, autocorrelation and measurement errors.

AGEC 7700 RESEARCH METHODS IN AGRICULTURAL ECONOMICS (3). LEC, 3. Overview of the philosophy of science, detailed discussion of how various research tools are used to perform applied research in agricultural economics.

AGEC 7950 GRADUATE SEMINAR (1). SEM, 1. SU. A forum for sharing research information and interaction on topics and issues of current interest.

AGEC 7970 SPECIAL PROBLEMS IN AGRICULTURAL ECONOMICS (1-3). LEC, Pr., departmental approval. Individualized direction/instruction by faculty on research, teaching and/or outreach issues. Course may be repeated for a maximum of 6 credit hours.

AGEC 7990 RESEARCH AND THESIS (1-10). MST, TD. Course may be repeated with change in topic.

AGEC 8000 THEORY OF AGRICULTURAL MARKETS (3). LEC, 3. Pr., AGEC 7590 and ECON 6020 or departmental approval. Theory and methods for esti-
mating complete demand systems (e.g., LES, Translog, ALIDS, and Rotterdam) for food products. Introduction to imperfect competition models.

**AGEC 8080 PRODUCTION ECONOMICS II (3).**LEC. 3. Pr., AGEC 7080. Firm-level economics problems are extended. Consideration of the influence of risk on firm behavior; empirical analysis of theoretical problems; welfare analysis; technical change; impacts of research investments.

**AGEC 8090 RESOURCE ECONOMICS III (3).**LEC. 3. Pr., AGEC 8080. Quantitative analysis of economic relationships related to natural resource and environmental problems. Economic framework includes dynamic efficiency of resource allocation and welfare analysis techniques, property rights and resource policy, with consideration of legal ramifications and non-market values.

**AGEC 8990 RESEARCH AND DISSERTATION (1-10).**DSR. TD. Course may be repeated with change in topic.

**RURAL SOCIOLOGY (RSOC)**

**RSOC 3190 AGRICULTURE AND S3. Values (3).**LEC. 3. Values and conflicts associated with technological and other changes in farming, rural communities and the food system. Perspectives on agrarian structures, food security, and government policy.

**RSOC 3620 COMMUNITY ORGANIZATION (3).**LEC. 3. Analysis of social organization at the community level. Conceptual framework developed to examine both internal and external forces affecting urban as well as rural communities in the U.S., and to identify strategies to strengthen local capacity to adapt to changing social and economic environments.

**RSOC 4410 EXTENSION PROGRAMS AND METHODS (3).**LEC. 2. Principles and models of applied social change in U.S. and developing nations. The Cooperative Extension System is analyzed as an educational institution. Fundamental steps in program development and evaluation.

**RSOC 4610 RURAL SOCIOLOGY (3).**LEC. 3. Pr., SOCY 1000. Theories and conceptual approaches to rurality in international and domestic contexts. Rural-urban differences in demographic composition, occupational structure, attitudes and values of rural people and regional cultures. Rural services and institutions as determinants of the quality of life.

**RSOC 4640 SOCIOLOGY OF COMMUNITY DEVELOPMENT (3).**LEC. 3. Pr., SOCY 1000 or departmental approval. Principles of applied social change at the community level in both industrialized and non-industrialized settings; impacts of economic and technological changes on urban and rural communities; citizen participation in community affairs.

**RSOC 4650 SOCIOLOGY OF NATURAL RESOURCES AND THE ENVIRONMENT (3).**LEC. 3. The social origins of contemporary environmental problems, emergence of environmentalism as a social movement within industrialized nations, and other topical issues.

**RSOC 4930 DIRECTED STUDIES IN RURAL SOCIOLOGY AND COMMUNITY DEVELOPMENT (1-3).**IND. Pr., departmental approval, junior standing. Individualized study of topics in rural sociology and community development, natural resources and environmental issues conducted in consultation with a faculty member. Course may be repeated for a maximum of 3 credit hours.

**RSOC 4980 DIRECTED FIELD EXPERIENCE (3).**LEC. 3. Pr., departmental approval, senior standing. Structured intensive involvement within an agency or organization serving people in communities or rural areas. Supervision is shared between agency personnel and department faculty who plan, consult, discuss and evaluate student activities and reports.

**RSOC 7410 EXTENSION PROGRAMS AND METHODS (3).**LEC. 2. Principles and models of applied social change in U.S. and developing nations. The Cooperative Extension System is analyzed as an educational institution. Fundamental steps in program development and evaluation.

**RSOC 7610 RURAL SOCIOLOGY (3).**LEC. 3. Pr., SOCY 1000. Theories and conceptual approaches to rurality in international and domestic contexts. Rural-urban differences in demographic composition, occupational structure, attitudes and values of rural people and regional cultures. Rural services and institutions as determinants of the quality of life.

**RSOC 7620 SOCIOLOGY OF COMMUNITY (3).**LEC. 3. Emphasis on theories, conceptual approaches and methods for studying communities and assessing developmental needs with attention to organizational structure, power structures, decision-making and linkage networks to societal units.

**RSOC 7630 POLITICAL ECONOMY OF DEVELOPMENT (3).**LEC. 3. Theories of societal development applied to contemporary issues associated with change in non-industrialized nations. Exploration of institutional, class, and state interests that guide development processes, as well as alternative participatory development strategies.

**RSOC 7640 SOCIOLOGY OF COMMUNITY DEVELOPMENT (3).**LEC. 3. Pr., SOCY 1000 or departmental approval. Principles of applied social change at the community level in both industrialized and non-industrialized settings; impacts of economic and technological changes on urban and rural communities; and citizen participation in community affairs.

**RSOC 7760 SOCIOLOGY OF NATURAL RESOURCES AND THE ENVIRONMENT (3).**LEC. 3. The social origins of contemporary environmental problems, emergence of environmentalism as a social movement within industrialized nations, and other topical issues.

**RSOC 7770 METHODS OF SOCIAL RESEARCH (3).**LEC. 3. Pr., SOCY 3700 or departmental approval. Problem identification, hypothesis development and empirical analysis. Quantitative and qualitative procedures for obtaining social data using surveys, direct observation and secondary sources.

**RSOC 7970 SPECIAL PROBLEMS IN RURAL SOCIOLOGY AND COMMUNITY DEVELOPMENT (1-3).**LEC. Pr., departmental approval. Individual study in a particular area or topic of interest involving an in-depth review of the literature, a research project, or an outreach education activity. Course may be repeated for a maximum of 6 credit hours.

**RSOC 7990 RESEARCH AND THESIS (1-10).**MST. TD. Course may be repeated with change in topic.

**Agriculture (AGRI)**

**AGRI 3800 AGRICULTURAL LEADERSHIP DEVELOPMENT (2).**LEC. 1. LAB. 2. Pr., sophomore standing, COMM 1000. Programmed sessions and activities designed to enhance self-awareness of leadership skills and enable students to become effective leaders.

**Agronomy and Soils (AGRN)**

Dr. Joseph T. Touchton - 844-4100

**AGRN 1000 BASIC CROP SCIENCE (4).**LEC. 3. LAB. 2. Basic agronomic principles involved in classification, growth, structure and soil-plant relationships of field crops. Emphasis is on identification of field crops, and the local and global importance of crop production in world food production. Fall, Spring.

**AGRN 2040 INTRODUCTION TO SOILS (4).**LEC. 3. LAB. 2. Pr., CHEM 1010/1011 or CHEM 1030/1031. Formation, classification, properties, management, fertility and conservation of soils in relation to the growth of plants. Fall, Spring.

**AGRN 3100 SOILS IN AGRICULTURAL AND EARTH SYSTEMS (4).**LEC. 3. LAB. 2. Pr., GEOL 1100, CHEM 1020. The role of the soils as key components in changing earth and agricultural systems. Intended for those who will teach earth science at the middle school level. Credit will not be given for AGRN 3100 and either AGRN 2040 or AGRN 3040. Spring, Summer, Fall.

**AGRN 3120 PRINCIPLES OF WEED SCIENCE (4).**LEC. 3. LAB. 2. Pr., BIOL 1020, BIOL 3100, and AGRN 2040. Weed identification and biology, methods of weed management and classification of herbicides and how they are used in weed control. Laboratory subjects are weed identification and spray calibration.

**AGRN 3150 TURFGRASS MANAGEMENT (4).**LEC. 3. LAB. 2. Pr., AGRN 2450, BIOL 1020. The management of recreational and home area turfgrass will be studied including establishment and maintenance of turf and the effect of light, traffic, soil fertility and water on its growth. Fall, Spring.

**AGRN 3920 AGRONOMY AND SOILS INTERNSHIP (3).**INT. 3. Pr., departmental approval. Practical experience under the supervision of an approved employer and the department. Internship may be in the areas of production, business, turf or science.

**AGRN 3970 PROBLEMS IN WEED SCIENCE (2).**IND. 2. Pr., departmental approval. Conferences, problems and assigned reading in weed science. Spring.

**AGRN 4000 ADVANCED CROP PRODUCTION (3).**LEC. 3. Pr., AGRN 1000 or BIOL 1030 and AGRN 2040. Application, expansion and integration of principles from undergraduate agricultural, biological and physical sciences courses in the management of crop production systems with emphasis on discussion and problem-solving. Spring.

**AGRN 4010 FORAGE PRODUCTION AND UTILIZATION (3).**LEC. 3. Pr., junior standing. Grass and legume forage crops. The crops are considered from the standpoint of (a) pasture crops, (b) hay and silage crops, (c) soil-improving crops. Spring.

**AGRN 4200 SOIL JUDGING (2).**LEC. 1. LAB. 4. Pr., AGRN 2040. Description, evaluation and interpretation of soil-profile characteristics. Fall.

**AGRN 4950 SENIOR SEMINAR (1).**SEM. Pr., junior standing. Professional communication related to selected topics in agronomy and soils. Fall, Spring.

**AGRN 4967 HONORS READINGS (1-3).**LEC. Pr., Membership in the Honors College; department approval. Course may be repeated for a maximum of 3 credit hours.

**AGRN 4970 SPECIAL PROBLEMS (1-3).**IND. 1. Pr., departmental approval, junior standing. Work under the direction of a staff member on special problems in crop, soil or weed science. Course may be repeated for a maximum of 6 credit hours.

**AGRN 4997 HONORS THESIS (1-3).**LEC. Pr., Membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.
AGRN 6000 SOILS AND ENVIRONMENTAL QUALITY (3). LEC. 3. Pr., AGRN 2040. Role of soils in bio-geochemical cycling of major elements and components of environmental concern; interactions of pollutants with soils and aquatic and atmospheric environments; methods to minimize or correct pollution; risk assessment and management. Spring.

AGRN 6020 NUTRIENT MANAGEMENT (3). LEC. 3. Pr., AGRN 2040. Lectures and problems illustrate principles of nutrient management as related to soil or growth media, plant, fertilizer practices, management systems and environment. Required for all students majoring in Agronomy and Soils. Spring.

AGRN 6060 SOIL MICROBIOLOGY (4). LEC. 3. LAB. 2. Pr., BIOL 3200. Ecology, physiology, and biochemistry of soil microorganisms with emphasis on soil microbial processes that are important to environment quality and soil productivity. Spring.

AGRN 6080 SOIL RESOURCES AND CONSERVATION (4). LEC. 3. LAB. 2. Pr., AGRN 2040. Soils as a natural resource for land-use planning; their use and management for sustainable crop production, urban and industrial development and ecosystem protection. Fall.

AGRN 6100 METHODS OF PLANT BREEDING (3). LEC. 3. Pr., BIOL 3000. Genetic principles related to crop improvement including modes of reproduction, qualitative vs. quantitative traits, role of environment and heritability. Breeding methods including pedigree selection, backcross and recurrent selection. Fall.


AGRN 6160 ADVANCED TURFGRASS MANAGEMENT (3). LEC. 3. Pr., AGRN 3150 and either BIOL 3100 or BIOL 6130. Factors affecting the turfgrass plant as a component of a dynamic community. Influence of soil chemical and physical conditions, management practices and climate are discussed. Theoretical and practical aspects of turfgrass management practices are discussed along with design and construction of golf courses and other athletic purpose turf areas. Spring.


AGRN 7120 CYTOLOGY AND CYTOGENETICS (4). LEC. 2. LAB. 4. Pr., BIOL 3000. Cell structure and function with emphasis on cell reproduction and factors contributing to the evolution of organisms. Fall.

AGRN 7140 CHEMISTRY AND USE OF HERBICIDES IN CROP PRODUCTION (4). LEC. 3. LAB. 2. Pr., CHEM 3100. Principles and use of herbicides in agronomic crops. Methods of herbicide application, including timing, incorporation and formulation, the fate of herbicides in soil and the ecological impact on succeeding plant species. Fall.

AGRN 7150 SEMINAR IN GENETICS (1). SEM. 1. Pr., BIOL 3000. Reports by students and staff members on current research and literature in the field of genetics. Spring.

AGRN 7160 GENETIC DATA ANALYSIS (3). LEC. 3. Pr., AGRN 6100 and STAT 7010. Introduces procedures to study the genetic characteristics of individuals and populations. Computer models will be used to simulate genomes and traits. Application of quantitative methods to experimental populations used to plan breeding programs. Fall.


AGRN 7180 CROP ECOLOGY (3). LEC. 3. Pr., BIOL 6130 and AGRN 4510. Analysis of structure and function of crop and pasture farming systems. Integrative approach with emphasis on systems, concepts, production processes and resource management. Topics include current trends, views and problems in population, food supply and technology in agriculture. Spring.

AGRN 7190 ADVANCED FORAGE MANAGEMENT AND RESEARCH METHODS (3). LEC. 3. Pr., AGRN 2040. Principles involved in successful establishment, maintenance and management of crops used for grazing, hay and silage, and research methods related to this field. Field trips will be made to research stations and private farms to observe management practices. Spring.

AGRN 7250 CROP PHYSIOLOGY (3). LEC. 3. Pr., BIOL 3100, CHEM 2080. Integrates principles of plant physiology, biochemistry, ecology and genetics as they relate to plant growth and development and crop yield. The effect of management practices and abiotic stress on plant growth and development will be discussed. Fall.


AGRN 7550 SOIL AND PLANT ANALYSIS (4). LEC. 1. LAB. 6. Pr., CHEM 3050, AGRN 6020. Principles, methods and techniques of quantitative chemical analysis of soils and plants applicable to soil science. Fall.

AGRN 7560 CLAY MINERALOGY (4). LEC. 3. LAB. 2. Crystal structure and properties of the important clay minerals of soils and clay deposits combined with identification techniques involving x-ray diffraction and spectroscopy, differential thermal analysis, electron microscopy, specific surface analysis and infrared absorption. Fall.

AGRN 7590 SOIL PHYSICS (4). LEC. 3. LAB. 2. Pr., AGRN 2040, MATH 1610, and PHYS 1500. Lectures, laboratory exercises and demonstrations to illustrate fundamental physical properties of soils. Introduction to flow and transport phenomena through soils. Fall.

AGRN 7950 SEMINAR (1). SEM. 1. SU. Required of all graduate students in Agronomy and Soils. Fall, Spring. Course may be repeated for a maximum of 2 credit hours.

AGRN 7970 AGRONOMY PROBLEMS (1-3). LEC. 1. Conferences, problems and assigned reading in soils and crops, including results of agronomic research from the substation and experiment fields. Course may be repeated for a maximum of 6 credit hours.

AGRN 7990 RESEARCH AND THESIS (1-10). MST, TD. Research and thesis on problems in the soil and crop sciences. Course may be repeated with change in topic.

AGRN 8570 PHYSICAL SOIL CHEMISTRY (3). LEC. 3. Pr., CHEM 6070 and AGRN 6300. Interpretation of soil properties and chemical reactions in terms of ion exchange, solubility diagrams, solutions equilibria, electrochemistry and electrokinetics of charged particles. Fall.


AGRN 8890 RESEARCH AND DISSERTATION (1-10). DSR, TD. Research and dissertation on problems in the soil and crop sciences. Course may be repeated with change in topic.

Aerospace Studies (AIRF)

Col. Joseph Dougherty - 844-4355


AIRF 1011 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 1010 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.


AIRF 1021 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 1020 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.


AIRF 2011 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 2010 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.


AIRF 2021 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 2020 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.

AIRF 3010 AIR FORCE LEADERSHIP STUDIES (3). LEC. 3. Pr., AIRF 3011. Advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills and supervision concepts.

AIRF 3011 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 3010 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.

AIRF 3020 AIR FORCE LEADERSHIP STUDIES (3). LEC. 3. Pr., AIRF 3010 or departmental approval. Coreq., AIRF 3021. Advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills and supervision concepts.

AIRF 3021 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 3020 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.
AIRF 4101 NATIONAL SECURITY AFFAIRS AND PREPARATION FOR ACTIVE DUTY (3). LEC. 3. Pr., AIRF 3020 or departmental approval. Coreq., AIRF 4011. For AFROTC senior cadets. The role of military officers in American society.

AIRF 4011 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 4010 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.


AIRF 4202 AFROTC LEADERSHIP LABORATORY (0). LAB. 2. SU. Coreq., AIRF 4020 or departmental approval. Required AFROTC Leadership Laboratory for students who are pursuing a commission in the US Air Force.

Aviation Management and Logistics (AMLG)

Col. Emmett Johnson - 844-6848

AMLG 1010 INTRODUCTION TO AVIATION (3). LEC. 3. Orientation to aviation management career opportunities. The history of significant events and accomplishments in the attempt to move through air and space.

AMLG 2141 FLIGHT ORIENTATION (1). LAB. 2. Basic flight experience for non-pilots to familiarize aviation majors, engineers, teachers, and other students desiring a limited exposure to flight. Includes ground discussion and aircraft flight time. Special fee.


AMLG 2171 PRIVATE PILOT FLIGHT TRAINING (1). LAB. 3. Pr., AMLG 2150 or departmental approval. Dual and solo flight instruction and discussion to prepare for FAA Private Pilot Certificate. Special fee.

AMLG 2230 PRINCIPLES OF INSTRUMENT FLIGHT (3). LEC. 3. Pr., departmental approval. Instruments, FAA regulations, air traffic control procedures, radio navigation and aircraft operation and performances as applied to instrument flying. Preparation for the FAA Instrument Pilot written examination. Special fee.


AMLG 2250 COMM FLIGHT OPERATIONS (3). LEC. 3. Pr., Private Pilot Certificate, AMLG 2171, or departmental approval. FAA regulations, high altitude operations aerodynamics, commercial flight maneuvers, environmental, ice control, retractable landing gear and aircraft performances as applied to commercial flying. Preparation for the FAA Commercial Pilot knowledge examination. Special fee.

AMLG 2261 COMM FLIGHT TRAINING II (1). LAB. 3. Pr., AMLG 2241 and departmental approval. Flight training toward the Commercial Pilot Certificate. Special fee.


AMLG 3050 AVIATION METEOROLOGY (3). LEC. 3. Pr., departmental approval. Meteorology as it applies to the operation of aircraft with emphasis on observation of weather elements and interpretation of flight planning weather information.

AMLG 3060 PROPULSION AND SYSTEMS (3). LEC. 3. Pr., PHYS1510. Coverage of turbine and reciprocating engine components and principles of operation. Description and operation of systems typically found on light and heavy transport aircraft and selected aerospace vehicles.

AMLG 3140 AEROSPACE MANAGEMENT AND OPERATIONAL PROBLEMS (3). LEC. 3. Pr., computer competency, ECON 2030. Introduction to the use of operations research techniques. Includes the role of math modeling procedures, manual and computer generated solutions, applied to the decision-making process.


AMLG 3330 ADVANCED AERODYNAMICS (3). LEC. 3. Pr., PHYS 1510. The principles of aerodynamics and aircraft design and how aerodynamic factors affect all aircraft in terms of lift, thrust, drag, in-air performance, stability and flight control. All the steps in the aircraft design process, from concept to test flight and the reasoning behind them.

AMLG 3710 INTRODUCTION TO LOGISTICS (3). LEC. 3. Pr., 2.2 GPA, junior standing. Coreq., MKTG 3310. Logistics activities and their interrelationships in the management of the materials supply and distribution process.

AMLG 3720 PRINCIPLES OF TRANSPORTATION (3). LEC. 3. Pr., 2.2 GPA, ECON 2020. The study of transportation systems and their role in domestic and international trade.

AMLG 4030 GENERAL AVIATION MANAGEMENT (3). LEC. 3. Pr., MKGT 3310, junior standing. An overview of general aviation and its impact and interaction with the total aviation industry including a study of the various users, the suppliers and service organizations, the aircraft and facilities and regulatory framework.

AMLG 4040 GENERAL AVIATION OPERATIONS (2). LEC. 2. Pr., junior standing. Current principles and practices in commercial and business/corporate flight operations including organization sources of revenue, functions, operations and typical problems.

AMLG 4050 AVIATION SAFETY (3). LEC. 3. Pr., junior standing. Problems and issues of aviation safety including aircraft accidents, their cause, effect and the development of safety programs and procedures.

AMLG 4060 AVIATION ACCIDENT CAUSES AND INVESTIGATION (3). LEC. 3. Pr., junior standing. Analysis and insight into the sequence of circumstances that can occur and cause an aircraft accident to happen as well as the techniques, processes and limitations in determining aircraft accident causation.

AMLG 4080 AIR TRANSPORT PLANNING (3). LEC. 3. Pr., AMLG 4090. Management decision making involved in selection of equipment, routes and the establishment of rates by certified and non-certified air carriers.

AMLG 4090 AVIATION LAW AND INSURANCE (3). LEC. 3. Pr., 2.2 GPA, departmental approval. The legal structure of aviation including federal, local and state statutes, contracts, insurance and liability, regulatory statutes and case law.


AMLG 4140 AIRPORT PLANNING AND DESIGN (3). LEC. 3. Pr., AMLG 4130. Principles and procedures pertaining to planning airport facilities required to meet the immediate and future air transportation of a community or region.

AMLG 4160 AIRLINE OPERATIONS (3). LEC. 3. Pr., junior standing or departmental approval. Significance of air transportation in modern society. Development of the present system. Economic and social costs and benefits of the present air transport system.

AMLG 4170 AIRLINE MANAGEMENT (3). LEC. 3. Pr., junior standing or departmental approval. Airline manufacturing, economic, and operational/managerial issues, research and development and competition issues and a survey of the world’s major airlines in terms of their management strategies and style.

AMLG 4180 INTERNATIONAL AIRLINE OPERATIONS (3). LEC. 3. Pr., departmental approval or junior standing. International foreign air carriers, influences of ICAO and IATA, national ownership, determinants of power, operational and management practices, routes and fares.

AMLG 4190 AIR TRAFFIC CONTROL FUNDAMENTALS (3). LEC. 3. Pr., departmental approval. Air traffic control procedures, facilities, center, and operations. Theory of radar operation and air traffic separation using computer-based ATC radar simulators. Special fee.

AMLG 4200 AIR CARGO OPERATIONS (3). LEC. 3. Pr., junior standing. Domestic and international air cargo operations with emphasis on cargo economics, equipment, domestic and international regulatory activities, agents, operational techniques, systems and problems.

AMLG 4210 COMMUTER AIRLINE OPERATIONS AND MANAGEMENT (3). LEC. 3. Pr., departmental approval. Management practices and operational characteristics of the commuter airline and its place in the air transportation system.

AMLG 4220 COMPARATIVE AIRLINE MANAGEMENT AND OPERATIONS (3). LEC. 3. Pr., junior standing or departmental approval. Interdisciplinary study of industry globalization and global scale competition. The differences in economic characteristics, management structures in terms of organizational behavior and more, political economy frameworks, and human factors, between airlines in the United States and abroad.

AMLG 4271 MULTI ENGINE TRAINING (1). LAB. 2. Pr., 2.2 GPA, AMLG 2271 or Commercial Pilot Certificate with Instrument rating and Pr., departmental approval. Specialized instruction in methods and techniques of multi-engine aircraft operations. Sufficient classroom and flight instruction is given under FAA Part 141 to qualify for the FAA Multi-Engine Land Certificate. Special Fees.


AMLG 4331 TRANSPORT AIRCRAFT FLIGHT TRAINING (1). LAB. 2. Pr., AMLG 2271 and departmental approval. Includes instrument and night instruction, emergency procedures and actual air transportation operations. Preparation for the Airline Transport Pilot Certification, if otherwise qualified. Special fees.

AMLG 4340 PURCHASING (3). LEC. 3. Pr., 2.2 GPA, grade of C or better in MKTG 3310; STAT 2610. Objectives, control and direction of industrial purchasing.

AMLG 4351 INSTRUMENT FLIGHT INSTRUCTOR TRAINING (1). LAB. 2. Pr., AMLG 4280, AMLG 4291, or CFI and departmental approval. Discussion, instruction and arranged practice in instrument flight instruction in preparation for the FAA Instrument Instructor Certificate. Special fees.


AMLG 4380 HUMAN FACTORS CREW/RESOURCE MANAGEMENT (3). LEC. 3. Pr., junior standing. Maximizing all of the accessible resources to accomplish the safe and competent execution of any aviation task while using a multi-person work crew.

AMLG 4770 SUPPLY CHAIN MANAGEMENT (3). LEC. 3. Pr., 2.2 GPA, grade of C or better in MKTG 3310 and AMLG 3710. Problems and analysis in the design and management of the retail, industrial and service supply chain. Fall, Spring.

AMLG 4780 TRANSPORTATION MANAGEMENT IN THE SUPPLY CHAIN (3). LEC. 3. Pr., 2.2 GPA, grade of C or better in AMLG 3720. Strategies for managers involved in the transportation industry covering the perspectives of both shippers and carriers.

AMLG 4790 LOGISTICS IN THE SERVICE INDUSTRIES (3). LEC. 3. Pr., 2.2 GPA, grade of C or better in AMLG 3710. The management of logistics processes in the retail, banking and communications industries.

AMLG 4800 INTERNATIONAL SUPPLY CHAIN MANAGEMENT (3). LEC. 3. Pr., 2.2 GPA, grade of C or better in AMLG 3710. International aspects of managing the flow of product and its accompanying information around the world.

AMLG 4880 LOGISTICS DECISION MAKING (3). LEC. 3. Pr., 2.2 GPA, grade of C or better in AMLG 3710, College of Business Information Pr., Technology requirement. College of Business Information Technology requirement. Managerially-applied course utilizing data analysis packages and logistics software applications for logistics decision-making.

AMLG 4890 INTERMODAL DISTRIBUTION (3). LEC. 3. Pr., 2.2 GPA, grade of C or better in AMLG 3710. The management of intermodal distribution and intermodal marketing operations.

AMLG 4900 SPECIAL PROBLEMS IN LOGISTICS (1-3). LEC. 3. SU, 2.2 GPA, senior standing, departmental approval. Advanced research, reading and study of special topics in logistics. Course may be repeated for a maximum of 3 credit hours.

AMLG 4910 INTERNSHIP IN LOGISTICS (1-6). INT., SU, Pr. 2.2 GPA, grade of C or better in AMLG 3710, AMLG 3720, departmental approval. Work experience in a Logistics or logistics-related business, industry or organization. Course may be repeated for a maximum of 6 credit hours.

AMLG 4920 INTERNSHIP IN AVIATION MANAGEMENT (1-6). INT., SU, 2.2 GPA, departmental approval. Work experience in an aviation or aviation-related business, industry or organization. Course may be repeated for a maximum of 6 credit hours.

AMLG 4950 AVIATION STRATEGIC MANAGEMENT SEMINAR (1). SEM. 1. Pr., 2.2 GPA, senior standing, departmental approval. Coreq., MNGT 4800. Aviation Management Capstone course in which managerial issues in the aviation and aerospace industries are analyzed through a problem solving exercise.

AMLG 4970 SPECIAL TOPICS IN AVIATION MANAGEMENT (1-4). LEC. Pr., departmental approval. Investigation of current issues in the aviation industry. Course may be repeated for a maximum of 4 credit hours.

AMLG 7100/7106 AIRLINE MANAGEMENT (3). LEC. 3. Pr., Departmental approval. Airline manufacturing, economic, and operational/managerial issues, research and development and competition issues and a survey of the world’s major airlines in terms of their management strategies and style.

AMLG 7180/7186 INTERNATIONAL AIRLINE OPERATIONS (3). LEC. 3. Pr., Departmental approval. International foreign air carriers, influences of ICAO and IATA, national ownership, determinants of power, operational and management practices, routes and fares.

AMLG 7770/7776 SUPPLY CHAIN MANAGEMENT (3). LEC. 3. Pr., MKTG 3310 and AMLG 3710, or departmental approval. Problems and analysis in the design and management of the retail, industrial and service supply chain. Credit will not be given for both AMLG 4770 and AMLG 7770. Fall.

AMLG 7930/7936 SPECIAL PROBLEMS IN AVIATION MANAGEMENT (1-3). LEC. Pr., Departmental approval. Special problems and current status of the aviation and aerospace industries are analyzed through a problem solving exercise. Course may be repeated for a maximum of 6 credit hours.

AMLG 7970/7976 SPECIAL TOPICS IN AVIATION MANAGEMENT (1-3). LEC. Pr., Departmental approval. Investigation of current issues in the aviation industry. Credit will not be given for both AMLG 4970 and AMLG 7970. Course may be repeated for a maximum of 9 credit hours.

Animal Sciences (ANSC)

Dr. Lowell T. Frobish - 844-1521

ANSC 1000 INTRODUCTION TO ANIMAL AND DAIRY SCIENCES (4). LEC. 3, LAB. 2. The importance of livestock to agriculture and to the health and nutrition of a modern society. Livestock terminology, selection, reproduction, nutrition, management, marketing and species characteristics of beef and dairy cattle, swine, sheep and horses.

ANSC 1100 ORIENTATION TO ANIMAL AND DAIRY SCIENCES (1). LEC. 1. SU. An introduction to the departmental programs and personnel and how to make the most of the college experience. Breadth of career opportunities for animal science graduates.

ANSC 2000 COMPANION ANIMAL MANAGEMENT (3). LEC. 3. Practical aspects of behavior, nutrition, breeding, reproduction, health and management of dogs, cats and other animals generally considered to be human companions.

ANSC 2050 INTRODUCTION TO HORSE MANAGEMENT AND TRAINING (3). LEC. 1, LAB. 4. An introduction to the management, training and enjoyment of horses.

ANSC 2150 SKILLS AND CONCEPTS OF EQUESTRIAN SPORTS (1). LAB. 4. Pr., departmental approval. Basic management and care of animals used in intercollegiate equestrian and rodeo sports. Course may be repeated for a maximum of 2 credit hours.

ANSC 2700 VALUE-BASED ANALYSIS OF MEAT ANIMALS (2). LAB. 4. Pr., ANSC 1000. Comparative evaluation of body composition and application of federal grading standards to determine relative value and price of live animals, carcasses and wholesale cuts.

ANSC 2710 COMMERCIAL MEAT MANAGEMENT (4). LEC. 3, LAB. 2. The importance of meat in the food service industry, including food safety, purchasing, cooking and meat in the diet. For non-majors only.

ANSC 3000 HERD HEALTH MANAGEMENT (3). LEC. 3. Pr., ANSC 1000 and BIOL 3200. The prevention and control of the major diseases of farm animals and the development of herd health programs.

ANSC 3300 INTRODUCTORY LIVESTOCK EVALUATION AND MARKETING (2). LAB. 6. Pr., ANSC 1000. Comprehensive study of live animal and carcass evaluation techniques used in the selection and marketing of beef cattle, swine and sheep. The development of decision-making and oral communication skills is emphasized.


ANSC 3330 INTRODUCTION TO DAIRY CATTLE JUDGING (2). LAB. 6. Pr., ANSC 1000. Theory and practice in the selection of dairy cattle based on visual appraisal, pedigree and performance records. The development and presentation of oral reasons also is emphasized.

ANSC 3400 ANIMAL NUTRITION (4). LEC. 3, LAB. 2. Pr., ANSC 1000 and BCHE 3200 and BIOL 1030, or departmental approval. Principles and practice of animal nutrition, nutrient contents of feedstuff and diet formulation.

ANSC 3500 ANIMAL BREEDING (3). LEC. 3. Pr., ANSC 1000, BIOL 3000. Genetic and environmental effects of animal differences. Selection and mating systems used in the improvement of domestic animals with an emphasis on livestock.

ANSC 3500 REPRODUCTIVE PHYSIOLOGY (4). LEC. 3, LAB. 2. Pr., ANSC 1000 and BIOL 2510 or equivalent. Comparative anatomy, physiology and en-
Animal Sciences (ANSC)

docrinology of animal reproduction; principles of reproductive biotechnologies used to enhance reproductive efficiency in mammalian systems.


ANSC 3800 CAREERS IN ANIMAL SCIENCE (1). LEC. 1, SU. Pr., Junior standing. Career opportunities for animal science graduates. Identifying and investigating careers and presenting oneself professionally for employment or post-baccalaureate education.

ANSC 4010 BEEF PRODUCTION (4). LEC. 3, LAB. 2, Pr., ANSC 3400, 3500, 3600 or departmental approval for non-majors. Overview of the beef cattle industry. Modern concepts, ideas and methodology associated with the application of technology to reproduction, breeding, nutrition, management and the use of facilities in a modern beef cattle enterprise.

ANSC 4030 DAIRY CATTLE PRODUCTION (4). LEC. 3, LAB. 3, Pr., ANSC 3400, 3500, 3600 or departmental approval for non-majors. Practical application and integration of nutrition, breeding, reproduction, selection, herd health, economics and management for efficient dairy production.

ANSC 4050 HORSE PRODUCTION (4). LEC. 3, LAB. 2, Pr., ANSC 3400, ANSC 3500, ANSC 3600 or departmental approval for non-majors. Practical application and integration of nutrition, breeding, reproduction, selection, herd health, economics and management for efficient horse production.

ANSC 4070 SWINE PRODUCTION (4). LEC. 3, LAB. 2, Pr., ANSC 3400, ANSC 3500, ANSC 3600 or departmental approval for non-majors. Practical application and integration of nutrition, breeding and genetics, herd health, reproduction, economics, housing and management techniques for efficient swine production.

ANSC 4090 SHEEP PRODUCTION (4). LEC. 3, LAB. 2, Pr., ANSC 1000, or departmental approval for non-majors. Overview of the sheep industry. Introduction and integration of nutrition, breeding, reproduction, selection, herd health, economics and management for efficient sheep production.

ANSC 4100 FARM ANIMAL BEHAVIOR (2). LEC. 2, Pr., ANSC 3600 or departmental approval. Basic information on behavior, its purpose and measurement. Examination of eating, locomotive, sexual, aggressive, territorial, maternal and resting behaviors in cattle, horses, swine and sheep.

ANSC 4150 ADVANCED SKILLS AND CONCEPTS OF EQUESTRIAN SPORTS (1). LAB. 4, Pr., ANSC 2150 and departmental approval. Principles and skills utilized in intercollegiate equestrian and rodeo team competition and management. Issues affecting management, training, marketing and promotion of animals used in equestrian and rodeo sports. Course may be repeated for a maximum of 2 credit hours.

ANSC 4300 ADVANCED LIVESTOCK JUDGING (1). LEC. 4, Pr., ANSC 3300. Advanced course in principles and techniques of livestock selection based on visual criteria, performance records and other advanced technologies. Course may be repeated for a maximum of 2 credit hours.

ANSC 4310 ADVANCED MEAT JUDGING (1). LEC. 4, Pr., ANSC 3310. Practice in evaluation and grading of beef, pork, and lamb carcasses and cuts. Development of communication skills and exposure to animal agriculture through training and intercollegiate competition. Course may be repeated for a maximum of 2 credit hours.

ANSC 4320 ADVANCED ANIMAL EVALUATION AND MARKETING (1). LEC. 4, Pr., ANSC 4300 or 4310 or departmental approval. Live animal and carcass evaluation techniques used in marketing cattle, swine, and sheep.

ANSC 4330 ADVANCED DAIRY CATTLE JUDGING (1). LEC. 4, Pr., ANSC 3300. Advanced course in the selection of dairy cattle and presentation of oral reasons. Course may be repeated for a maximum of 2 credit hours.

ANSC 4700 MEAT PROCESSING (4). LEC. 3, LAB. 3, Pr., ANSC 3700. Integration of topics in meat and non-meat ingredient chemistry and their applications to muscle food processing. Physical, chemical and sensory properties of fresh and processed meat products.

ANSC 4800 ISSUES IN ANIMAL AGRICULTURE (2). LAB. 4, Pr., Junior standing, ANSC 1000, COMM 1000, or departmental approval. Issues affecting animal agriculture, dealing with concerns of consumers and activists, involvement in public debate and the political process.

ANSC 4810 PROFESSIONAL DISCOURSE IN AGRICULTURE (1). LAB. 2, Pr., Junior standing, COMM 1000 or departmental approval, ANSC 4800. Methods for enhancing effective discourse concerning issues facing the livestock industry.

ANSC 4920 INTERNSHIP IN ANIMAL AND DAIRY SCIENCES (5-15). INT., SU. Pr., departmental approval. Course may be repeated for a maximum of 15 credit hours.

ANSC 4967 HONORS READINGS (3-6). IND. Pr., membership in the Honors College, junior standing, departmental approval. Consult Honors Program Adviser for more details. Course may be repeated for a maximum of 6 credit hours.

ANSC 4970 SPECIAL PROBLEMS (1-5). IND. Pr., departmental approval. Students will work under the direction of staff members on specific problems. Course may be repeated for a maximum of 15 credit hours.

ANSC 4997 HONORS THESIS (3-6). IND. Pr., membership in the Honors College, junior standing, departmental approval. See Honors Program Adviser for more details. Course may be repeated for a maximum of 6 credit hours.

ANSC 6101 STOCKER CATTLE PRODUCTION (4). LEC. 3, LAB. 4, Pr., departmental approval. Application of the principles of animal science to the successful production of stocker cattle. Emphasis placed on marketing and management strategies. Lab will involve a considerable amount of traveling.

BCHE 7200 ADVANCED BIOCHEMISTRY I (3). LEC. 3. Pr. Graduate credit will not be given for both BCHE 6190 and BCHE 7200.

BCHE 7210 ADVANCED BIOCHEMISTRY II (3). LEC. 3, Pr., CHEM 2080 or equivalent. Structure and function of macromolecules participating in the flow of molecular information. Graduate credit will not be given for both BCHE 6180 and BCHE 7210.

BCHE 7220 PRINCIPLES OF CELLULAR AND MOLECULAR ENZYMOL- OGY (3). LEC. 3, Pr., BCHE 6190, or CHEM 6190 or departmental approval. The principles of enzyme chemistry including the physical, chemical and catalytic properties of enzymes.

BCHE 7230 BIOCHEMISTRY OF MACROMOLECULES (3). LEC. 3, Pr., BCHE 6180 or departmental approval. Advanced study of the structure of protein and nucleic acids: DNA replication, RNA transcription and protein synthesis.

BCHE 7250 BIOCHEMISTRY OF LIPIDS AND LIPOPROTEINS (3). LEC. 3, Pr., BCHE 7200 or departmental approval. The regulation of lipid and lipoprotein metabolism, role of lipid mediators in signaling pathways and protein modification, assembly and dynamics of lipoproteins and biomembranes.

BCHE 7260 BIOINFORMATICS (3). LEC. 3, Pr., BCHE 7260 or departmental approval. Advanced study of main concepts and tools of genomics and proteomics.

BCHE 7270 BIOCHEMICAL RESEARCH TECHNIQUES (3-6). LEC. Pr., BCHE 6190, or CHEM 6190 or departmental approval. Modern Biochemical Laboratory Techniques. Course may be repeated for a maximum of 6 credit hours.

BCHE 7280 TOPICS IN BIOCHEMISTRY (1-3). LEC. Pr., BCHE 7210 or equivalent, departmental approval. Directed studies in biochemistry. Course may be repeated for a maximum of 3 credit hours.

ANSC 7400 Ruminant Nutrition (3). LEC. 3, Pr., BCHE 7210 or departmental approval. Digestive physiology, mechanisms of rumen fermentation, post-ruminal/nutritional biochemistry.

ANSC 7410 NON-Ruminant Nutrition (3). LEC. 3, Pr., BCHE 7210 or departmental approval. Digestion, absorption and utilization of macro and micro nutrients, nutrient interrelationship in swine and other non-ruminant species.

ANSC 7420 NUTRITIONAL TOXICOLOGY (3). LEC. 3, Pr., graduate standing. General principles of nutrition and toxicology applied toward understanding and managing livestock responses to toxicants in feeds and plants.

ANSC 7500 EXPERIMENTAL METHODS (3). LEC. 3, Pr., STAT 7010. Research methods used in the animal sciences for the analysis and interpretation of data. Included are experimental designs and computing techniques.

ANSC 7510 QUANTITATIVE GENETICS (3). LEC. 3, Pr., BIOL 3000 or departmental approval, STAT 7010. Principles of population genetics; gene frequency, biometric relationships between relatives, additive, dominance and epistatic effects, estimation and use of repeatability, heritability, genetic correlations, and breeding values.

ANSC 7600 PHYSIOLOGY OF REPRODUCTION (3). LEC. 3, Pr., ANSC 3600, BCHE 6190 or departmental approval. Physiological, endocrinological, cellular and molecular mechanisms regulating reproduction, with emphasis on mammalian systems.

ANSC 7610 PHYSIOLOGY OF GROWTH (3). LEC. 3, Pr., BCHE 7210 or departmental approval. Molecular and cellular basis of tissue differentiation, growth and development with emphasis on muscle, adipose and connective tissues and factors influencing gene expression controlling such events.

ANSC 7700 MUSCLE FOODS AND APPLIED MUSCLE BIOLOGY (4). LEC. 3, LAB. 2, Pr., ANSC 3700, BCHE 7210 or departmental approval. Investigation of muscle microanatomy, biochemistry of muscle proteins and lipids, biochemistry of skeletal muscle contraction, lipid/protein interactions, antemor-
term and postmortem factors affecting fresh and processed meat quality; discussion of classic and current scientific literature.

**ANSC 7950 SEMINAR** (1). LEC. 1, SU. An intensive study of selected topics in some facet of animal sciences.

**ANSC 7970 SPECIAL PROBLEMS** (1-5). LEC. Conference problems, assigned reading, literature searches in one or more of the following major fields: (a) biochemistry, (b) nutrition, (c) animal breeding, (d) reproductive physiology, (e) growth physiology, (f) muscle foods, (g) microbiology, and (h) behavior. Course may be repeated for a maximum of 15 credit hours.

**ANSC 7990 RESEARCH AND THESIS** (1-15). MST. TD. Research and thesis may be on technical laboratory problems or on problems directly related to beef and dairy cattle, sheep, swine or laboratory animals. Course may be repeated with change in topic.


**ANSC 8410 VITAMIN AND MINERAL METABOLISM** (3). LEC. 3. Pr., BCHE 7210 or departmental approval. Vitamin and mineral nutrition with emphasis on chemical structures and characteristics, metabolic functions, deficiencies and toxicity syndromes, interrelationships and requirements of vitamins and minerals.

**ANSC 8500 LINEAR MODEL APPLICATIONS IN ANIMAL BREEDING** (4). LEC. 4. Pr., ANSC 7510 and STAT 7010. Selection index and mixed linear model genetic theory for estimation and prediction. Equivalent animal models, properties of solutions, and extension of methods to consider genetic relationships, multiple records, culling bias and multiple trait evaluation. Current literature will also be discussed.

**ANSC 8610 MUSCLE PHYSIOLOGY AND BIOCHEMISTRY** (3). LEC. 3. Pr., BCHE 7210 or departmental approval. Heterogeneity and plasticity of muscle as a tissue, ontogeny, differentiation, growth and regulation of metabolic and molecular properties of muscle fibers by innervation, usage, hormones and artificial modulation. Evaluation of current literature.

**ANSC 8990 DOCTORAL RESEARCH AND DISSERTATION** (1-15). DSR. TD. Course may be repeated with change in topic.

**Architecture (ARCH)**

Prof. David Hinson - 844-5438

**ARCH 1000 CAREERS IN DESIGN AND CONSTRUCTION** (2). LEC. 2. SU. Introduction to the environmental design and construction professions and the curricula in the chosen field.

**ARCH 1010 INTRODUCTION TO ARCHITECTURE DESIGN I** (5). LEC. 1. STU. 12. Principles of visual organization, research and design process skills, and the graphic communication of form and ideas.

**ARCH 1020 INTRODUCTION TO ARCHITECTURE DESIGN II** (5). LEC. 1. STU. 12. Principles of visual organization, research and design process skills, and the graphic communication of form and ideas.

**ARCH 1060 VISUAL COMMUNICATION** (3). LEC. 3. Pr., ARCH 1000. Introduction to graphic communication. Focus on developing graphic skills for the purpose of explaining form and communicating ideas via exercises in drafting, sketching, and diagramming.

**ARCH 2010 STUDIO I** (6). LEC. 2. STU. 10. Pr., ARCH 1010. Basic issues of architectural design centered around the thoughtful creation of exterior and interior space. Studies of light, material, texture, proportion, scale and site are integrated into each project.


**ARCH 2110 ARCHITECTURAL HISTORY I: HISTORY OF THE BUILT ENVIRONMENT** (3). LEC. 3. Pr., ARCH 1010. Examination of the social determinants that shape the public beliefs and practices that produce buildings.

**ARCH 2600 APPRECIATION OF ARCHITECTURE** (3). LEC. 3. Pr., sophomore standing. Fine Arts Core. Architectural development with particular attention to American and contemporary examples. Illustrated lectures, reading and essays.


**ARCH 3110 ARCHITECTURAL HISTORY II: HISTORY OF EUROPEAN ARCHITECTURE TO 1800** (3). LEC. 3. Pr., ARCH 2110. Introduction to key European buildings and towns from the Bronze Age to the Enlightenment. Examines how societal beliefs and practices influence the making of architecture.

**ARCH 3120 ARCHITECTURAL HISTORY III: 19TH CENTURY TO PRESENT** (3). LEC. 3. Pr., ARCH 3110. The history of architecture, 1850-present, with an emphasis on the rise of the modern movement in Europe and the U.S.

**ARCH 3320 MATERIALS AND METHODS OF CONSTRUCTION I** (3). LEC. 3. Pr., ARCH 1010. The properties and potential design function of materials used in contemporary construction, with an emphasis on foundation systems, wood, and masonry.

**ARCH 3410 DESSEIN ELECTIVES** (3). LEC. 3. Explorations in the art of representation. Complete descriptions of specific courses and their prerequisites are available from the School of Architecture. Course may be repeated for a maximum of 6 credit hours.

**ARCH 3500 SEMINAR IN METHODS AND PROCESS** (3). LEC. 3. Pr., ARCH 2020. The tools and techniques available to the design professional including specific design specializations, and design methodologies. Descriptions of specific seminars are available from the School of Architecture. Course may be repeated with change in topic.

**ARCH 3600 SEMINAR IN CONTEMPORARY ISSUES** (3). LEC. 3. Pr., ARCH 2020. Investigation of significant topics that present opportunities and constraints to architectural thought and practice. Course may be repeated with change in topic.

**ARCH 3700 SEMINAR IN HISTORY AND THEORY** (3). LEC. 3. Pr., ARCH 3120. Investigation of theories, schools or periods to examine the potential and limitations of architecture. Descriptions of specific seminars available from School of Architecture. Course may be repeated with change in topic.

**ARCH 3710 SEMINAR IN HISTORICAL PERSPECTIVES** (3). LEC. 3. Pr., ARCH 3120. Study of aspects of architectural design, such as form, space, style, meaning, perception, culture. Descriptions of specific seminars available from the School of Architecture. Course may be repeated with change in topic.


**ARCH 4220 STUDIO 6: EUROPE TRAVEL STUDIO** (6). LEC. 6. Pr., ARCH 4010. Coreq., ARCH 4900. First hand exposure to the canonical works of European architecture and urban design. The specific subjects of study and trip itinerary will vary slightly based on the objectives of the faculty leading the studio.

**ARCH 4320 MATERIALS AND METHODS OF CONSTRUCTION II** (3). LEC. 3. Pr., ARCH 3320. Properties and potential design applications of materials used in contemporary construction, with an emphasis on steel and concrete, roofing, glass and glazing, cladding, and interior finishes.

**ARCH 4500 PROFESSIONAL PRACTICE** (3). LEC. 3. Pr., ARCH 3020. Architects’ legal responsibilities, frameworks of professional practice, office organization, business planning, marketing, project delivery, internship and professional ethics and leadership.

**ARCH 4900 SPECIAL PROBLEMS** (1-6). IND. Pr., ARCH 1010 and departmental approval. Development of an area of special interest through independent study. May be a group or individual effort under direction of the faculty and with prior approval of the School Head. Evaluation of the work may be by faculty jury. Course may be repeated for a maximum of 6 credit hours.

**ARCH 4997 HONORS THESIS** (1-6). LEC. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 6 credit hours.

**ARCH 5010 STUDIO 7** (6). LEC. 2. STU. 10. Pr., ARCH 4020, ARCH 4300, and ARCH 3120, BSCI 3450 and BSCI 3110. Coreq., ARCH 5990 and ARCH 5030 Advanced problem-solving in the synthesis of previous design experi-
ences. Development of a comprehensive design project from programming to construction documents.


ARCH 5030 APPLIED TECTONICS (2). LEC. 2. Coreq., ARCH 5010. Connections between broad architectural ideas and the way the idea is realized; relations of form to function and technic; and the role of material and construction method in the explicit expression of built form.

ARCH 5990 INTRODUCTION TO THESIS RESEARCH (2). LEC. 2. Coreq., ARCH 5010. The tools, techniques and strategies required to select, develop, refine, write and present a thesis argument.


INTERIOR ARCHITECTURE (ARIA)

Dr. Sharon Gaber - 844-4516


ARIA 4020 STUDIO 6-A INTERIOR ARCHITECTURE (6). LEC. 2. STU. 10. Pr., ARCH 4010; ARCH 3320, ARCH 2110, BSCI 3400. Parallels Architecture Studio 6, with an emphasis on the development of interior architecture and spaces within an urban context. Consideration will be given to adaptive reuse.


ARIA 4450 INTERIOR ARCHITECTURE PROFESSIONAL PRACTICE (2). LEC. 2. Pr., ARCH 4020. Prepares student to enter professional office with an understanding of the skills, concepts and technical knowledge expected.


COMMUNITY PLANNING (CPLN)

Dr. John Pittari - 844-4516-

CPLN 6100 URBAN DESIGN METHODS (3). LEC. 3. Pr., senior level or departmental approval. Techniques and methodologies in urban design problem-solving and strategies for implementation.

CPLN 6200 HISTORY AND THEORY OF URBAN FORM (3). LEC. 3. Pr., senior level or departmental approval. The vocabulary and historical development of urban design, focusing on the environmental and cultural forces that design, shape, build and redevelop the urban fabric.

CPLN 6300 REAL PROPERTY DEVELOPMENT (3). LEC. 3. Pr., fourth-year standing or departmental approval. Survey and analysis of the financial, legal, administrative, planning and design factors influencing the process of land development from the perspectives of developers, planners and consumers.

CPLN 6400 PRESERVATION PLANNING (3). LEC. 3. Pr., senior-level or departmental approval. Planning for the preservation, restoration, conservation and adaptive reuse of historic buildings, sites and districts within the comprehensive planning process.

CPLN 7200 URBAN DESIGN STUDIO (6). STU. 12. Pr., departmental approval. Coreq., CPLN 7220 and CPLN 7240. Conceptual issues in urban design are explored, with an emphasis on the interpretation and representation of urban form; projects provide experience in both the making and the critical understanding of design actions within the community.

CPLN 7220 PLANNING IMPLEMENTATION (3). LEC. 3. Pr., departmental approval. Coreq., CPLN 7200. The programming of public and private action to affect community growth and development, including policy formulation, information systems, taxation policies and capital improvement programming.

CPLN 7240 PLANNING METHODS (3). LEC. 3. Pr., departmental approval. Coreq., CPLN 7200. Introduction to methods useful in the comprehensive planning process, including population and employment projections, resource analysis and allocation, and land use design.

CPLN 7400 COMMUNITY PLANNING STUDIO (6). STU. 12. Pr., CPLN 7200 or departmental approval. Coreq., CPLN 7420. CPLN 7440. Application of the comprehensive planning process to assist a client in the solution of a community planning problem, under faculty direction in cooperation with other professionals.

CPLN 7420 PLANNING LAW (3). LEC. 3. Pr., CPLN 7200 or departmental approval. Coreq., CPLN 7400. Legal basis for local government planning to guide development and conservation of land and other resources, including police powers and eminent domain, zoning, subdivision regulations, permitting and administrative review.

CPLN 7440 HISTORY AND THEORY OF PLANNING (3). LEC. 3. Pr., CPLN 7200 or departmental approval. Coreq., CPLN 7400. Historical development of communities with emphasis on the interaction of their dynamic and structural elements; impact of the planning process and planners on public and private decision-making; ethics and professional responsibility of planners.

CPLN 7600 SYNTHESIS STUDIO I (6). STU. 12. Pr., CPLN 7400 or departmental approval. Coreq., CPLN 7620. Demonstration of competence in community planning and design through the production of an original, comprehensive project that integrates knowledge and experience in addressing a complex problem.

CPLN 7620 RESEARCH METHODS (3). LEC. 3. Pr., CPLN 7400 or departmental approval. Coreq., CPLN 7600. The tools for conducting research that are essential for the development of a comprehensive community planning and design synthesis project.

CPLN 7800 SYNTHESIS STUDIO II (6). STU. 12. Pr., CPLN 7600 and CPLN 7620. Coreq., CPLN 7950. Demonstration of competence in community planning and design through production of an original, comprehensive project that integrates knowledge and experience in addressing a complex planning and design problem.

CPLN 7950 SYNTHESIS SEMINAR (1). SEM. 1. Pr., CPLN 7600 and CPLN 7620. Coreq., CPLN 7620. Seminar to familiarize students in depth with current and compelling issues in the relevant fields of community planning and design through readings, discussions and presentations.

CPLN 7970 SPECIAL PROBLEMS IN PLANNING (1-3). LEC. 1. Pr., departmental approval. Directed study in an area of special interest; topic and credit are based on student proposal and defined product as arranged with adviser and approved by program director or instructor. Course may be repeated for a maximum of 3 credit hours.

LANDSCAPE ARCHITECTURE (LAND)

Prof. Bruce Lindsey - 844-5418

LAND 5110 BASIC LANDSCAPE ARCHITECTURAL DESIGN (6). STU. 12. Landscape architectural design studio emphasizing research, planning and design problems at neighborhood to community scales.

LAND 5120 LANDSCAPE ARCHITECTURAL DESIGN STUDIO (6). STU. 12. Pr., LAND 5110. A continuation of the basic design studio emphasizing research, planning, and design problems at community to regional scales.

LAND 5130 HISTORY OF LANDSCAPE ARCHITECTURE I (3). LEC. 3. The heritage and traditions of landscape architecture from antiquity to the 17th Century.

LAND 5140 HISTORY OF LANDSCAPE ARCHITECTURE II (3). LEC. 3. Explores the built landscape from the 17th Century to the present including designs in America, Europe and Asia.

LAND 5150 LANDSCAPE ARCHITECTURE: CONSTRUCTION I: LANDFORM, GRADING, DRAINAGE (3). LEC. 3. Fundamental skills necessary to analyze, understand, and manipulate landforms to maximize use and minimize environmental impact.

LAND 5160 PROFESSIONAL PRACTICE OF LANDSCAPE ARCHITECTURE (3). LEC. 3. Procedure in architectural practice, construction methods, office organization, legal requirements, professional organizations and relations, civic responsibility, and professional ethics.

LAND 5170 DESIGN COMMUNICATION (3). LEC. 3. Graphic and communication theories and skills in a variety of media.

LAND 5210 URBAN HOUSING STUDIO (6). STU. 12. Spatial/formal qualities of multi-unit housing utilizing the wealth of housing typologies erected in North America.

LAND 5220 ENVIRONMENTAL PLANNING STUDIO (6). STU. 12. Pr., level-II standing. Natural systems analysis as a basis for site planning and large scale facilities design.

LAND 5240 LAND ETHICS AND ENVIRONMENTAL RESPONSIBILITY (3). LEC. 3. Explores the ethical relationship of man and nature.

LAND 5250 SEMINAR IN HISTORY OF LANDSCAPE ARCHITECTURE (3). LEC. 3. Examination of different topics in Landscape Architecture; A) The formal garden in America, B) 20th Century Landscape Architecture, C) The life and works of Frederick Law Olmsted. Course may be repeated with change in topic.

LAND 5260 LANDSCAPE ARCHITECTURE: CONSTRUCTION II; SITE ENGINEERING, DESIGN AND DETAILING (3). LEC. 3. Pr., LAND 5150. Advanced skills necessary to direct construction in the built environment.

LAND 5270 STUDY ABROAD (3-15). FLD. Pr., level-II standing. Study abroad, China, Europe or Canada. Course may be repeated for a maximum of 15 credit hours.

LAND 5280 LANDSCAPE ELEMENTS: EARTH, FIRE AND WATER (3). LEC. 3. Introduces students to the basic elements used in the design of the built landscape.

LAND 5310 INDEPENDENT STUDY (THESIS) (6). STU. 12. Pr., level-III standing, departmental approval. Coreq., LAND 5330. Extensive exploration and development of a landscape architecture issue of the students choice beyond the level associated with entry to the profession.

LAND 5320 INDEPENDENT STUDY (THESIS) (6). STU. 12. Pr., LAND 5310. Coreq., LAND 5340. A major integrative investigation of a focused problem area, defined and pursued by the student under the direction of a faculty member.


Art (ARTS)

Prof. Joseph Ansell - 844-4373

ARTS 1010 BASIC DRAWING (3). STU. 9. Pr. Not open to ARTS majors. Credit not applicable to BFA degree. Instruction in freehand drawing concepts, materials and techniques. A variety of approaches and subject matter will be used.

ARTS 1030 BASIC CERAMICS (3). STU. 9. Pr. Credit not applicable to BFA. Instruction in principles of three-dimensional design and sculpture. Clay is used to explore techniques of casting, constructing, modeling and wheel throwing. Work with glazes and surface decoration.

ARTS 1040 BASIC PAINTING (3). STU. 9. Pr. Not open to ARTS Majors. Credit not applicable to BFA. Instruction in painting concepts, materials, and techniques. Waterbased paints and other media are used to explore a variety of approaches and subject matter.

ARTS 1110 DRAWING I (3). STU. 9. Pr., Arts majors only; or Departmental permission. Basic drawing with emphasis on accurate observation, pictorial organization, and the depiction of space; development of drawing skills using various black and white media.

ARTS 1120 DRAWING II (3). STU. 9. Pr., ARTS 1110. Continuation of concepts and processes from ARTS 1110. Introduction to interpretive approaches with emphasis on concept, content, and creativity. Exploration of various black and white and color media.

ARTS 1210 2-D DESIGN FOR FINE ART AND GRAPHIC DESIGN (3). STU. 9. Pr., Arts majors only; or Departmental permission. Elements and principles of basic two-dimensional design. Emphasis on composition, color theory, and craftsmanship.

ARTS 1220 3-D DESIGN FOR FINE ART AND GRAPHIC DESIGN (3). STU. 9. Pr., Arts majors only; or departmental permission. Elements and principles of basic three-dimensional design. Emphasis on spatial organization, color, and media exploration and craftsmanship.

ARTS 1710 INTRODUCTION TO ART HISTORY I (3). LEC. 3. Fine Arts Core. Introduction to major art traditions of the world, from Paleolithic times to AD/CE 1000.

ARTS 1720 INTRODUCTION TO ART HISTORY II (3). LEC. 3. Fine Arts Core. An introduction to world art, c.1000 to c.1700. Medieval, Renaissance and Baroque Europe with Islamic and non-Western art of the same time period.

ARTS 1730 INTRODUCTION TO ART HISTORY III (3). LEC. 3. Fine Arts Core. Major works of painting, sculpture and architecture from the Rococo period through the 20th century. Emphasis on styles and social, political and cultural relationships.

ARTS 2110 FIGURE DRAWING (3). STU. 9. Pr., ARTS major; ARTS 1120, 1210, 1220, two 1000-level art history courses. The human figure as form as a compositional element. Measuring and sighting for proportion. Drawing from casts, skeletons and live nude models.

ARTS 2140 ADVANCED DRAWING I (3). STU. 9. Pr., ARTS major only. ARTS 2110. Concepts, materials and techniques with emphasis on the development of a personal vision and individual approach. Live nude models may be used.

ARTS 2210 PRODUCTION PROCESSES (3). STU. 9. Pr., ARTS 1210, ARTS 1220, two 1000-level Art History courses, 6 hrs. of University Core Curriculum, Minimum 2.5 GPA in pre-requisite courses and department approval. Design and production processes, preparation of design for printing, paper, copyright, electronic techniques, and related subjects. Emphasis on presentation and visualization of concepts.

ARTS 2220 TYPOGRAPHICS I (3). STU. 9. Pr., ARTS 1120, ARTS 1210, ARTS 1220, two 1000-level Art History courses, 6 hrs. of University Core Curriculum, Minimum 2.5 GPA in pre-requisite courses and department approval. Practical application of design typography for design and layout, advertising and other contemporary formats. Historical and anatomical development of type and letter forms. Emphasis on presentation and visualization of concepts.


ARTS 2410 PRINTMAKING I (3). STU. 9. Pr., ARTS 1120, ARTS 1210, ARTS 1220, two 1000-level art history courses. Instruction in basic forms, concepts, and materials of printmaking. Mono printing, relief and multiple origins are covered.


ARTS 2710 HISTORY OF GRAPHIC DESIGN (3). LEC. 3. Pr., 6 hours from ARTS 1710, ARTS 1720 or ARTS 1730; sophomore standing. A chronological survey of graphic design from its Paleolithic origins to the present. Emphasis on social and cultural contexts, symbolic application, formal characteristics, and significant art and design movements.


ARTS 3010 ELEMENTARY SCHOOL ART (4). LEC. 2, STU. 6. Pr., junior standing. Not open to ARTS major. A practical and hands-on introduction to teaching art, and the materials and methods related to elementary and pre-school art.


ARTS 3150 ADVANCED DRAWING II (3). STU. 9. Pr., ARTS 2140, ARTS majors only. Medium and subject determined by student with approval of instructor. Emphasis on strengthening the student’s aesthetic awareness and technical skills.

ARTS 3200 INTRODUCTION TO GRAPHIC DESIGN (4). STU. 12. Pr., ARTS 1710, ARTS 1720, ARTS 1730, GPA 2.5 in ARTS 2210 and ARTS 2220. Design and layout, and image making procedures for creative problem solving in graphic design, emphasis on presentation, creativity and visualization.


ARTS 3220 PHOTO COMMUNICATIONS (4). STU. 12. Pr., ARTG major. ARTS 1710, 1720, 1730, 2210, 2220, 3200, 3210. Photography as applied communication such as advertising, editorial photography, and annual report photography. Emphasis on advanced technological and studio techniques.

ARTS 3240 ELECTRONIC MEDIA (4). STU. 12. Pr., ARTG major; ARTS 3200, 6 hours of art history, junior standing. Emphasis on new technology in relation to advertising design, graphic design and imaging.


ARTS 3320 PAINTING II (3). STU. 9. Pr., 2.5 GPA in ARTS 2140, ARTS 2310. Instruction in painting concepts, materials and techniques with emphasis on the development of technical skills and a personal vision and individual approach.

ARTS 3330 PAINTING III (3). STU. 9. Pr., ARTS 2140, ARTS 2310. Medium and subject determined by student and instructor. Emphasis on strengthening aesthetic awareness and technical skills. Live nude models may be used.

ARTS 3430 PRINTMAKING III (3). STU. 9. Pr., 2.5 GPA in ARTS 2410, ARTS 2140, ARTS 2110. Techniques of lithography. May not be taken concurrently with ARTS 3420.

ARTS 3520 SCULPTURE II (3). STU. 9. Pr., 2.5 GPA in ARTS 2510, ARTS 2140. Instruction in sculptural concepts, materials and techniques with emphasis on the development of technical skills, personal vision and individual approach.

ARTS 3530 SCULPTURE III (3). STU. 9. Pr., ARTS 3520, ARTS 2140. Advanced sculpture with medium and subject determined by student and instructor. Emphasis on student's aesthetic awareness and technical skills.

ARTS 3700 ART OF THE UNITED STATES (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. A study of architecture, painting and sculpture from colonial to recent times. Selected movements and works are considered in relationship both to European and to indigenous conditions and attitudes.


ARTS 3720 MEDIEVAL ART OF THE WEST (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. A study of major art traditions of the West from the fall of Rome to CE 1400, with a selective focus on the major art traditions: Migration period, Carolingian, Ottonian, Romanesque, Gothic and Italo-Byzantine.

ARTS 3730 RENAISSANCE ART IN ITALY (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. A study of the architecture, painting, and sculpture of the 15th and 16th centuries in Italy.

ARTS 3740 BAROQUE AND ROCOCO ART (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. A study of Baroque architecture, painting and sculpture in 17th-century Europe and of the Rococo style of the 18th century.

ARTS 3750 19TH CENTURY ART (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. An introduction to major art movements from Neo-Classicism to Post-Expressionism and Art Nouveau.

ARTS 3760 20TH CENTURY ART (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. A study of major developments in painting, sculpture and architecture in Europe and the United States from 1900 to recent times.

ARTS 3770 ANCIENT AMERICAN ART (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. A study of major art traditions of Nuclear America, from Mexico to the Andes, from the beginnings to CE 1550.

ARTS 3780 RENAISSANCE ART OF NORTHERN EUROPE (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. A study of the art of Northern Europe, CE 1300-1600. Major themes include: cultural interchange, court and bourgeois patronage, rise of graphic arts, and the development of the art market.

ARTS 3790 ARTS OF ASIA (3). LEC. 3. Pr., Sophomore standing, 6 hours of 1000-level Art History or departmental approval. Introduction to major art traditions of Asia, from the beginnings to the present.

ARTS 3800 ISSUES AND CRITICISM CONTEMPORARY ART (3). LEC. 3. Pr., ARTS 1710, 1720, 1730, one 3000-level art history course, levels I and II in a single fine arts studio sequence. Readings and discussions about art since 1970.


ARTS 3830 CERAMICS III (3). STU. 9. Pr., ARTS 2810, ARTS 2140. Continuation of ARTS 2810 with increased emphasis on individual stylistic and conceptual concerns.

ARTS 3920 GRAPHIC DESIGN INTERNSHIP (4). INT. 4. Pr., ARTS 3200. A fifteen-week period working full time as a staff member with an approved internship sponsor under the direction of a supervising art director.

ARTS 3930 ART AND EDUCATION (4). STU. 10. Pr., Junior standing. Not open to ARTS majors. Principles and objectives of art issues pertinent to teaching on the public school level. Art appreciation and production emphasizing multicultural and interdisciplinary aspects of art in the classroom. Course may be repeated for a maximum of 8 credit hours.

ARTS 4240 GRAPHIC DESIGN I (4). STU. 12. Pr., ARTTG major. ARTS 2710, ARTS 3200, Junior standing. Application of communicative procedures and skills necessary to convey messages by means of graphic presentation: problem solving in corporate identity, advertising design, self promotion, etc. Development of student's individual style. Courses in this sequence may not be taken concurrently.

ARTS 4250 GRAPHIC DESIGN II (4). STU. 12. Pr., ARTTG major. ARTS 2710, 3200, Junior standing. Application of communicative procedures and skills necessary to convey messages by means of graphic presentation: problem solving in publication design, packaging, large format design and layout, etc. Development of student's individual style and main potential. Courses in this sequence may not be taken concurrently.

ARTS 4320 PRINTMAKING II (3). LEC. 3. Pr., 2.5 GPA in ARTS 2140, ARTS 2410. Techniques of intaglio printmaking. May not be taken concurrently with ARTS 3430.

ARTS 4340 PAINTING IV (4). STU. 12. Pr., ARTS 3330, ARTS 1710, ARTS 1720, ARTS 1730, one 3000-level art history. Advanced painting with medium and subject idea determined by student with approval of the instructor. Emphasis on strengthening the student's aesthetic awareness and technical skills as a maturing painter. Live nude models may be used. Course may be repeated for a maximum of 8 credit hours.

ARTS 4440 PRINTMAKING IV (4). LEC. 4. STU. 12. Pr., ARTS 3420, ARTS 3430, ARTS 1710, ARTS 1720, ARTS 1730, one 3000-level art history. Stylistic development, technical proficiency, and individual interest are pursued. Emphasis on aesthetic and conceptual growth through production and research. Course may be repeated for a maximum of 8 credit hours.

ARTS 4540 SCULPTURE IV (4). STU. 12. Pr., ARTS 3530, ARTS 1710, ARTS 1720, ARTS 1730, one 3000-level art history. Advanced sculpture with medium and subject idea determined by student with approval of the instructor. Emphasis on strengthening the student's aesthetic awareness and technical skills as a maturing sculptor. Course may be repeated for a maximum of 8 credit hours.

ARTS 4640 IMAGE I (4). STU. 12. Pr., ARTS 3200 and 6 hours of Art History. Application of illustration techniques and concepts to various graphic formats. Development of personal vision and individual style. Courses in this sequence may not be taken concurrently.

ARTS 4650 IMAGE II (4). STU. 12. Pr., ARTS 3200 and 6 hours of Art History. Exploration of 2 dimensional and 3 dimensional imaging techniques and concepts. Development of personal skills and an individual style. Courses in this sequence may not be taken concurrently.

ARTS 4840 CERAMICS IV (4). STU. 12. Pr., ARTS 1710, 1720, 1730, 3820, 3830, and one 3000-level art history. Continuation of ARTS 3830 with increased emphasis on individual stylistic and conceptual concerns.

ARTS 4900 INDEPENDENT STUDY (2-3). IND. Pr., 3.0 minimum average in 3000-level ARTS courses in area of emphasis and departmental approval. Seminar. Open to ARTS students only, who have shown ability, initiative and industry on individual projects. Independent studies are offered in Graphic Design, Painting, Printmaking, Sculpture, Imaging, Art History, Ceramics and Photography (see department for listing). Course may be repeated for a maximum of 6 credit hours.


ARTS 4967 HONORS READINGS (1-3). LEC. 3. Pr., Membership in the Honors College, ARTS major only. Course may be repeated for a maximum of 3 credit hours.

ARTS 4970 SPECIAL TOPICS (2-3). STU. Pr., Completion of all 1000-level Art History and all 1000-level Foundation courses, one 3000-level studio and junior standing. ARTS majors only. Offered in Design, Fine Arts, Imaging and Art History (see department for listing). Course may be repeated for a maximum of 6 credit hours.

ARTS 4980 SENIOR PROJECT FOR FINE ARTS (4). LEC. 4. Pr., ARTS 2310, ARTS 2410, ARTS 2510, ARTS 2810 and Fine Arts studio sequence in one group through level IV. Must be taken student's final semester. Coreq., ARTS 4910. A directed terminal studio project with choice of subject and medium. Project will be exhibited and a faculty committee will award a letter grade. Professional quality color slides of the project work must be presented to the department before the student is cleared for graduation.

ARTS 4990 SENIOR PROJECT FOR GRAPHIC DESIGN (4). STU. 12. Pr., ARTS 4240 and ARTS 4250 or ARTS 4640 and ARTS 4650. Must be taken in student's final semester. A directed terminal studio project with choice of subject and medium. Project will be exhibited and a faculty committee will award a letter grade. Professional quality color slides of the project work must be presented to the department before student is cleared for graduation.

ARTS 4997 HONORS RESEARCH AND THESIS (1-3). IND. Pr., Membership in the Honors College, ARTS major only. Course may be repeated for a maximum of 6 credit hours.
Biochemistry (BCHE)

Dr. J. Howard Hargis - 844-4043
Dr. Jaeck Wowor - 844-1508

BCHE 3180 NUTRITIONAL BIOCHEMISTRY (3). LEC. 3, Pr., CHEM 2030 or BIOL 1010 or departmental approval. Fundamental pathways of carbohydrate, lipid and amino acid metabolism in human beings. Credit will not be given for both BCHE 3180 and BCHE 3200.

BCHE 3200 PRINCIPLES OF BIOCHEMISTRY (3). LEC. 3, Pr., CHEM 2030 and BIOL 1010 or departmental approval. Introduction to the molecular level of chemical constituents and their reactions in cells related to life processes in animals. Credit will not be given for both BCHE 3180 and BCHE 3200.


BCHE 4240 PLANT METABOLIC PATHWAYS (3). LEC. 3, Pr., CHEM 2080. Fundamental processes of metabolism specific to plants.

BCHE/CHEM 6180 BIOCHEMISTRY I (3). LEC. 3, Pr., CHEM 2080 or departmental approval. Fundamentals of the classification, structure and reactions of the major constituents of living matter and evaluation of binding phenomena and bioenergetics.

BCHE/CHEM 6181 BIOCHEMISTRY I LABORATORY (1). LAB. 3. Coreq., BCHE 6180 or CHEM 6180. Laboratory techniques required for identification and quantification of compounds of important biochemical classes.

BCHE/BCHE 6190 BIOCHEMISTRY II (3). LEC. 3, Pr., BCHE 6180. Fundamentals of metabolism, focusing on the design and regulation of the major catabolic and biosynthetic metabolic pathways.

BCHE/BCHE 6191 BIOCHEMISTRY II LABORATORY (1). LAB. 3. Coreq., BCHE 6190. Laboratory techniques required for partial purification, kinetic studies and characterization of enzymes and nucleotides from various plants, animals and bacteria.

BCHE 7200 ADVANCED BIOCHEMISTRY I (3). LEC. 3. Graduate credit will not be given for both BCHE 6190 and BCHE 7200.

BCHE 7210 ADVANCED BIOCHEMISTRY II (3). LEC. 3, Pr., CHEM 2080 or equivalent. Structure and function of macromolecules participating in the flow of molecular information. Graduate credit will not be given for both BCHE 6180 and BCHE 7210.

BCHE 7220 PRINCIPLES OF CELLULAR AND MOLECULAR ENZYMOL-OGY (3). LEC. 3, Pr., BCHE 6190, or CHEM 6190 or departmental approval. The principles of enzyme chemistry including the physical, chemical and catalytic properties of enzymes.

BCHE 7230 BIOCHEMISTRY OF MACROMOLECULES (3). LEC. 3, Pr., BCHE 6180 or departmental approval. Advanced study of the structure of protein and nucleic acids; DNA replication, RNA transcription and protein synthesis.

BCHE 7240 PLANT METABOLISM (3). LEC. 3, Pr., CHEM 2080. Fundamental processes of metabolism specific to plants.

BCHE 7250 BIOCHEMISTRY OF LIPIDS AND LIPOPROTEINS (3). LEC. 3, Pr., BCHE 7200 or departmental approval. The regulation of lipids and lipoprotein metabolism, role of lipid mediators in signaling pathways and protein modification, assembly and dynamics of lipoproteins and biomembranes.

BCHE 7260 BIOINFORMATICS (3). LEC. 3, Pr., BCHE 7260 or departmental approval. Advanced study of main concepts and tools of genomics and proteomics.

BCHE 7270 BIOCHEMICAL RESEARCH TECHNIQUES (3-6). LEC. Pr., BCHE 6190, or CHEM 6190 or departmental approval. Modern Biochemical Laboratory Techniques. Course may be repeated for a maximum of 6 credit hours.

BCHE 7280 TOPICS IN BIOCHEMISTRY (1-3). LEC. Pr., BCHE 7210 or equivalent, departmental approval Directed studies in biochemistry. Course may be repeated for a maximum of 3 credit hours.

Biological Sciences (BIOL)

Biol 1020 PRINCIPLES OF BIOLOGY (4). LEC. 3, LAB. 2. Science Core. Introduction to the physical, chemical, and biological principles common to all organisms. Credit will not be given for both BIOL 1020 and BIOL 1000 or BIOL 1027.

Biol 1021 PRINCIPLES OF BIOLOGY LABORATORY (0). LAB, NG. Coreq., BIOL 1020. Laboratory Course for BIOL 1020.

Biol 1027 HONORS BIOLOGY (4). LEC. 3, LAB. 2, Pr., Membership in the Honors College. Credit will not be given for both BIOL 1027 and BIOL 1000 or BIOL 1020. Science Core. Introduction to the physical, chemical, and biological principles common to all organisms.

Biol 1030 ORGANISMAL BIOLOGY (4). LEC. 3, LAB. 2, Pr., BIOL 1020. Science Core. Principles and fundamentals of biology at the organismal level. Credit will not be given for both BIOL 1030 and BIOL 1010 or BIOL 1037.

Biol 1031 ORGANISMAL BIOLOGY LABORATORY (0). LAB, NG. Coreq., BIOL 1030. Laboratory Course by BIOL 1030.

Biol 1037 HONORS ORGANISMAL BIOLOGY (4). LEC. 3, LAB. 2, Pr., Membership in the Honors College and BIOL 1020 or BIOL 1027. Science Core. Principles and fundamentals of biology at the organismal level. Credit will not be given for both BIOL 1037 and BIOL 1010 or BIOL 1030.

Biol 2000 MICROBIOLOGY AND PUBLIC HEALTH (4). LEC. 3, LAB. 1, Pr., BIOL 1000 or BIOL 1020. Introduction to the science of microbiology with an emphasis on the public health aspects. (Cannot be used to satisfy minor or major requirements in the biological sciences).

Biol 2015 MARINE SCIENCE I: OCEANOGRAPHY (5). LEC. 3, LAB. 4, Pr., MATH 1130, departmental approval. An introduction to oceanography that integrates physical, chemical, biological and oceanological geography to provide a multidisciplinary foundation in the fundamentals of marine science. Taught at Gulf Coast Research Laboratory.

Biol 2415 MARINE SCIENCE II: MARINE BIOLOGY (5). LEC. 3, LAB. 4, Pr., BIOL 1020, BIOL 1030, departmental approval. An overview of biological oceanography with emphasis on organisms, habitats, and fisheries of Mississippi Sound and the Gulf of Mexico. Taught at Gulf Coast Research Laboratory.

Biol 2425 MARINE BIOLOGY (4). LEC. 4, Pr., BIOL 1030, departmental approval. The invertebrates, vertebrates and marine plants as communities with emphasis on local examples. Taught only at Dauphin Island Sea Lab.

Biol 2445 COASTAL ECOLOGY FOR TEACHERS (4). LEC. 3, LAB. 2, Pr., Basic science courses required for education degree, departmental approval. Provides teachers with a background in basic coastal ecology. Interdisciplinary concepts involving the environment and its conservation. Taught at the Gulf Coast Research Laboratory.

Biol 2500 HUMAN ANATOMY AND PHYSIOLOGY I (4). LEC. 3, LAB. 3, Pr., BIOL 1000, BIOL 1020, or BIOL 1027. Study of the structure and function of the human body. First half of two-part sequence with BIOL 2510, concentrating on tissues, muscle and nervous system.

Biol 2510 HUMAN ANATOMY AND PHYSIOLOGY II (4). LEC. 3, LAB. 3, Pr., BIOL 2500. Study of the structure and function of the human body. Second half of two-part sequence with BIOL 2500, concentrating on cardiovascular, respiratory, digestive, urinary, reproductive and endocrine systems.

Biol 3000 GENETICS (4). LEC. 3, LAB. 1, Pr., BIOL 1020, BIOL 1027 and MATH 1150. A contemporary overview of theoretical principles of transmission, population and molecular genetics. Principles emphasizing use of animal, plant and microbial models.

Biol 3010 COMPARATIVE ANATOMY (4). LEC. 3, LAB. 3, Pr., BIOL 1030, or BIOL 1037. Comparisons of the organ systems of vertebrates.

Biol 3030 EVOLUTION AND SYSTEMATICS (3). LEC. 3, Pr., BIOL 1030 or BIOL 1037. An introduction to evolutionary processes, classification or organisms and scientific nomenclature.

Biol 3060 ECOLOGY (4). LEC. 3, LAB. 3, Pr., 8 hours Biology or departmental approval. Interactions of organisms with their environments and characteristics of populations, communities, and ecosystems.

Biol 3070 INTRODUCTION TO OCEANOGRAPHY (4). LEC. 4, Pr., MATH 1150, CHEM 1030, PHYS 1500, departmental approval. The physics, chemistry, biology and geology of the oceans. Taught only at Dauphin Island Sea Lab.

Biol 3100 PLANT BIOLOGY (3). LEC. 3, Pr., BIOL 1030, or BIOL 1037, CHEM 1040. Coreq., BIOL 3101. Introduction to the morphology, anatomy, physiology and classification of plants with emphasis on the angiosperms.

Biol 3101 PLANT BIOLOGY LABORATORY (1). LAB. 3, Pr., BIOL 1030, or BIOL 1037, CHEM 1041. Coreq., BIOL 3100. Introductory plant biology laboratory on morphology, anatomy, physiology and classification of plants with emphasis on the angiosperms.

Biol 3200 GENERAL MICROBIOLOGY (4). LEC. 3, LAB. 2, Pr., BIOL 1030, or BIOL 1037, CHEM 1030. Introduction to the science of microbiology, emphasizing cell structure, systems, growth, genetics, and the role in human affairs.
Biology

Biology 6030 VERTEBRATE REPRODUCTIVE BIOLOGY (3). LEC. 3. Pr., departmental approval. Study of reproductive biology on the genetic, morphological, developmental, physiological, and evolutionary levels.

Biology 6110 PARASITOLOGY (4). LEC. 3. LAB. 3. Pr., BIOL 1030 or BIOL 1037 or BIOL 2500, BIOL 2510. Development, identification, host-parasite relationships and medical significance of parasitic protozoa, helminthes, and arthropods that infect humans, domestic animals and wildlife.


Biology 6140 PLANT ECOLOGY (4). LEC. 3. LAB. 4. Pr., BIOL 1030, or BIOL 1037, BIOL 3100 and BIOL 3060 or departmental approval. Exploration of ecological interactions between plants and their environment. Field trips emphasize Southeastern habitats/plant examples. Includes 3-day weekend field trip.

Biology 6160 FIELD BIOLOGY AND ECOLOGY (3-15). LEC. 3. Pr., 15 hours of biology and departmental approval. Intensive classroom and field studies of an area outside Alabama. Course may be repeated for a maximum of 15 credit hours.

Biology 6170 POPULATION GENETICS (3). LEC. 3. Pr., BIOL 3000. Examination of the theories relating to maintenance of variation in natural populations of plants and animals.


Biology 6240 ANIMAL PHYSIOLOGY (4). LEC. 3. LAB. 3. Pr., BIOL 4100 or CHEM 2070 or CHEM 2080. General overview of the function of the major systems in animals, including evolution and adaptation to specific environments.


Biology 6375 MARINE SCIENCE FOR ELEMENTARY SCHOOL TEACHERS (3). LEC. 3. Pr., 6 hours in basic biological science and departmental approval. Principle-centered training in a broad spectrum of subjects relating marine science to health, reading, social studies, language, arithmetic, science and art. Taught at Gulf Coast Research Laboratory.


Biology 6425 MARINE BOTANY (4). LEC. 4.

Biology 6435 COASTAL VEGETATION (4). LEC. 2. LAB. 2. Pr., BIOL 1030 or BIOL 1037, BIOL 3100. Study of different coastal ecosystems with an emphasis on plant vegetation.


Biology 6465 MARINE MICROBIOLOGY (5). LEC. 3. LAB. 2. Pr., BIOL 3200, BIOL 4600 or departmental approval. The role of microorganisms in marine environments.


Biology 6495 MARINE PROTOZOOLOGY (3). LEC. 2. LAB. 3. Pr., Introductory Biology. Treatment of the major groups of protists from marine habitats including their taxonomy, structure, ecology, and methods of studying.

CMBL/Biology 6500 IMMUNOLOGY (3). LEC. 3. Pr., BIOL 3200 and BIOL 3000. The cellular and molecular basis of the immune response, including antigen presentation, immunogenetics, effector mechanisms and medical immunology.

CMBL/Biology 6510 IMMUNOLOGY LABORATORY (2). LAB. 4. Pr., or corequisite BIOL 6500. Techniques illustrating principles of antigen-antibody interactions and their application in immunoassays, identification of leukocytes, cellular interactions and antibody production.

CMBL/Biology 6521 GENE EXPRESSION AND RECOMBINANT DNA LAB (2). LEC. 2. LAB. 4. Pr., or corequisites BIOL 4220 and BIOL 7220. Coreq., BIOL 4220, BIOL 7220. Laboratory experiences demonstrating concepts and techniques in recombinant DNA.

Biology 6525 MARINE BEHAVIORAL ECOLOGY (4). LEC. 3. LAB. 3. Pr., Vertebrate and Invertebrate Zoology. Study of animal behavior and the influence by and interaction with the environment and the ecological and evolutionary significance of these behaviors. Summer.


Biology 6600 MAMMALIAN PHYSIOLOGY (6). LEC. 5. LAB. 3. Pr., BIOL 1030 or BIOL 2500 and CHEM 2080. An in-depth investigation of the physiology of the major mammalian organ systems.


Biology 6660 FOOD MICROBIOLOGY (5). LEC. 3. LAB. 2. Pr., BIOL 3200. The role of microorganisms food production and food spoilage with basic training in the microbiological analysis of food.


Biology 7000 ADVANCED PARASITOLOGY (3). LEC. 3. Pr., BIOL 6110. Cell biology, immunology, vaccine strategy, and other topics in parasitology including review of current literature on newly emerging/re-emerging parasitic diseases.

Biology/Fish 7030 ADVANCED ICTHYOLOGY (6). LEC. 6. LAB. 32. Pr., Biology/Fish 6380. Summer, second term. Five week course. Survey of the biodiversity of freshwater fishes in the southeastern United States through intensive field trips and sampling. Credit will not be given for both BIOL 7030 and FISH 7030 Summer.


Biology 7090 CONSERVATION BIOLOGY (4). LEC. 3. LAB. 3. Pr., BIOL 3060 and departmental approval. Examination of practical and theoretical issues in the conservation and maintenance of biological diversity and the recovery and management of endangered species.

Biology 7110 ANIMAL COMMUNITY ECOLOGY (4). LEC. 3. LAB. 2. Pr., BIOL 3060 or departmental approval. Dynamics of natural animal communities, including niches, species interactions, succession, island biogeography, species diversity and food webs.

Biology 7125 COASTAL ECO SYSTEMS DYNAMICS (2). LEC. 2. Pr., none: Biological Oceanography, Advanced Marine Ecology, Fisheries Oceanography recommended. Investigation of the basic principles of ecosystem structure and function.

Biology 7160 SYSTEMATIC ICTHYOLOGY (3). LEC. 3. Pr., BIOL 6380. The principles of systematics and their application to the study of the evolution of fishes. Emphasizes individual and group work with faunistic literature and museum material.


CMBL/Biology 7220 INTRODUCTORY MOLECULAR GENETICS (4). LEC. 4. Pr., BIOL 3000, BIOL 4510. Advanced principles of gene expression including replication, transcription and translation; structure and regulation of genes; detailed concepts and techniques in recombinant DNA. Credit will not be given for both BIOL 7220 and CMBL 7220.

CMBL/BIOL 7230 VIROLOGY (4). LEC. 4. Pr., BIOL 3000, BIOL 3200, BIOL 4220. Molecular mechanisms of virus biology including virus-cell interactions, replication, assembly and release and pathogenesis. Credit will not be given for both BIOL 7230 and CMBL 7230.


BIOL 7280 PLANT HORMONES (2). LEC. 2. Pr., BIOL 6130. Synthesis, physiology, and modes of action of the major plant hormones including abscisic acid, auxins, cytokinins, ethylene and gibberellins.

CMBL/BIOL 7290 EVOLUTIONARY GENETICS (3). LEC. 3. Pr., BIOL 3000, BIOL 6170 or departmental approval. The role of population processes as mechanisms for evolution; and evolution at the molecular level. Credit will not be given for both BIOL 7290 and CMBL 7290.

BIOL 7300 PLANT ANATOMY AND DEVELOPMENT (4). LEC. 2. LAB. 4. Pr., BIOL 6130 or departmental approval. The study of the structure and ontogeny of plant cells, tissues, and organs. Fall.

CMBL/BIOL 7320 PLANT GENE EXPRESSION (4). LEC. 4. Pr. BIOL 4320 or departmental approval. Genetic expression of genetic elements in plants from the recent literature. Credit will not be given for both BIOL 7320 and CMBL 7320.

CMBL/BIOL 7330 MOLECULAR BIOLOGY OF PLANT DEVELOPMENT (2). LEC. 2. Pr., BIOL 6130, BIOL 7280, or departmental approval. Physiological, biochemical and molecular aspects of plant growth and development. Credit will not be given for both BIOL 7330 and CMBL 7330.

BIOL 7340 WATER RELATIONS AND ENVIRONMENTAL STRESS (2). LEC. 2.

BIOL 7360 POPULATION ECOLOGY (4). LEC. 4. Pr. BIOL 3060 or departmental approval. Quantitative study of populations, including life tables, Leslie matrices, exponential and logistic models, metapopulations and life-history theory.

BIOL 7370 STREAM ECOLOGY (4). LEC. 3. LAB. 3. Pr., BIOL 1030 and BIOL 3060. Physical, chemical, and biological aspects of stream ecosystems emphasizing relationships and human influences on stream biota, and quantitative methods used to study stream ecology.


CMBL/BIOL 7440 ADVANCED CELL BIOLOGY (3). LEC. 3. Pr., BIOL 4100. Examination of current areas of research in cell and developmental biology by directed reading and discussion. Credit will not be given for both BIOL 7440 and CMBL 7440.

BIOL 7490 PHYSIOLOGICAL ECOLOGY (3). LEC. 3. Pr., 20 hours of biology beyond 1000-level to include a course in ecology. A study of the physiological adaptations that allow animals to survive in unusual environments.

BIOL 7500 BIOGEOGRAPHY (3). LEC. 3. Pr., departmental approval. Patterns and processes associated with the distribution of living and fossil organisms.

BIOL 7515 OCEANOLOGY OF THE GULF OF MEXICO (3). LEC. 3.


BIOL 7540 PROFESSIONAL ASPECTS OF BIOLOGY (3). LEC. 3. Pr., departmental approval. Instruction on practical aspects of a career in biological sciences.

BIOL 7550 WETLAND BIOLOGY (4). LEC. 4. LAB. 3. Pr., BIOL 3060 or equivalent. Biology of world wetland habitats. Field trips, research project, presentation, and paper discussion required.

BIOL 7560 PLANT OR ANIMAL INTERACTIONS (3). LEC. 3. Pr., BIOL 3060, BIOL 3100 or departmental approval. Overview of ecological and evolutionary interrelationships between animals and plants, including pollination biology, dispersal ecology, carnivory and plant-herbivore interactions.


BIOL 7620 MICROBIOLOGY OF EPIDEMICS (3). LEC. 3. Pr., BIOL 4200 or departmental approval. Epidemics of communicable disease outbreaks are analyzed according to the hosts, modes of transmission, environment, and pathogenesis of the agents.

BIOL 7705 TROPICAL BIOLOGY: ECOLOGICAL APPROACH (8). LEC. 4. LAB. 12. Pr., 75 hours of graduate level biological science. An in-depth introduction to the principles of ecology in the tropics. Orientation and introductory lecture in San Jose, Costa Rica followed by field work during an 8 week period.

BIOL 7715 TROPICAL AGRO BIOLOGY (8). LEC. 4. LAB. 12. Pr., 20 hours of graduate level biological science. Application of ecological principles to tropical agricultural systems with emphasis on research training. Orientation in San Jose, Costa Rica followed by visits to 3 main habitats.


BIOL 7750 ORNITHOLOGY (4). LEC. 3. LAB. 3. Pr., departmental approval. An intensive investigation of the current literature and relevant research dealing with birds.

BIOL 7950 MASTER’S THESIS SEMINAR (1). LEC. 1. SU. Pr., departmental approval. Oral presentation and discussion of research in the field of specialization. Course may be repeated for a maximum of 2 credit hours.

CMBL/BIOL 7960 READINGS IN MOLECULAR BIOLOGY (1). LEC. 1. Pr., or corequisite BIOL 7220. Oral presentation and discussion of recent scientific publications from a selected area molecular biology. Credit will not be given for both BIOL 7960 and CMBL 7960. Course may be repeated for a maximum of 4 credit hours.

BIOL 7970 SPECIAL TOPICS (1-4). LEC. Pr., departmental approval. Instruction and discussion in a selected current topic in botany, microbiology, molecular biology, or zoology. A different topic for advanced study will be selected each semester this course is offered. Course may be repeated for a maximum of 4 credit hours.

BIOL 7980 SPECIAL PROBLEMS (1-4). LEC. Pr., departmental approval. (A) Zoology, (B) Botany, (C) Microbiology, (D) Molecular Biology. Numerous study areas are available in each category. Consult individual faculty member before registering. Course may be repeated for a maximum of 4 credit hours.

BIOL 7990 RESEARCH AND THESIS (1-10). MST. TD. Course may be repeated with change in topic.

BIOL 8950 DOCTORAL SEMINAR (1). SEM. 1. SU. Oral presentation and discussion of research in the field of specialization. Course may be repeated for a maximum of 3 credit hours.

BIOL 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

Building Science (BSCI)

Prof. John Murphy

BSCI 1100 HISTORY AND INTRODUCTION TO CONSTRUCTION (3). LEC. 2. LAB. 6. Overview of the construction industry, practices, and careers and the development and use of construction materials and methods in Western civilization from Greece to the present time.

BSCI 1200 WORKING DRAWINGS AND SPECIFICATIONS (3). LEC. 2. LAB. 2. Pr., PBSC major. Graphical communication in construction; reading and interpreting working drawings, specifications, and shop drawings for use in construction estimating and administration.

BSCI 2200 CAD IN CONSTRUCTION (3). LEC. 2. LAB. 8. Pr., BSCI 1200. Applications of CAD in modern construction practice, which should enable students to produce MODIFY CAD drawings typically found in the construction environment.

BSCI 2300 MATERIALS, METHODS AND EQUIPMENT I (3). LEC. 3. LAB. 4. Pr., PBSC major. An overview of the materials, methods and construction equipment used in the construction of components found in CSI divisions 2-6.

BSCI 2350 MATERIALS, METHODS AND EQUIPMENT II (3). LEC. 3. Pr., BSCI 2300. An overview of the material, methods and construction equipment used in the construction of components found in CSI divisions 7-16.

BSCI 2400 STRUCTURES I (3). LEC. 3. Pr., PBSC, PHYS 1500, and MATH 1610. Principles of mechanics and material behavior related to building structures. Includes: force systems, frame analysis, section properties, stress, and basic design and structural elements.

BSCI 3100 ENVIRONMENTAL CONTROL I (3). LEC. 3. Pr., ARCH 1010 Survey of the effects of climate, design, materials and systems on the energy consumption and human environment of buildings. Alternative energy sources and materials are also included.

BSCI 3110 ENVIRONMENTAL CONTROL II (2). LEC. 2. Pr., BSCI 3100. Survey of the effects of climate, design, materials and systems on the energy consumption and human environment of buildings. Alternative energy sources are also included.

BSCI 3400 STRUCTURES II (3). LEC. 3. Pr., BSCI 2400, BSCI major. Primary and secondary member design, connection design, temporary bracing/shoring, and steel shop drawing review.
BSCI 3450 STRUCTURES III (3). LEC. 3. Pr., BSCI 3400. Introduction to the design of reinforced concrete and related formwork including beams, columns, slabs, footings, retaining walls, and pre-stressed members.

BSCI 3500 CONSTRUCTION INFORMATION TECHNOLOGY (3). LEC. 1. LAB. 4. Pr., BSCI major. Exploration of information technology and information management in construction. Problem solving using beginning and advanced techniques in spreadsheets, databases, presentation software, and many forms of digital communication.


BSCI 3650 PROJECT CONTROLS II (4). LEC. 3. LAB. 2. Pr., BSCI 3600. Professional estimating and scheduling concepts focusing on the roll-over of project estimates into detailed CPM schedules for construction including cost budget data.

BSCI 3700 CONSTRUCTION SAFETY HOisting (3). LEC. 3. Pr., BSCI major. Introduction to safety management in construction including risk reduction, lift planning, operations and rigging. Students earn 10 hour OSHA certification through the detailed coverage of code requirements.

BSCI 3800 PROJECT CONTROLS LEVELING I (3). LEC. 3. Pr., departmental approval. Combined course in blueprint reading, quantity surveying and cost estimating for students accepted into the Master’s program, but working on required remedial course work. This course can not be used to replace required undergraduate courses. Fall.


BSCI 3850 PROJECT CONTROLS LEVELING II (3). LEC. 2. LAB. 2. Pr., BSCI 3800. Combined course in construction scheduling and project administration for students accepted into the Master’s program, but working on required remedial course work. This course can not be used to replace required undergraduate courses. Spring.

BSCI 3920 EXPERIMENTAL LEARNING (3). LEC. 3. SU. Pr., Junior standing and departmental approval. Requires daily log and employer certification.

BSCI 4200 RESIDENTIAL CONSTRUCTION (3). LEC. 3. Pr., BSCI major. An overview of residential construction and development practices and professional issues including: local ordinances and codes, land use law, financing practices, architect-builder relationship, spec homes vs. custom homes, etc.

BSCI 4300 COMBINED ESTIMATING AND SCHEDULING FOR DESIGNERS (3). LEC. 3. Pr., BSCI major. Provides an overview of estimating and project planning practices and techniques which relate to interactions between the architect and constructor. Includes: sources of project costs, conceptual estimating, value engineering, CPM scheduling, cost of acceleration and delays, change orders, etc.

BSCI 4400 CONSTRUCTION STRUCTURES (2). LEC. 2. Pr., BSCI 2400. Temporary construction methods and design principles to ensure stability of structures during all phases of the construction process. Includes: concrete formwork, trench shoring, temporary bracing, rigging, and materials handling.

BSCI 4600 PROJECT CONTROLS III (4). LEC. 3. LEC. 2. PR, BSCI 3650. Detailed development of project management and project administration skills including resource scheduling, change management, project documentation, billing, cost control, QA/QC techniques, and site utilization planning.

BSCI 4700 BUILDING EQUIPMENT (3). LEC. 3. Pr., BSCI major. Overview of plumbing, mechanical and electrical systems in buildings. Basic design concepts are covered with emphasis on the management and quality control of system installation during the construction process.

BSCI 4750 SOILS, EARTHMOVING, AND SURVEYING (3). LEC. 2. LAB. 3. Pr., BSCI major. Introduction to properties and testing of soils encountered on a construction jobsite. Also, an overview of construction equipment and processes used in site preparation, building layout, and excavation of construction projects.

BSCI 4800 CONTRACTING BUSINESS (3). LEC. 3. Pr., BSCI 4600. Introduction to the organization and management of construction companies. Includes issues such as business planning, operations management, insurance, bonding, construction finance, employment law, etc.

BSCI 4850 BUSINESS AND CONSTRUCTION LAW (3). LEC. 3. Pr., BSCI major. Introduction to the legal environment of business in the United States with emphasis on contract law and liability issues for construction companies. Course includes legal research, claims avoidance, claims documentation, and alternative dispute resolution.

BSCI 4970 SPECIAL PROBLEMS (1-5). IND. Pr., departmental approval. Special problems in construction topics. Offered only at the discretion of the department head. This course may not be used to replace any required Building Science course.

BSCI 4980 BUILDING SCIENCE THESIS (4). LAB. 12. Pr., BSCI 4600. Individual project demonstrating mastery of curriculum content through the application of skills/knowledge to a theoretical construction company and project. Requires a written thesis and oral defense of work.

BSCI 7010 CONSTRUCTION LABOR AND PRODUCTIVITY (3). LEC. 3. Pr., departmental approval. Construction labor issues, productivity measurement and productivity improvement in the construction industry. Includes reading, research, and an out of class project.

BSCI 7020 ADVANCED CONSTRUCTION SCHEDULING (3). LEC. 3. Pr., departmental approval. Construction planning and scheduling techniques, the analysis of schedule data, and the decision making process of construction planning. Individual scheduling and analysis projects, presentations, and research.

BSCI 7030 CONSTRUCTION INFORMATION MANAGEMENT (3). LEC. 3. Pr., departmental approval. Advanced computer and information management systems applied in the construction industry. Topics include: network systems, EDI, voice recognition, bar coding/other ID systems, imaging, etc. Independent projects, research and homework assignments.

BSCI 7040 PROJECT DELIVERY SYSTEMS (3). LEC. 3. Pr., departmental approval. Survey of alternative project delivery systems in construction with analysis of their impact on project management and company organization. Guest lectures, readings, exams and projects.

BSCI 7100 ELECTIVES IN PROJECT MANAGEMENT (3). LEC. 3. Pr., departmental approval. Special course offerings related to advanced project management topics. Course may be repeated with change in topic.

BSCI 7200 ELECTIVES IN CONSTRUCTION LABOR (3). LEC. 3. Pr., departmental approval. Special course offerings related to construction labor topics. Course may be repeated with change in topic.

BSCI 7300 ELECTIVES IN INFORMATION TECHNOLOGY AND INNOVATION (3). LEC. 3. Pr., departmental approval. Special course offerings related to information technology, innovation, and robotics in construction. Course may be repeated with change in topic.

BSCI 7950 GRADUATE SEMINAR (1). SEM. 1. SU. Pr., departmental approval. Two hour bi-weekly meetings. Topics include research techniques, professional development, job placement, student projects, etc. Course may be repeated for a maximum of 3 credit hours.

BSCI 7960 DIRECTED READINGS IN CONSTRUCTION (1-3). IND. Pr., departmental approval. Individually proposed exploration of a construction industry related topic not covered in existing course offerings. Students must prepare a written proposal of the topic/course which may be repeated for a maximum of 3 credit hours.

BSCI 7970 SPECIAL PROBLEMS IN CONSTRUCTION (1-3). LAB. Pr., departmental approval. Individually proposed problems or projects related to the construction industry. Students must prepare a written proposal with defined deliverables. Course may be repeated for a maximum of 3 credit hours.

BSCI 7980 CAPSTONE PROJECT (3). LAB. 6. Pr., departmental approval. Individually proposed topic with final written report of findings and an oral defense of the work. Specific capstone project requirements are established by the supervising committee and vary based on the chosen topic.

Biosystems Engineering (BSEN)

Dr. Clifton Flood - 844-4180

BSEN 3210 MECHANICAL POWER FOR BIOSYSTEMS (3). LEC. 2. LAB. 3. Pr., ENGR 2010, MATH 2650. Basic engineering analysis, synthesis, and design concepts applied to power sources, mobile equipment and machinery applications for agricultural, forestry, and natural resource systems.


BSEN 3250 ENGINEERING FOR PRECISION AGRICULTURE AND FORESTRY (3). LEC. 2. LAB. 3. Pr., ELEC 3810, MATH 2650, or departmental approval. Engineering aspects of spatial technologies applied to agricultural and forest production. Data collection in the field using GPS and use of field data in site specific applications. Fall.

BSEN 3500 NATURAL RESOURCE SYSTEMS CONSERVATION (3). LEC. 2. LAB. 3. Pr., MATH 1130. Natural resource conservation technologies including rainfall-runoff relationships, sediment transport capacity, runoff control struc-
ures, water supply development, surveying techniques including GPS methods.
BSEN 3510 AGRICULTURAL POWER AND MACHINERY FUNDAMENTALS (3). LEC. 2, LAB. 3, Pr., MATH 1130. Power unit fundamentals with emphasis on diesel and small gasoline engines; mechanics of operation, safety, use, and adjustment of machines used for horticultural and agronomic crop production; and precision agriculture principles and technology. Fall.
BSEN 3530 AGRICULTURAL PRODUCTION AND PROCESSING FACILITY TECHNOLOGY (3). LEC. 3, Pr., MATH 1130. Fundamental requirements for the design and operation of agricultural production and processing facilities. Spring.
BSEN 3560 TURF SYSTEMS IRRIGATION DESIGN (3). LEC. 3, Pr., MATH 1130. Irrigation system design for turf-based systems including residential lawns, commercial properties, athletic fields and golf courses. Irrigation scheduling and effective management are presented to provide management capability in biosystems. Fall.
BSEN 4210 IRRIGATION SYSTEM DESIGN (3). LEC. 2, LAB. 3, Pr., CIVL 3110. Theory and design of irrigation systems for the application of water and wastewater including surveying techniques for system design. Systems include solid-set, traveler, center-pivot and trickle. Fall.
BSEN 4230 WASTE MANAGEMENT AND UTILIZATION ENGINEERING FOR BIOSYSTEMS (3). LEC. 2, LAB. 3, Pr., CHEM 1040, BSEN 3230, BIOL 3200. Theory and design of physical and biological treatment processing systems for biological waste management and utilization. The technologies of lagoons, land application systems, energy production and refeeding. Spring.
BSEN 4240 MECHANICAL AND ELECTRICAL PROCESS OPERATIONS IN BIOSYSTEMS (3). LEC. 3, Pr., ENGR 2070, CIVL 3110, ELEC 3810. Fluid flow applications, pump and fan selection, materials handling, size reduction, sorting and separating. Application of electrical power, equipment, and control devices to biological, food, forest and agricultural systems. Fall.
BSEN 4250 HYDRAULIC CONTROL SYSTEMS DESIGN (3). LEC. 2, LAB. 3, Pr., CIVL 3110 or MECHE 3310. Principles of energy transfer by means of fluid power. Design of hydraulic control systems using prime movers, valves, actuators and accessories. Spring.
BSEN 4310 ENGINEERING DESIGN FOR BIOSYSTEMS (4). LEC. 2, LAB. 6, Pr., BSEN 4240, or FOEN 6710 or departmental approval. Capstone design course in biosystems engineering emphasizing teamwork, communication, safety engineering, and economic analysis to complete an engineering design project. Spring.
BSEN 4900 SPECIAL PROBLEMS IN BIOSYSTEMS ENGINEERING (1-4). IND. Pr., departmental approval. Faculty supervision of individual student investigations of specialized problems in biosystems engineering. May be repeated with change in problem. Course may be repeated with change in topic.
BSEN 4967 HONORS READING (1-3). IND. Pr., membership in the Honors College. Course may be repeated for a maximum of 3 credit hours.
BSEN 4970 SPECIAL TOPICS IN BIOSYSTEMS ENGINEERING (1-4). LEC. Pr., departmental approval. Individual or small group study of a specialized area in biosystems engineering. May be repeated with change in topic. Course may be repeated for a maximum of 12 credit hours.
BSEN 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College. Course may be repeated for a maximum of 3 credit hours.
BSEN 6220 INTRODUCTION TO SPATIAL TECHNOLOGIES FOR BIOSYSTEMS (3). LEC. 2, LAB. 3, Pr., BSEN 3230 or BSEN 3500, AGRN 2040 or AGRN 2070 or departmental approval. Spatial technologies including GPS, GIS and remote sensing systems applied to biosystems. Collecting, managing, and analyzing spatial data for agricultural and forest systems. Spring.
BSEN 6250 DETERMINISTIC MODELING FOR BIOSYSTEMS (3). LEC. 2, LAB. 3, Pr., MATH 2650, ELEC 3810, ENGR 2350, or MECHE 2110 or departmental approval. Modeling of biosystems, methods to deal with complexity and validation tools. Spring.
BSEN 6550 PRINCIPLES OF FOOD ENGINEERING TECHNOLOGY (4). LEC. 3, LAB. 3, Pr., MATH 1130, PHYS 1000. Engineering concepts and unit operations used in processing food products. Fall.
BSEN 6900 SPECIAL PROBLEMS IN BIOSYSTEMS ENGINEERING (1-4). IND. Pr., departmental approval. Faculty supervision of individual student investigations of advanced specialized problems in biosystems engineering. May be repeated with change in problem. Course may be repeated for a maximum of 12 credit hours.
BSEN 6970 SPECIAL TOPICS IN BIOSYSTEMS ENGINEERING (1-4). LEC. Pr., departmental approval. Individual or small group study of an advanced specialized area in biosystems engineering. May be repeated with change in topic. Course may be repeated for a maximum of 12 credit hours.
BSEN 7050 SOIL DYNAMICS OF TILLAGE AND TRACTION (3). LEC. 3, Pr., CIVIL 4500, AGRN 7590, and departmental approval. Analyses and measurements of soil reactions as affected by physical properties of soil when subject to forces imposed by tillage implements and traction devices.
BSEN 7120 STOCHASTIC MODELING FOR BIOSYSTEMS (3). LEC. 3, Pr., CIVIL 3020 or departmental approval. Solving problems in biosystems engineering and related fields by modeling data with probability distributions, spatial statistics, autoregressive models, Monte-Carlo simulation, and reliability methods.
BSEN 7900 SPECIAL PROBLEMS IN BIOSYSTEMS ENGINEERING (1-4). IND. Pr., departmental approval. Faculty supervision of individual student investigations of advanced specialized problems in biosystems engineering at the graduate level. Course may be repeated with change in topic.
BSEN 7950 SEMINAR (1). SEM., SU. Reviews and discussions of research techniques, current scientific literature and recent developments in biosystems engineering. Course may be repeated for a maximum of 12 credit hours.
BSEN 7970 SPECIAL TOPICS IN BIOSYSTEMS ENGINEERING (1-4). IND. Pr., departmental approval. Individual or small group study of an advanced specialized area in biosystems engineering at the graduate level. Course may be repeated with change in topic.
BSEN 7990 RESEARCH AND THESIS (1-10). RES. TD. Course may be repeated with change in topic.

Business Administration (BUSI)
BUSI 1010 CONTEMPORARY ISSUES IN BUSINESS ADMINISTRATION I (1). LEC. 1, SU. Exposure to various topics relative to business administration. For Business majors, should be taken during student’s first academic year.
BUSI 2010 CONTEMPORARY ISSUES IN BUSINESS ADMINISTRATION II (1). LEC. 1, SU. BUSI 1010. Orientation to business administration. Business majors should take during student’s second academic year.
BUSI 3510 INTRODUCTION TO BUSINESS AND ENGINEERING (3). LEC. 3, Pr., MATH 2630, junior standing, and admission to Business-Engineering Technology Program. Principles of business and engineering management processes.
BUSI 3530 ENTREPRENEURSHIP AND E-COMMERCE (3). LEC. 3, Pr., BUSI 3510 or ENGR 3510. Skills required to start a new business and develop a marketing presence on the Internet.
BUSI 4540 STRATEGIC MANAGEMENT OF TECHNOLOGY AND INNOVATION (3). LEC. 3, Pr., BUSI 3530. Commercialization of technology, product design and development, automation, case analyses, and a team project.
BUSI 4980 CAPSTONE PROJECT II: DESIGN PROJECT (3). LEC. 1, LAB. 6, Pr., BUSI 4970 or ENGR 4970. Cross-functional team design projects for sponsoring industry.
BUSI 7110/7116 FINANCIAL ANALYSIS (3). LEC. 3, Pr., departmental approval. Integrated course combining financial accounting and corporate finance for MBA students.
BUSI 7120/7126 QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS (3). LEC. 3, Pr., departmental approval. Integrated course in statistical methods and management science for MBA students.
BUSI 7130/7136 STRATEGIC ANALYSIS AND THE COMPETITIVE ENVIRONMENT (3). LEC. 3, Pr., departmental approval. Integrated course covering business strategy and the external environment in a global context.
BUSI 7140/7146 ORGANIZATIONAL LEADERSHIP AND CHANGE (3). LEC. 3, Pr., departmental approval. Integrated course covering aspects of individual and group behavior and assessment in organizations, effective team building, and leading organizations through change.
BUSI 7210/7216 MARKETING AND CONSUMER THEORY (3). LEC. 3, Pr., departmental approval. Combines elements of the economics of demand theory and marketing management. Includes advanced pricing topics and the competitive environment.
BUSI 7220/7226 OPERATIONS AND INFORMATION TECHNOLOGY FOR COMPETITIVE ADVANTAGE (3). LEC. 3, Pr., departmental approval. The structure of business operations and the role that information technology plays in formulating and implementing strategies for competitive advantage.
BUSI 7230/7236 COST ANALYSIS AND SYSTEMS (3). LEC. 3, Pr., departmental approval. Integrates production and cost theory from economics with managerial and cost accounting theory and systems for MBA students.
BUSI 7920/7926 MBA INTERNSHIP (3-6). INT., SU. Pr., departmental approval. Internship for MBA students in business organizations. Course may be repeated for a maximum of 6 credit hours.
BUSI 7970/7976 SPECIAL TOPICS IN BUSINESS ADMINISTRATION (1-3). IND. Pr., departmental approval. Specialized topics in business administration.
not otherwise covered in existing courses. Course may be repeated for a maximum of 6 credit hours.

BUSI 7980/7986 INTEGRATED BUSINESS PROJECT AND CASE ANALYSIS (3). LEC. 3. Pr. departmental approval. Integrates knowledge gained from MBA classes and applies that knowledge to address actual business problems.

Consumer Affairs (CAHS)

Dr. Carol L. Warfield - 844-4084

CAHS 1000 STUDIO I: INTRODUCTION TO INTERIOR DESIGN (4). LEC. 3, STU. 3. Introduction and application of design theory to interior design and consumer products. Fall, Spring.


CAHS 1600 TEXTILE INDUSTRIAL COMPLEX (3). LEC. 3. Introduction to the composition, characteristics, and products of the network of fiber producers, textile manufacturers, dyers, finishers, apparel manufacturers, and retailers. Fall.

CAHS 1750 FUNDAMENTALS OF PRODUCT DEVELOPMENT (4). LEC. 2, STU. 6. Pr., CAHS 1600. Introduction to apparel planning and production for merchandisers, designers and production managers.

CAHS 2000 GLOBAL CONSUMER CULTURE (3). LEC. 3. Cultural, commercial, and aesthetic factors influencing the selection and usage of consumer products and services to create and express social identity.


CAHS 2300 HISTORY OF THE DECORATIVE ARTS (3). LEC. 3. Pr., CAHS 1000. Core fine arts. Historical survey of the interior design and decorative arts from antiquity through present. Fall.

CAHS 2400 INTERIOR MATERIALS AND COMPONENTS (3). LEC. 3. Pr., CAHS 1000. Survey of finishes, textiles, materials and components. Introduction to health, safety and environmental issues that impact consumers. Fall.

CAHS 2740 AESTHETICS FOR APPAREL DESIGN (4). LEC. 2, STU. 6. Pr., CAHS 1600. Principles of aesthetics applied to apparel product development including computer-aided design and other presentation techniques.


CAHS 2760 VISUAL MERCHANDISING (4). LEC. 2, STU. 6. Pr., CAHS 1600 or departmental approval. History, equipment, application and theory of display techniques in store and non-store settings. Fall.


CAHS 3200 STUDIO VI: RESIDENTIAL INTERIORS (4). LEC. 2, STU. 6. Pr., CAHS 2200, CAHS 2300, CAHS 2400. Application of human factors and consumer needs to programming and design process of residential interiors. Fall.

CAHS 3380 STUDY ABROAD OPPORTUNITY IN HUMAN SCIENCES (1). LEC. 1. Exploration of study abroad opportunities for students interested in the International Minor in Human Sciences. Spring.


CAHS 3750 PRODUCT DEVELOPMENT: APPAREL DESIGN (4). LEC. 2, STU. 6. Pr., CAHS 2750, CAHS 2800. Advanced design techniques, including Creative solution of design problems. Course may be repeated for a maximum of 6 credit hours.

CAHS 3850 MERCHANDISE PLANNING AND CONTROL (3). LEC. 2. LAB. 2. Pr., ACCT 2910 or departmental approval. Application of principles of merchandising management and retail buying to the retailing of consumer goods and services.

CAHS 3900 INDEPENDENT STUDY (1-3). IND. SU. Pr., departmental approval. Directed readings and/or individualized research project. Course may be repeated for a maximum of 6 credit hours.

CAHS 3940 AND TRAVEL IN CONSUMER AFFAIRS (1-3). FLD. Pr., departmental approval. Concentrated study in the U.S. or abroad. Course may be repeated for a maximum of 6 credit hours.


CAHS 4300 STUDIO IX: DIRECTED RESEARCH IN INTERIOR DESIGN (2). LEC. 1, STU. 3. Pr., CAHS 3400, CAHS 3500, senior standing, departmental approval. Selection and development of design thesis project with faculty supervision. Fall.


CAHS 4450 HISTORY OF COSTUME (3). LEC. 3. Pr., junior standing, core History or departmental approval. Historical roles of dress in western civilization. Cultural, social, and physical evolution. Credit will not be given for both CAHS 4450 and CAHS 7450. Spring.

CAHS 4600 WORLD PRODUCTION AND TRADE IN TEXTILES AND APPAREL (3). LEC. 3. Pr. junior standing, Social Science or departmental approval. The role of fiber, textile and apparel industries in the international economic system. Credit will not be given for both CAHS 4600 and CAHS 7600. Spring.

CAHS 4650 TEXTILE AND APPAREL EVALUATION (4). LEC. 2, LAB. 6. Pr., CAHS 3600 or departmental approval. Testing procedures for characterization and evaluation of fabrics and sewn products for apparel and interiors. Credit will not be given for both CAHS 4650 and CAHS 7650. Spring.

CAHS 4700 ENTREPRENEURSHIP IN APPAREL AND INTERIORS (3). LEC. 3. Pr., junior standing. Analyzing business opportunities in textiles, apparel and interiors; developing marketing concepts and entrance strategies. Credit will not be given for both CAHS 4700 and CAHS 7700. Spring.

CAHS 4730 HISTORY OF TEXTILES (3). LEC. 3. Pr. junior standing, core History or departmental approval. Cultural, economic, material, technological and aesthetic perspectives on the evolution of textiles. Credit will not be given for both CAHS 4730 and CAHS 7730. Summer.

CAHS 4750 APPAREL LINE DEVELOPMENT (4). LEC. 4, STU. 24. Pr., CAHS 3750, CAHS 4800, departmental approval. Team driven design production and market research. Development of apparel lines. Credit will not be given for both CAHS 4750 and CAHS 7750. Spring.

CAHS 4760 FASHION ANALYSIS AND FORECASTING (3). LEC. 3. Pr. CAHS 1600 or departmental approval. Theories explaining fashion dynamics and techniques for forecasting change, with case applications in textiles, apparel and retailing.

CAHS 4763 FASHION ANALYSIS AND FORECASTING (3). LEC. 3. Pr., CAHS 1600 or departmental approval. Theories explaining fashion dynamics and techniques for forecasting change, with case applications in textiles, apparel and retailing.

CAHS 4800 APPAREL ENGINEERING (4). LEC. 3, LAB. 3. Pr., CAHS 2800. Planning and problem solving throughout the apparel production process, including methods engineering, time study, costing, CAD. Fall.

CAHS 4850 APPAREL MERCHANDISING AND RETAIL MANAGEMENT (4). LEC. 10, LAB. 4. Pr., CAHS 3850 or departmental approval. Problem-solving and decision making strategies for retailing apparel, textiles and other consumer products. Credit will not be given for both CAHS 4850 and CAHS 7850. Spring.

CAHS 4920 INTERNSHIP IN INTERIOR DESIGN (8). INT. Pr., senior standing and departmental approval. Supervised 10 week professional internship experience in the field of Interior Design. Summer.


CAHS 4967 HONORS READINGS (1-3). IND., SU. Pr., membership in the Honors College, departmental approval. Readings in specialized topics. Course may be repeated for a maximum of 6 credit hours.

CAHS 4970 PROBLEMS IN DESIGN (1-3). IND. Pr., departmental approval. A) Apparel, B) Interior Design, C) Visual Merchandising, D) Textile Design. Creative solution of design problems. Course may be repeated for a maximum of 6 credit hours.

CAHS 4997 HONORS THESIS (3). IND. Pr., membership in the Honors College, CAHS 4967, departmental approval. Research in specialized topics.

CAHS 7100 ENVIRONMENTAL DESIGN THEORIES AND APPLICATIONS (3). LEC. 3. Pr., CAHS 4400 or departmental approval. Theories, methodologies, and current issues relevant to interior design; sociological, psychological, ecological, and post-modern perspectives. Fall - odd numbered years. Fall.

CAHS 7450 HISTORY OF COSTUME (3). LEC. 3. Pr., core History or departmental approval. Historical roles of dress in western civilization. Cultural, social, and physical evolution. Credit will not be given both CAHS 7450 and CAHS 4450. Spring.

CAHS 7530 ECONOMICS OF APPAREL AND TEXTILES (3). LEC. 3. Pr., ECON 2020, departmental approval. Economic issues involving the manufacture, distribution and consumption of textiles and apparel. Fall - even numbered years. Fall.


CAHS 7600 WORLD PRODUCTION AND TRADE IN TEXTILES AND APPAREL (3). LEC. 3. Pr., core Social Sciences or departmental approval. The role of fiber, textile and apparel industries in the international economy. Credit will not be given for both CAHS 7600 and CAHS 4600. Spring.


CAHS 7650 TEXTILE AND APPAREL EVALUATION (4). LEC. 2, LAB. 6. Pr., CAHS 3600 or departmental approval. Testing procedures for characterization and evaluation of fabrics and sewn products for apparel and interiors. Credit will not be given for both CAHS 4650 and CAHS 7650. Spring.

CAHS 7670 CLOTHING AND BEHAVIOR (3). LEC. 3. Pr., departmental approval. Clothing as a factor in the physical, social, and psychological environment; response to and use of clothing in social behavior. Fall.

CAHS 7690 CONSUMER PREFERENCES FOR FASHION PRODUCTS (3). LEC. 3. Pr., departmental approval. Effects of consumer preference formation on the product development, marketing and merchandising of fashion products. Fall.

CAHS 7700 ENTREPRENEURSHIP IN APPAREL AND INTERIORS (3). LEC. 3. Pr., departmental approval. Analyzing business opportunities in textiles, apparel and interiors; developing marketing concepts and entrance strategies. Credit will not be given for both CAHS 7700 and CAHS 4700. Summer.

CAHS 7730 HISTORY OF TEXTILES (3). LEC. 3. Pr., core History or departmental approval. Cultural, economic, material, technological, and aesthetic perspectives on the evolution of textiles. Credit will not be given for both CAHS 7730 and CAHS 4730 Summer.

CAHS 7750 APPAREL LINE DEVELOPMENT (4). LEC. 4, STU. 24. Pr., CAHS 3750, CAHS 4800, departmental approval. Team-driven design, production and market research. Development of apparel lines. Credit will not be given for both CAHS 4750 and CAHS 7750. Spring.

CAHS 7760/7766 FASHION ANALYSIS AND FORECASTING (3). LEC. 3. Pr., CAHS 1600 or departmental approval, gradual standing. Theories explaining fashion dynamics and techniques for forecasting change with case applications in textiles, apparel and retailing.

CAHS 7850 APPAREL MERCHANDISING AND RETAIL MANAGEMENT (4). LEC. 10, LAB. 4. Pr., CAHS 3850 or departmental approval. Problem-solving and decision-making strategies for retailing apparel and textiles and other consumer products. Credit will not be given for both CAHS 7850 and CAHS 4850. Spring.

CAHS 7900 INDEPENDENT STUDY (1-3). IND., SU. Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours. Spring.

CAHS 7910 SUPERVISED TEACHING IN CONSUMER AFFAIRS (1). IND., SU. Pr., departmental approval. Practical experience teaching in the classroom. Course may be repeated for a maximum of 3 credit hours.

CAHS 7920 GRADUATE INTERNSHIP (3). INT. Pr., departmental approval. Supervised professional experience in the United States or internationally.

CAHS 7930 ADVANCED DESIGN PROJECTS (1-6). IND., SU. Pr., departmental approval. Independent execution of advanced design work. (A) Apparel; (B) Interiors; (C) Visual Merchandising; (D) Textile Design. Course may be repeated for a maximum of 6 credit hours.

CAHS 7940 STUDY/TRAVEL IN CONSUMER AFFAIRS (1-3). FLD., SU. Pr., departmental approval. Concentrated study/travel in the U.S. or internationally. Course may be repeated for a maximum of 6 credit hours.

CAHS 7950 SEMINAR (1). SEM., SU. Pr., departmental approval. Research presentations and discussion. Course may be repeated for a maximum of 3 credit hours.

CAHS 7960 DIRECTED READINGS (1-3). IND., SU. Pr., departmental approval. Directed readings in textiles, apparel, and retailing. Course may be repeated for a maximum of 6 credit hours.

CAHS 7970 DIRECTED RESEARCH IN DESIGN (1-6). RES. Pr., departmental approval. (A) Apparel; (B) Interiors; (C) Visual Merchandising; (D) Textile Design. Course may be repeated for a maximum of 6 credit hours.

CAHS 7980 GRADUATE PROJECT (1-3). LEC. Pr., departmental approval. In-depth, integrative research in a particular project related to apparel, textiles, interiors or consumer behavior. Course may be repeated for a maximum of 6 credit hours.

CAHS 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval. Course may be repeated with change in topic.

Chemistry (CHEM)

Dr. J. Howard Harpigs - 844-4043


CHEM 1011 SURVEY OF CHEMISTRY I LAB (1). LAB. 3. Pr., or corequisite CHEM 1010. Science Core. Laboratory experiments emphasizing course material in CHEM 1010.

CHEM 1020 SURVEY OF CHEMISTRY II (3). LEC. 3. Pr., CHEM 1010, Science Core. Survey of important topics from organic and biochemistry. Aldehydes and ketones, carboxylic acids, carbohydrates, lipids, proteins, enzymes, extracellular fluids, metabolism, nucleic acids, radioactivity.

CHEM 1021 SURVEY OF CHEMISTRY II LAB (1). LAB. 3. Pr., CHEM 1011. Coreq., CHEM 1020. Science Core. Laboratory experiments emphasizing course material in CHEM 1020.

CHEM 1030 FUNDAMENTALS CHEMISTRY I (3). LEC. 3. Pr., MATH 1130. Science Core. Atomic and molecular theory, chemical equations, stoichiometry, gas laws, thermochemistry, bonding, electronic structure, molecular geometries, solids, liquids, properties of solutions, problem-solving techniques. Credit will not be given for both CHEM 1030 and CHEM 1110 or CHEM 1117.

CHEM 1031 FUND OF CHEMISTRY I LAB (1). LAB. 3. Pr., CHEM 1030, Science Core. Laboratory experiments emphasizing course material in CHEM 1030. Credit will not be given for both CHEM 1031 and CHEM 1111 or CHEM 1118.

CHEM 1040 FUNDAMENTAL CHEMISTRY II (3). LEC. 3. Pr., CHEM 1030. Science Core. Chemical kinetics; chemical equilibrium; acids and bases; calculations of pH; equilibrium constants and thermodynamical properties; electrochemistry; descriptive chemistry. Credit will not be given for both CHEM 1040 and CHEM 1120 or CHEM 1127.

CHEM 1041 FUND OF CHEMISTRY II LAB (1). LAB. 3. Pr., CHEM 1031. Coreq., CHEM 1040. Science Core. Laboratory experiments emphasizing course material in CHEM 1040. Credit will not be given for both CHEM 1041 and CHEM 1121 or CHEM 1128.

CHEM 1110 GENERAL CHEMISTRY I (3). LEC. 3. Pr., High School Chemistry and MATH 1130. Science Core. Chemical principles for chemistry and related majors. Atomic and molecular theory, periodicity, chemical reactions, stoichiometry, gases, thermochemistry, bonding, molecular geometries, liquids, solids, and solutions. Credit will not be given for both CHEM 1110 and CHEM 1030 or CHEM 1117.

CHEM 1111 GENERAL CHEMISTRY I LAB (1). LAB. 3. Coreq., CHEM 1110. Science Core. Laboratory experiments emphasizing course material in CHEM 1110. Credit will not be given for both CHEM 1110 and CHEM 1031 or CHEM 1118.

CHEM 1117 HONORS GENERAL CHEMISTRY I (3). LEC. 3. Pr., Membership in the Honors College, High School Chemistry and MATH 1610. Science Core. General chemistry for students in the honors program. Topics similar to CHEM 110, but covered to a greater extent. Credit will not be given for both CHEM 1117 and CHEM 1030 or CHEM 1110.

CHEM 1118 HONORS GENERAL CHEMISTRY I LAB (1). LAB. 3. Pr., Membership in the Honors College and CHEM 1117. Science Core. Laboratory experiments emphasizing course material in CHEM 1117. Credit will not be given for both CHEM 1118 and CHEM 1031 or CHEM 1111.

CHEM 1120 GENERAL CHEMISTRY II (3). LEC. 3. Pr., CHEM 1110. Science Core. Continuation of CHEM 1110. Chemical kinetics, chemical equilibrium, acids and bases, thermodynamics, electrochemistry, representative element and transition metal chemistry. Credit will not be given for both CHEM 1120 and CHEM 1040 or CHEM 1127.

CHEM 1121 GENERAL CHEMISTRY II LAB (1). LAB. 3. Coreq., CHEM 1120. Science Core. Laboratory experiments emphasizing course material in CHEM 1120.
CHEM 127 HONORS GENERAL CHEMISTRY II (3). LEC. 3. Pr., Membership in the Honors College and CHEM 1171. Science Core. General chemistry for students in the honors program. Topics similar to CHEM 1270, but covered in more depth. Credit will not be given for both CHEM 1271 and CHEM 1040 or CHEM 1120.

CHEM 128 HONORS GENERAL CHEMISTRY II LAB (1). LAB. 3. Pr., Membership in the Honors College and CHEM 1118, CHEM 1127. Science Core. Laboratory experiments emphasizing course material in CHEM 1127. Credit will not be given for both CHEM 1128 and CHEM 1041 or CHEM 1121.

CHEM 1200 CHEMICAL APPLICATIONS OF COMPUTERS I (1). LEC. 1. Coreq., CHEM 1110 or CHEM 1117. Introduction to computer applications in chemistry required for solving chemical problems and preparing laboratory reports.

CHEM 2030 SURVEY OF ORGANIC CHEMISTRY (3). LEC. 3. Pr., CHEM 1040, CHEM 1120, or CHEM 1127. Structure, nomenclature and reactions of the functional group classes of organic compounds, polymers, and molecules of biological interest. Credit will not be given for both CHEM 2030 and CHEM 2070.

CHEM 2070 ORGANIC CHEMISTRY I (3). LEC. 3. Pr., CHEM 1040, CHEM 1120 or CHEM 1127. In-depth study of organic chemistry including structure, nomenclature, reactions, reaction mechanisms, stereochemistry, synthesis and spectroscopic structure determination organized by the functional group approach. Considers alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, and aromatic compounds. Credit will not be given for both CHEM 2070 and CHEM 2030.

CHEM 2071 ORGANIC CHEMISTRY I LABORATORY (1). LAB. 3. Pr., or corequisite CHEM 2070. Laboratory for CHEM 2070.


CHEM 2200 CHEMICAL APPLICATIONS OF COMPUTERS II (1). LEC. 1. Pr., CHEM 1200. Coreq., CHEM 2070. Utilization of chemically-oriented programs to include chemical drawing, graphic analysis and spreadsheet chemistry. Introduction to generating technical documents.

CHEM 3000 CHEMICAL LITERATURE (1). LEC. 1. Pr., CHEM 2080. Chemical literature with emphasis on primary and secondary sources and the various computer data bases available.

CHEM 3050 ANALYTICAL CHEMISTRY (3). LEC. 3. Pr., CHEM 1040, CHEM 1120, or CHEM 1127. Theory and application of volumetric, potentiometric and spectrophotometric chemical analysis.

CHEM 3051 ANALYTICAL CHEMISTRY LABORATORY (1). LAB. 3. Pr., or corequisite CHEM 3050. Analytical techniques applied to chemical analysis.

CHEM 3160 SURVEY OF PHYSICAL CHEMISTRY (3). LEC. 3. Pr., CHEM 1040, CHEM 1120, or CHEM 1127. Principles of physical chemistry.

CHEM 3200 CHEMICAL APPLICATIONS OF COMPUTERS III (1). LEC. 1. Pr., CHEM 2200 and CHEM 2070. Introduction to computer data acquisition, data manipulation and molecular structure and spectral analysis programs.

CHEM 4901 SPECIAL PROBLEMS IN CHEMISTRY (3). LAB. 9. Pr., junior standing and departmental approval. This is an individual problem course. Each student will work under the direction of a staff member on some problem of mutual interest. Course may be repeated for a maximum of 9 credit hours.

CHEM 4950 UNDERGRADUATE SEMINAR (1). LEC. 1. SU. Pr., junior standing. Oral presentation and discussion of research in the area of specialization.

CHEM 4997 HONORS THESIS (1-3). LEC. 3. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 6 credit hours.

CHEM 6040 COMPUTATIONAL CHEMISTRY (4). LEC. 3. LAB. 3. Pr., CHEM 2080 and CHEM 6080 or equivalent. Modern computational chemistry including molecular mechanics and quantum mechanical calculations.

CHEM 6070 PHYSICAL CHEMISTRY I (3). LEC. 3. Pr., CHEM 1040, CHEM 1120, or CHEM 1127; MATH 2630; PHYS 1610. The connection between molecular structure and the physical properties of matter using thermodynamics, quantum mechanics and statistical mechanics.

CHEM 6071 PHYSICAL CHEMISTRY I LABORATORY (1). LAB. 3. Pr., or corequisite CHEM 6070. Laboratory for CHEM 6070.

CHEM 6080 PHYSICAL CHEMISTRY II (3). LEC. 3. Pr., CHEM 6070. Continuation of CHEM 6070 with emphasis on kinetics and spectroscopy.

CHEM 6081 PHYSICAL CHEMISTRY II LABORATORY (1). LAB. 3. Pr., CHEM 6070 or corequisite CHEM 6080. Laboratory for CHEM 6080.

CHEM 6100 INORGANIC CHEMISTRY (3). LEC. 3. Pr., CHEM 6080 or equivalent. Principles of inorganic chemistry emphasizing periodic properties, bonding, structure and symmetry, the solid state, acid-base theory and coordination chemistry.

CHEM 6101 INORGANIC CHEMISTRY LABORATORY I (1). LAB. 3. Pr., or corequisite CHEM 6100. Synthesis and characterization of a variety of inorganic compounds.

CHEM 6110 INORGANIC CHEMISTRY II (3). LEC. 3. Pr., CHEM 6100 or departmental approval. Survey of main group, transition metal and organometallic chemistry.

CHEM 6111 INORGANIC CHEMISTRY LABORATORY II (1). LAB. 3. Pr., CHEM 6101 or departmental approval. Coreq., CHEM 6110. Laboratory for CHEM 6110.

CHEM 6130 INSTRUMENTAL ANALYSIS (3). LEC. 3. Pr., CHEM 6080. Fundamental concepts used in instrumental analytical chemistry emphasizing spectrophotometric, electroanalytical and chromatographic analysis.

CHEM 6131 INSTRUMENTAL ANALYSIS LAB (1). LAB. 3. Coreq., CHEM 6130. Laboratory for CHEM 6130.

CHEM 6180 BIOCHEMISTRY I (3). LEC. 3. Pr., CHEM 2080. Molecular Structure: classification, structure and reactions of the major constituents of living matter. Also includes binding phenomena and bioenergetics. Credit will not be given for both CHEM 6180 and BCH 6180.

CHEM 6181 BIOCHEMISTRY I LABORATORY (1). LAB. 3. Pr., or corequisites CHEM 6180. Identification and quantification of compounds from the important biochemical classes. Examples include amino acid chromatography, dipalpe sequencing, glucose concentration, etc. Credit will not be given for both CHEM 6181 and BCH 6181.

CHEM 6190 BIOCHEMISTRY II (3). LEC. 3. Pr., CHEM 6180. Metabolism: survey of design and regulation of the major catabolic and biosynthetic (including photosynthesis) metabolic pathways. An overview of the flow of genetic information. Credit will not be given for both CHEM 6190 and BCH 6190.

CHEM 6191 BIOCHEMISTRY II LABORATORY (1). LAB. 3. Pr., or corequisite CHEM 6190. Partial purification, Kinetic studies and characterization of enzymes and nucleotides from various plants, animals and bacteria. Credit will not be given for both CHEM 6191 and BCH 6191.

CHEM 7100 ADVANCED INORGANIC CHEMISTRY (3). LEC. 3. Pr., CHEM 6100 or departmental approval. Current concepts of inorganic chemistry with an emphasis on theory, structure, bonding and reactivity.

CHEM 7110 PHYSICAL METHODS IN INORGANIC CHEMISTRY (3). LEC. 3. Pr., CHEM 7100 or equivalent. Theory and application of techniques for obtaining information on inorganic compounds including magnetism, multinuclear nmr, mass spectrometry, x-ray diffraction, vibrational and electronic spectroscopies.

CHEM 7120 ORGANOMETALLIC CHEMISTRY (3). LEC. 3. Pr., CHEM 7100 or departmental approval. Main group and transition metal organometallic chemistry.

CHEM 7160 ADVANCED TOPICS IN INORGANIC CHEMISTRY (3). LEC. 3. Pr., CHEM 7100 or departmental approval. Currently active research areas in inorganic chemistry. Course may be repeated for a maximum of 12 credit hours.

CHEM 7200 ADVANCED ORGANIC CHEMISTRY I (3). LEC. 3. Pr., CHEM 7200 or departmental approval. Structure and mechanism in organic chemistry.

CHEM 7210 ADVANCED ORGANIC CHEMISTRY II (3). LEC. 3. Pr., CHEM 7200. Physical organic chemistry including spectroscopic methods.


CHEM 7280 THEORY AND PRACTICE OF COMPUTATIONAL CHEMISTRY (3). LEC. 3. Pr., departmental approval. The use of modern computational chemistry in solving chemical problems.

CHEM 7300 ADVANCED PHYSICAL CHEMISTRY (3). LEC. 3. Pr., CHEM 6080. Topics of general and current interest; may vary from year to year.


CHEM 7370 SPECIAL TOPICS IN PHYSICAL CHEMISTRY (1-3). LEC. 3. Pr., CHEM 7300. Modern topics in advanced physical chemistry. Course may be repeated for a maximum of 3 credit hours.

CHEM 7410 PROTEINS (3). LEC. 3. Pr., CHEM 6070 and CHEM 6190. Chemical and physical properties of amino acids and proteins, protein structure and the relation of protein structure to function.


CHEM 7520 SURFACE CHEMISTRY (3). LEC. 3. Pr., CHEM 7500. Basic concepts in surface chemistry and surface analytical methods.


CHEM 7750 FORMAL PRESENTATIONS IN MODERN CHEMISTRY (1). LEC. 1. Pr. Graduate student standing. Oral presentations skills will be developed with a focus on the disseminating of new discoveries in the field of Chemistry. Course may be repeated for a maximum of 6 credit hours.

CHEM 7930 DIRECTED INDIVIDUAL STUDY IN CONTEMPORARY CHEMISTRY (1-15). IND. credit to be arranged.

CHEM 7950 SEMINAR (1). SEM. 1. Course may be repeated for a maximum of 6 credit hours.

CHEM 7990 RESEARCH AND THESIS (1-10). MIST. Course may be repeated for a maximum of 20 credit hours.

CHEM 8990 RESEARCH AND DISSERTATION (1-10). DSR. Course may be repeated for a maximum of 20 credit hours.

LABORATORY TECHNOLOGY (LABT)

LABT 1010 ORIENTATION (1). LEC. 1. Aims, objectives and requirements for careers in medical and laboratory technology.


LABT 4250 CLINICAL BIOCHEMISTRY/INSTRUMENTATION (4). LEC. 3. LAB. 3. Pr., CHEM 6180 and junior standing or departmental approval. Theoretical and practical application of continuous flow analysis, atomic absorption, spectrophotometry, radioimmunossay and chromatographic techniques used in the analysis of body fluids.

LABT 4910 CLINICAL PRACTICUM (0). PRA.

LABT 4920 CLINICAL INTERNSHIP (0). PRA. Pr., LABT 4910 Final term of clinical internship.

Chemical Engineering (CHEN)

Dr. Robert P. Chambers - 844-4827

CHEM 2100 PRINCIPLES OF CHEMICAL ENGINEERING (3). LEC. 3. Pr., CHEM 1120, CHEM 1040, MATH 1610 or MATH 1710. Coreq., PHYS 1600, MATH 1620 or MATH 1720, CHEN 2101, ENGR 1110. Application of multicomponent material and energy balances to chemical processes involving phase changes and chemical reactions.

CHEM 2101 PRINCIPLES OF CHEMICAL ENGINEERING LABORATORY (1). LEC. 3. Pr., CHEM 1120, OR CHEM 1040, MATH 1610 or MATH 1710. Coreq., PHYS 1600, MATH 1620 or MATH 1720, CHEN 2100. Process engineering and computer applications laboratory. Application of spreadsheet programming and process engineering principles to multicomponent material and energy balances of chemical processes involving phase changes and chemical reactions.

CHEM 2610 TRANSPORT I (3). LEC. 3. Pr., PHYS 1600, MATH 2630, completion of CHEN 2100 with a grade of C or better. Coreq., ENGR 2010. Introduction to fluid statics and dynamics; dimensional analysis; compressible and incompressible flows; design of flow systems, introduction to fluid solids transport including fluidization, flow through process media and multiphase flows.

CHEM 3090 PULP AND PAPER TECHNOLOGY (3). LEC. 3. Pr., CHEM 1110, ENGR 2010 and junior standing or departmental approval. An introductory course on the technology of pulp and paper manufacturing with emphasis on raw materials, pulping, bleaching, paper making, coating and environmental control. For students with no previous formal pulp and paper background.

CHEM 3100 CHEMICAL ENGINEERING PROCESSES (2). LEC. 2. Pr., CHEM 3370, CHEM 3620. Coreq., CHEM 3660, CHEM 3700, CHEM 3820. Principles and applications of process technologies, process flow sheets and manufacturing routes in the processing of agrochemicals, food, petrochemicals, petroleum plastics, pharmaceuticals and specialty chemicals.

CHEM 3370 PHASE AND REACTION EQUILIBRIA (3). LEC. 3. Pr., CHEM 2100, CHEM 2101 and ENGR 2010 with grades of C or better. Molecular thermodynamics of phase and chemical reaction equilibria including non-ideal thermodynamics and multicomponent applications.


CHEM 3620 TRANSPORT II (3). LEC. 3. Pr., MATH 2650, ENGR 2010, completion of CHEN 2610 with a grade of C or better. Fundamentals and applications of heat and mass transfer in chemical processes including conduction, convection, and radiation, heat exchange, evaporation, chemical reaction gas absorption, drying and humidification.

CHEM 3650 CHEMICAL ENGINEERING ANALYSIS (3). LEC. 2. LAB. 3. Pr., CHEM 2100, CHEM 2101 and CHEM 3620 with grades of C or better, ENGR 2010. Mathematical modeling, analytical, numerical and statistical analysis of chemical processes.

CHEM 3660 CHEMICAL ENGINEERING SEPARATIONS (3). LEC. 3. Pr., CHEM 2100, CHEM 2101, CHEM 2106, and ENGR 2010 with grades of C or better. Coreq., CHEM 3370 and CHEM 3650. Separations processes including distillation, extraction, membrane separation, and other separation operations.


CHEM 3820 CHEMICAL ENGINEERING LABORATORY I (2). LEC. 1. LAB. 3. Pr., CHEM 3620 and CHEM 3650 with a grade of C or better. Experimental study of chemical thermodynamics, heat and momentum transfer with analytical, numerical, and statistical analysis.

CHEM 4100 PULP AND PAPER PROCESSING LABORATORY (2). LAB. 6. Pr., CHEM 2610, CHEM 3090, CHEM 3820 or departmental approval. Experimental study of pulping and papermaking operations.


CHEM 4560 PULP AND PAPER PROCESS SIMULATION (2). LEC. 1. LAB. 3. Pr., CHEM 3090; CHEM 3620, CHEM 3650, CHEM 3660 and CHEM 3700 with grades of C or better, CHEM 3820. Coreq., CHEM 4100, CHEM 6110. Fundamentals of microcomputer process simulation with applications to pulp and paper industry. Design of pulp and paper unit operations and small scale processes using commercial simulation software.

CHEM 4570 PULP AND PAPER PROCESS DESIGN (2). LEC. 2. Pr., CHEM 4560. Application of process simulation and process economics to complex, open-ended design, retrofiting and operation problems in pulp and paper. Design of pulp and paper unit operations and processes. Screening of alternatives and economic optimization.

CHEM 4750 NUCLEAR CHEMICAL ENGINEERING (2). LEC. 2. Pr., CHEM 6070, CHEM 3620, CHEM 3660, CHEM 3700. Nuclear reactor design, nuclear fission and fusion, isotope enrichment, handling and decay, spent fuel reprocessing, plasmas, radiations.

CHEM 4860 CHEMICAL ENGINEERING LABORATORY II (2). LEC. 1. LAB. 3. Pr., CHEM 3620, CHEM 3820, CHEM 3620, CHEM 3700. Experimental study of mass transfer, separations and reaction engineering. Emphasis is on open-ended laboratory projects with electronic instrumentation; experimental design with numerical and statistical analysis of data.


CHEM 4900 INDEPENDENT STUDY (1). IND. Pr., Junior standing and departmental approval. Supervised study in specialized areas of chemical engineering. Topic must be arranged with instructor during preregistration. Project report.
must be arranged with instructor during pre-registration. Course may be repeated for a maximum of 20 credit hours.

CHEN 7950 GRADUATE SEMINAR (1). SEM. 1. SU. Seminar course may be repeated for a maximum of 12 credit hours.

CHEN 7970/7976 ADVANCED SPECIAL TOPICS IN CHEMICAL ENGINEERING (1-6). IND. Pr., departmental approval. Topical courses for graduate students. Topics must be arranged with instructor during pre-registration. Course may be repeated for a maximum of 12 credit hours.

CHEN 7990 RESEARCH AND THESIS (1-20). MST, TD. Credit hours to be arranged.

CHEN 8000/8006 GRADUATE CHEMICAL ENGINEERING ANALYSIS (2), LEC. 2, Pr., CHEN 7100. Applications of advanced numerical methods to the analysis of complex chemical engineering problems.


CHEN 8100 ADVANCED TOPICS IN CHEMICAL ENGINEERING PROCESSES (3). LEC. 3. Pr., CHEN 7110. Advanced concepts in fluid dynamics with special emphasis on applications to chemical engineering, creeping flow, multiphase instabilities, computational fluid mechanics and turbulence.

CHEN 8110 ADVANCED TOPICS IN HEAT AND MASS TRANSFER (3). LEC. 3, Pr., CHEN 7110. Application of transport operations to chemical engineering problems containing physical and chemical rate processes. Chemically reacting boundary layers, heat and mass transfer, eddy diffusion, phase change and separation processes.

CHEN 8210 ADVANCED CHEMICAL ENGINEERING THERMODYNAMICS (3). LEC. 3. Pr., CHEN 7200. Application of advanced thermodynamics to complex chemical engineering problems including advanced models for electrolyte solutions, critical and supercritical phenomena, high pressure equilibrium, non-equilibrium and surface thermodynamics and molecular modeling.


CHEN 8270 HETEROGENEOUS CATALYSIS (3). LEC. 3. Pr., CHEN 7200 or departmental approval. Advanced concepts, techniques, applications and principles for the use of heterogeneous catalysts in chemical and environmental processes.

CHEN 8280 SURFACE CHARACTERIZATION/SOLIDS (3). LEC. 3. Pr., CHEN 7200 or departmental approval. Advanced concepts and techniques in the physical and chemical characterization of solid surfaces by microscopic, spectroscopic and chemical methods including various photon and/or electron spectroscopies, thermal desorption.


CHEN 8310 PROCESS DYNAMICS AND CONTROL II (2). LEC. 2. Advanced chemical process dynamics and control.

CHEN 8320 ADVANCED TOPICS IN CHEMICAL PROCESS COMPUTER CONTROL SYSTEMS (3). LEC. 2, LAB. 3. Pr., CHEN 6170, CHEN 7100. Analysis and design of advanced digital control systems for chemical processes. Introduction to computer communications through dynamic data exchange and peripheral linkage. Experimental application of advanced digital control algorithms to chemical processes.

CHEN 8340/8346 PROCESS MODELING AND SIMULATION (3). LEC. 2. LAB. 3. Pr., CHEN 6460. Advances in computer-aided process synthesis, simulation, analysis and optimization including systematic process integration tools for developing and screening potential flow sheets using advanced process simulators.

CHEN 8990 RESEARCH AND DISSERTATION (1-20). DSR, TD. Credit hours to be arranged.

Civil Engineering (CIVL)

Civil Engineering (CIVL)

Dr. Joseph F. Judkins - 844-4320

CIVIL 2010 SURVEYING (2). LEC. 1. LAB. 3. Pr., MATH 1610, COMP 1200. Civil engineering surveying theory and practice including data collection and analysis, analysis of errors, distance and angle measurements, leveling, traversing, and simple and spiral curves, topographic mapping, construction control, interfacing with computer-aided drafting and design software.


CIVIL 3210 ENVIRONMENTAL ENGINEERING I (3). LEC. 3. Pr., CHEM 1040, CIVIL 3110. The fundamentals of potable water treatment and distribution are presented. Process chemistry, regulations, design, and analysis of treatment and distribution systems are emphasized.

CIVIL 3220 WATER AND WASTE TREATMENT (4). LEC. 3. LAB. 3. Pr., CHEM 1040, BIOL 3200. Fundamentals of potable water treatment and wastewater treatment systems and disposal. Treatment processes; chemical principles, chemistry, and biology; operation and maintenance issues; regulatory requirements. Credit will not be given to students majoring in Civil Engineering.


CIVIL 3510 TRANSPORTATION ENGINEERING (4). LEC. 4. Pr., CIVIL 2010, CIVIL 3010, junior standing. Introduction to transportation engineering practice with emphasis on highway facility design, traffic operations, and life-cycle costing.


CIVIL 4110 HYDRAULIC ENGINEERING (3). LEC. 3. Pr., CIVIL 3110. Applications of hydraulics to civil engineering systems: Inflow hydrology, ground-water, open channel flow, closed conduit flow, dams and reservoirs, hydraulic structures, hydraulic machinery and flood damage reduction.

CIVIL 4120 HYDROLOGY (3). LEC. 3. Pr., STAT 3010, CIVIL 3110. Hydrologic cycle, probability concepts and frequency analysis, precipitation, infiltration, runoff, hydrographs, flood routing, evaporation, subsurface hydrology.

CIVIL 4210 ENVIRONMENTAL ENGINEERING II (4). LEC. 3. LAB. 3. Pr., CIVIL 3210 or departmental approval. The fundamentals and applications of wastewater collection and treatment systems. Wastewater characteristics, sanitary and storm sewer design, and the theory and operation of wastewater treatment processes are emphasized.

CIVIL 4220 ENVIRONMENTAL ENGINEERING DESIGN (3). LEC. 3. Pr., CIVIL 3210 or CIVIL 4210. Process design of environmental engineering systems.

CIVIL 4310 GEOTECHNICAL ENGINEERING II (3). LEC. 3. Pr., CIVIL 3310. Analysis and design in geotechnical engineering based on principles of soil mechanics and soil behavior. Problems of slope stability, earth pressure and design of earth retaining structures, foundation bearing capacity and settlement.

CIVIL 4500 TRAFFIC ENGINEERING FUNDAMENTALS (3). LEC. 3. Pr., CIVIL 3510. The fundamental elements of traffic engineering including traffic operations and traffic control devices.

CIVIL 4520 AIRPORT DESIGN (3). LEC. 3. Pr., CIVIL 3510 or departmental approval. An analysis of the elements affecting the design of airports including forecasting, runway configuration, capacity analyses, geometric design of runways and taxiways, pavement design and airfield drainage.

CIVIL 4590 TRANSPORTATION DESIGN PROJECT (3). LEC. 3. Pr., ENGR 1110, CIVIL 3510, CIVIL 3810. Individual senior design project requiring the de-
velopment of plans for a roadway over a large land segment: horizontal and vertical curves in accord with State and AASHTO standards; topographic terrain features; historical preservation area; minimum elevation; intersection design; earthwork balance.

CIVL 4600 REINFORCED CONCRETE DESIGN (2). LEC. 2. Pr., CIVL 3610. Concrete and reinforcing steel properties, analysis and design of reinforced concrete beams, slabs and columns; torsion, bond and development length, reinforcement details.


CIVL 4980 SPECIAL PROBLEMS (1-3). LEC. Pr., departmental approval. Individual student endeavor under staff supervision involving advanced special problems in civil engineering. Course may be repeated for a maximum of 6 credit hours.

CIVL 4997 HONORS THESIS (1-3). IND. Pr., Honors program and departmental approval. Course may be repeated for a maximum of 6 credit hours.

CIVL 6110/6116 OPEN CHANNEL HYDRAULICS (3). LEC. 3. Pr., CIVL 3110. Application of continuity, energy, and momentum analyses to problems of open channel flow. Topics include rapidly and gradually varied flow, unsteady flow, flood routing, computational methods, design concepts and applications.


CIVL 6180/6186 HYDROLOGIC DESIGN (3). LEC. 3. Pr., STAT 3100, CIVL 3110. Stormwater hydrology, hydraulic and hydrologic analysis and design of stormwater drainage systems, inlets, storm sewers, open channels, culverts and detention basins.

CIVL 6210/6216 CHEMICAL PRINCIPLES OF ENVIRONMENTAL ENGINEERING (3). LEC. 3. Pr., CIVL 4210 or departmental approval. Fundamentals of aquatic chemistry as applied to environmental engineering: chemical thermodynamics, acid/base equilibrium, solution/disolution chemistry, redox equilibrium, and chemical kinetics.

CIVL 6220 ENVIRONMENTAL ENGINEERING PROCESSES LABORATORY (1). LAB. 3. Pr., CIVL 4210 or departmental approval. Laboratory exploration of the fundamentals and applications of aquatic chemistry, physical-chemical processes and biological processes, as employed in water and wastewater treatment.

CIVL 6230/6136 ENVIRONMENTAL HEALTH ENGINEERING (3). LEC. 3. Pr., Departmental Approval. Application of engineering methodology in environmental health: communicable disease control, insect and rodent control, solid and hazardous wastes, noise, radiological health, legal and administrative considerations, etc.


CIVL 6250/6256 BIOLOGICAL PRINCIPLES OF ENVIRONMENTAL ENGINEERING (3). LEC. 3. Pr., CIVL 4210 or departmental approval. Fundamentals of aquatic biology and microbiology as applied to environmental engineering: microbial growth, microbial metabolism, microbial population dynamics, wastewater treatment microbiology, environmental impacts, toxicity testing, and biomonitoring.

CIVL 6330/6336 LANDFILLS (3). LEC. 3. Pr., CIVL 3310, senior standing. Landfill siting design, construction and operational practices; regulations.


CIVL 6420/6426 CONSTRUCTION MANAGEMENT (3). LEC. 3. Pr., CIVL 3410. Planning and management of construction/engineering projects and organizations, project management techniques, skills, and applications.

CIVL 6440/6446 CONSTRUCTION EQUIPMENT AND METHODS (3). LEC. 3. Pr., CIVL 3410, CIVL 3310, CIVL 3510. Selection of equipment for heavy construction operations, production rates, owning and operating costs, fleet management.
CMBL/BIOI 7230 VIROLOGY (4). LEC. 4, Pr., BIOL 3200, BIOL 3000, and BIOL 4520. Molecular mechanisms of virus biology including virus-cell interactions, replication, assembly and release and pathogens. Credit will not be given for both CMBL 7230 and BIOL 7230.

CMBL/BIOI 7270 ULTRASTRUCTURE OF PLANT CELLS AND MICROBES (5). LEC. 3, LAB. 4, Pr., graduate standing and departmental approval. Theory and practice of transmission and scanning electron microscopy and their applications to the biological sciences. Credit will not be given for both CMBL 7270 and BIOL 7270.

CMBL/BIOI 7290 EVOLUTIONARY GENETICS (3). LEC. 3, Pr., BIOL 3000, BIOL 6170, or departmental approval. Examines two major topics: the role of population processes as mechanisms for evolution; and evolution at the molecular level. Credit will not be given for both CMBL 7290 and BIOL 7290.

CMBL/BIOI 7320 PLANT GENE EXPRESSION (4). LEC. 4, Pr., BIOL 4320, departmental approval. Genetic expression of genetic elements in plants from the recent literature. Credit will not be given for both CMBL 7320 and BIOL 7320.

CMBL/BIOI 7330 MOLECULAR BIOLOGY OF PLANT DEVELOPMENT (2). LEC. 2, Pr., BIOL 6130, BIOL 7280 or departmental approval. Physiological, biochemical and molecular aspects of plant growth and development. Credit will not be given for both CMBL 7330 and BIOL 7330.

CMBL/PLPA 7400 PLANT VIROLOGY (4). LEC. 3, LAB. 2, Pr., PLPA 3000 or PLPA 6000, CHEM 6180, or departmental approval. Introduction to plant viruses and the diseases they cause; virus particle structure and replication strategies; disease identification by symptoms and detection of pathogens; transmission, ecology, epidemiology and control.

CMBL/BIOI 7440 ADVANCED CELL BIOLOGY (3). LEC. 3, Pr., BIOL 4100. Examination of current areas of research in cell and developmental biology by directed reading and discussion. Credit will not be given for both CMBL 7440 and BIOL 7440.

CMBL/BIOI 7510 MOLECULAR GENETICS I (5). LEC. 5, Pr., CHEM 7200. Bacterial, bacteriophage, and eukaryotic genetics, with a focus on gene structure, and molecular mechanisms regulation expression. Critical review of current literature will be emphasized.

CMBL/BIOI 7520 MOLECULAR GENETICS II (5). LEC. 5, Pr., VBMS 7510. Genetic mechanisms by which eukaryotic cells replicate, communicate and differentiate. Current literature will be used extensively.

CMBL/BIOI 7530 ADVANCED SYSTEMATIC BOTANY (3). LEC. 3, Pr., BIOL 6120. Morphological and molecular approaches to modern systematics of plants.

CMBL/BIOI 7540 MOLECULAR GENETICS (3). LEC. 3, Pr., VBMS 7510, or departmental approval. Viral gene expression and evasion of host defense mechanisms.

CMBL/BIOI 7560 MOLECULAR GENETICS AND BIOTECHNOLOGY (4). LEC. 3, LAB. 3, Pr., BIOL 3000 or departmental approval. Principles and application of DNA fingerprinting technologies, gene mapping, genetic information and analysis, and transgenic technologies. Credit will not be given for both CMBL 7560 and Fish 7660.

CMBL/BIOI 7580 VIROLOGY (1). RCT. 1, Pr., BIOL 7220. Coreq., BIOL 7220. Oral presentation and discussion of recent scientific publications from a selected area of molecular biology. Credit will not be given for both CMBL 7580 and 7960. Course may be repeated for a maximum of 4 credit hours.

CMBL/POUL 7160 LABORATORY TECHNIQUES IN MOLECULAR VIROLOGY (4). LEC. 1, LAB. 9, Pr., BIOL 4520, BIOL 4530, or equivalent. Isolation, purification, and identification of viral nucleic acids and proteins. Credit will not be given for both CMBL 8160 and POUL 8160.

CMBL/PLPA 8880 PHYSIOLOGICAL AND MOLECULAR PLANT PATHOLOGY (3). LEC. 2, LAB. 2, Pr., PLPA 6000, CHEM 6180, BIOL 4230, or departmental approval. Comprehensive coverage of physiology and molecular biology of plant-pathogen interactions.

Communication Disorders (CMDS)

CMDS 2500 COMMUNICATION DISORDERS IN SOCIETY (2). LEC. 2. Information on stuttering, speech, language, voice disorders and hearing impairment and how to interact with individuals with communication disorders.

CMDS 3000 INTRODUCTION TO SPEECH PATHOLOGY-AUDIOLOGY (3). LEC. 3. Survey of the field of speech pathology-audiology. Includes history of the profession, the inter-relatedness of the various pathologies, general principles of evaluation and therapy and the profession itself.

CMDS 3400 THE SPEECH AND HEARING MECHANISM (3). LEC. 3. Anatomy and physiology of the speech and hearing mechanism.


CMDS 3550 SPEECH AND HEARING SCIENCE (3). LEC. 3, Pr., CMDS 3400, CMDS 3410, 2.2 GPA. The acoustic properties of speech, their relationship to perceptual and physiological phonetics, and instrumentation used in speech science.

CMDS 4510 ARTICULATION DISORDERS (3). LEC. 3, Pr., CMDS 3400, CMDS 3410 or departmental approval; 2.2 GPA. Principles of normal and deviant articulation acquisition.

CMDS 4520 LANGUAGE ACQUISITION (3). LEC. 3, Pr., CMDS 3400, CMDS 3410 or departmental approval; 2.2 GPA. First language acquisition in childhood and its change throughout the life span.

CMDS 4530 FLUENCY DISORDERS (3). LEC. 3, Pr., CMDS 3400, CMDS 3410 or departmental approval; 2.2 GPA. Principles of fluent and disfluent verbal behavior.

CMDS 4540 VOCAL DISORDERS (3). LEC. 3, Pr., CMDS 3400, CMDS 3410 or departmental approval; 2.2 GPA. Principles of normal and deviant vocal behavior.

CMDS 4560 CHILD AND ADOLESCENT LANGUAGE DISORDER (3). LEC. 3, Pr., CMDS 4520 or departmental approval; 2.2 GPA. Overview of research dealing with the nature, assessment and treatment of language disorders in child and adolescent populations.

CMDS 4580 INTRODUCTION TO CLINICAL PROCEDURES IN SPEECH-LANGUAGE PATHOLOGY (3). LEC. 3, CLN. 30, Pr., CMDS 4510 or CMDS 4520 and one of the following: CMDS 4510, CMDS 4520, CMDS 4530, CMDS 4540. Orientation to clinical activities, management methods and preparation of professional reports.

CMDS 4600 THE INTRODUCTION TO AUDIOLOGY (3). LEC. 3, Pr., 2.2 GPA. Principles of auditory reception and the problems involved in measuring, evaluating and conserving hearing.

CMDS 4620 HEARING REHABILITATION (3). LEC. 3, Pr., CMDS 4600 or departmental approval; 2.2 GPA. Rehabilitation problems of children and adults in the area of auditory training, speech reading and speech conservation; includes clinical practice.

CMDS 4650 INTRODUCTION TO CLINICAL PROCEDURES IN AUDIOLOGY (3). LEC. 3, Pr., CMDS 4600 or departmental approval; requires 2.5 GPA to enter. Audiological instrumentation and test procedures.

CMDS 4910 CLINICAL PRACTICUM IN SPEECH-LANGUAGE PATHOLOGY (1). LEC. 1, Pr., CMDS 4510 or CMDS 4520 or departmental approval; 2.5 GPA. Course may be repeated for a maximum of 6 credit hours.

CMDS 4920 INTRODUCTION TO COMMUNICATION DISORDERS (1-3). IND. Pr., Department approval. Directed learning experience in communication disorders involving bibliographic research, writing, gaining expertise with laboratory/clinical procedures or conducting directed research. Course may be repeated for a maximum of 6 credit hours.

CMDS 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College; departmental approval; 2.5 GPA. Course may be repeated for a maximum of 3 credit hours.

CMDS 4987 HONORS THESIS (1-3). LEC. Pr., Membership in the Honor’s College; accepted as CMDS major. Course may be repeated for a maximum of 6 credit hours.

CMDS 5100 HEARING SCIENCE (3). LEC. 3, Pr., CMDS 4600, CMDS 4620 or departmental approval. Introduction to instrumentation and calibration of audiometric equipment. Auditory perception in normal-hearing and hearing-impaired listeners.

CMDS 5110 AUDITORY PHYSIOLOGY (3). LEC. 3, Pr., CMDS 4400 or departmental approval. Detailed study of the anatomy and physiology of the human auditory system. Fall.

CMDS 5200 DIAGNOSTIC AUDIOLOGY (3). LEC. 3, Pr., CMDS 4600, CMDS 4650. Basic and advanced audiometric techniques to assess the site of lesion in the auditory system. Spring.

CMDS 5220 AMPLIFICATION I (3). LEC. 3. Pr., CMDS 4600, CMDS 4620 or departmental approval. Background and development of hearing aids and other amplification systems; performance standards and measurement techniques; selection, fitting and dispensing procedures.

CMDS 5230 CLINICAL LEVEL I (2). LEC. 2. Pr., CMDS 4650 or departmental approval. Didactic and practical training for performing audiological testing and patient management at clinical level I. Spring.

CMDS 5300 CENTRAL AUDITORY PROCESSING (3), LEC, 3. Pr., CMDS 4600, CMDS 4620 or, departmental approval. Selected clinical procedures in audiology, including acoustic reflex measures and behavioral test of central auditory function.

CMDS 5310 AURAL REHABILITATION (3). LEC, 3. Pr., CMDS 4600, CMDS 4620 or departmental approval. Psychosocial aspects on hearing loss; medical and therapeutic management of older persons with hearing disorders including counseling of the hearing-impaired and their families.

CMDS 5320 CLINICAL LEVEL II (2). LEC, 2. Pr., CMDS 5230 with a grade of C or higher. Didactic and practical training for performing audiological testing and patient management at Clinical Level II. Summer.


CMDS 5410 AURAL HABILITATION (3). LEC, 3. Pr., CMDS 4600, CMDS 4620, or departmental approval. The parameters involved in the management of hearing-impaired school-aged children.

CMDS 5420 AMPLIFICATION II (3). LEC, 3. Pr., CMDS 5220. Review of recent trends in hearing aid technology including digital and programmable instruments. Fall.

CMDS 5430 CLINICAL LEVEL III (2). LEC, 2. Pr., CMDS 5230, CMDS 5320 with a grade of C or higher. Didactic and practical training for performing audiological testing and patient management at Clinical Level III.

CMDS 5500 ELECTROPHYSIOLOGICAL PROCEDURES IN AUDIOLOGY (3). LEC, 3. Pr., CMDS 4600, CMDS 4620, or departmental approval. Selected neurophysiological clinical procedures in audiology, including electroneystagmography and auditory evoked potentials.

CMDS 5510 CLINICAL LEVEL IV (2). LEC, 2. Pr., CMDS 5230, CMDS 5320, CMDS 5430 with a grade of C or higher. Didactic and practical training for performing audiological testing and patient management at Clinical Level IV. Spring.

CMDS 5520 HEARING CONSERVATION (3). LEC, 3. Pr., CMDS 5310. A study of the effects of noise on the auditory system and implementation of hearing conservation programs in industry, schools and the military. Spring.

CMDS 5570 EVALUATION OF RESEARCH IN SPEECH PATHOLOGY & AUDIOLOGY (3). LEC, 3. Pr., Departmental approval. Survey of experimental designs and statistical procedures used in speech-language pathology/audiology literature for consumers of research.

CMDS 5600 BALANCE DISORDERS (3). LEC, 3. Detailed coverage of the assessment and treatment of patients with balance disorders using vestibulometry and other techniques. Summer.

CMDS 5610 IMPLANT TECHNOLOGY (2). LEC, 2. Detailed study of the assessment and treatment of patients with cochlear implants. Summer.

CMDS 5620 OUTCOME MEASURES IN AUDIOLOGY (3). LEC, 3. Pr., CMDS 5120. Application of research methodology to demonstrate efficacy in clinical service delivery in all areas of audiology practice. Summer.

CMDS 5700 PROFESSIONAL ISSUES (3). LEC. 3. Legal and ethical issues in clinical audiology. Fall.

CMDS 5800 NEUROLOGICAL BASES OF COMMUNICATION DISORDERS (3). LEC. 3. Pr., Departmental approval. Anatomy and physiology of the central nervous system as it relates to speech, language and hearing function and disorders.

CMDS 5910 CLINICAL PROBLEMS IN HEARING (2). LEC, 2. Pr., CMDS 4650, CMDS 4600 and CMDS 4620 or departmental approval.

CMDS 5920 CLINICAL INTERNSHIP (5). INT. 5. SU. Pr. Third year standing and completion of CMDS 5510 with a grade of "C" or better. Intensive clinical experience at off-campus setting up to 20 hours per week of supervised practice.

CMDS 5940 CLINICAL RESIDENCY (10). LEC, 10. SU. Pr. Full time, supervised, nine month residency at an off-campus facility that provides audiological services. Course may be repeated for a maximum of 20 credit hours. Fall, Spring.

CMDS 5950 AUDIOLOGY GRAND ROUNDS (3). LEC. 3. Discussion/seminar in timely clinical issues in audiology, clinical problem solving and case studies in contemporary audiological service delivery. Summer.

CMDS 5980 CAPSTONE PROJECT (1). LEC. 1. A third year project involving applied clinical research or development of an innovative clinical procedure. Course may be repeated for a maximum of 3 credit hours.

CMDS 7500 CLINICAL PROBLEMS IN SPEECH (2). LEC, 2. Pr., CMDS 4580-4910 series or departmental approval. Methods, techniques and clinical management of the disorders of speech. Clinical practice required. Course may be repeated for a maximum of 12 credit hours.

CMDS 7510 ADVANCED ARTICULATION DISORDERS (3). LEC, 3. Pr., CMDS 4510 or departmental approval. Empirical and theoretical bases for articulatory pathologies.

CMDS 7520 CLINICAL STRATEGIES IN CHILD AND ADOLESCENT LANGUAGE DISORDERS (3). LEC, 3. Pr., CMDS 4520 or departmental approval. Empirical and theoretical bases for evaluation and treatment of child/adolescent language disorders.

CMDS 7530 ADVANCED FLUENCY DISORDERS (3). LEC, 3. Pr., CMDS 4530 or departmental approval. Empirical and theoretical bases for dysfluency disorders, diagnoses and therapies.

CMDS 7540 ADVANCED VOICE DISORDERS (3). LEC, 3. Pr., CMDS 4540 or departmental approval. Empirical and theoretical bases for voice pathologies, diagnoses and therapies.

CMDS 7550 LANGUAGE AND SPEECH DISORDERS (3). LEC, 3. Pr., CMDS 4520 or departmental approval. Empirical and theoretical bases for speech-language disorders associated with CNS pathologies, diagnoses and therapies.

CMDS 7560 CLEFT PALATE (3). LEC, 3. Pr., CMDS 4510 or departmental approval. Empirical and theoretical bases for speech/language disorders associated with cleft palate, diagnoses and therapies.

CMDS 7570 EVALUATION OF RESEARCH IN SPEECH PATHOLOGY AND AUDIOLOGY (3). LEC, 3. Pr., Departmental approval. Survey of experimental designs and statistical procedures used in speech-language pathology/audiology literature for consumers of research.

CMDS 7600 CLINICAL PROBLEMS IN HEARING (2). LEC. 2. Pr., CMDS 4650, CMDS 4600 and CMDS 4620 or departmental approval. Course may be repeated for a maximum of 12 credit hours.

CMDS 7810 MOTOR SPEECH DISORDERS (3). LEC. 3. Pr., CMDS 7800 or departmental approval. Empirical and theoretical bases for motor speech disorders, diagnoses and therapies.

CMDS 7820 SWALLOWING DISORDERS AND MEDICAL ASPECTS OF SPEECH-LANGUAGE PATHOLOGY (3). LEC, 3. Pr., CMDS 7800 or departmental approval. Overview of the role of speech language pathology in medical settings with specific emphasis on terminology and procedures used to assess and treat dysphagia, dementia, traumatic brain injury and right hemisphere damage in adult population. Fall.

CMDS 7840 AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (3). LEC, 3. Process and specific equipment involved in assessment, prescription and intervention with adults and children who are unable to use traditional communication modes.

CMDS 7860 EXPERIMENTAL PHONETICS (3). LEC, 3. Pr., CMDS 3550 or departmental approval. Orientation to acoustic and physiologic instrumentation used in the study of normal and disordered speech.

CMDS 7900 INDEPENDENT STUDY (1-3). IND. Conferences, readings, research or reports in a specialized area of communication disorders. Course may be repeated for a maximum of 3 credit hours.

CMDS 7940 FIELD EXPERIENCE (5). LEC, 5. SU. Full-time assignment in a facility, such as University Speech and Hearing Clinic, hospital, public school and various community agencies. Course may be repeated for a maximum of 10 credit hours.

CMDS 7970 SEMINAR (1-3). SEM. Pr., departmental approval. Advanced treatment of contemporary topics and trends, as well as current research aspects of audiology and speech-language pathology. Course may be repeated for a maximum of 3 credit hours.

CMDS 7990 RESEARCH AND THESIS (1-5). MST, TD. Course may be repeated with change in topic.

Communication (COMM)

Dr. Dale W. Harrison - 844-5166

COMM 1000 PUBLIC SPEAKING (3). LEC. 3. Oral communication theory and practice in a public speaking setting with emphasis on content, organization, delivery, and adaptation to the audience.
COMM 2010 MESSAGE PREPARATION AND ANALYSIS (3). LEC. 3. Pr., COMM 1000 or COMM 1010. Theory underlying the construction of rhetorical messages as well as critical perspectives for the analysis of public discourse.

COMM 2400 COMMUNICATION IN ORGANIZATIONS (3). LEC. 3. Pr., sophomore standing. Communication in modern organizations emphasizing practice in areas such as interviewing, meeting management, and professional presentations.

COMM 2410 SMALL GROUP COMMUNICATION (3). LEC. 3. Pr., sophomore standing. Theory and practice of competent communication in task-oriented small group settings such as committees. Topics include roles, leadership, decision making, problem solving, and conflict management.

COMM 3100 SPEAKING BEFORE AUDIENCES (3). LEC. 3. Pr., Departmental approval, sophomore standing, COMM 1000 and 2.00 GPA. Refining the knowledge and skills necessary for communicating clearly and effectively in oral presentations. Recommended for COMM majors only.

COMM 3110/3113 PERSUASIVE DISCOURSE (3). LEC. 3. Pr., sophomore standing and 2.00 GPA. Understanding and analyzing persuasive messages. Survey of theoretical approaches to attitude formation and change. Developing skills as a critical evaluation of persuasive messages.

COMM 3450 INTERCULTURAL COMMUNICATION (3). LEC. 3. Pr., sophomore standing and 2.00 GPA. Different types of problems encountered when communicating with different cultures.

COMM 3500 FOUNDATIONS OF HUMAN COMMUNICATION (3). LEC. 3. Pr., sophomore standing and 2.00 GPA. Theories examining the nature of human communication.

COMM 3500 FOUNDATIONS OF RHETORIC AND SOCIAL INFLUENCE (3). LEC. 3. Pr., sophomore standing and 2.00 GPA. Rhetorical theory from its classical roots to contemporary thinkers. Relates rhetorical theory and analysis to understanding persuasive discourse in our society.

COMM 3700 ARGUMENTATIVE DISCOURSE (3). LEC. 3. Pr., sophomore standing and 2.00 GPA. Examination of the critical tools necessary to evaluate arguments in current public discourse.

COMM 4100 COMMUNICATION STRATEGIES OF SOCIAL MOVEMENTS (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600. Examines persuasive strategies used in social movements to attract members, solidify support, and effect social change.

COMM 4400 GENDER COMMUNICATION (3). LEC. 3. Pr., COMM 3500, COMM 3600, RTVF 3300. Examination of the ways in which gender is communicated interpersonally, through small groups and organizations, and through the mass media.

COMM 4410 THEORIES OF LEADERSHIP (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600. Examination of theory and research in leadership as a communication variable and behavioral practice in small group and organizational settings.

COMM 4470 HEALTH COMMUNICATION (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600. The history, functions, and concepts central to the practice of health communication.

COMM 4500 MESSAGE STRUCTURES AND INFORMATION PROCESSING (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600. Relationship between message structures and information processing in both cognitive and affective domains during speaking and listening.

COMM 4510 SURVEY RESEARCH METHODS (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600. Focuses on basic research principles and survey research as it is used by mass media and public relations.


COMM 4700 LEGAL COMMUNICATION (3). LEC. 3. Pr., COMM 1000, RTVF 3300, COMM 3500, COMM 3600. Examination of the trial process including jury selection, opening statement, direct examination, cross examination, and closing arguments.

COMM 4800 INTERPERSONAL COMMUNICATION (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600. The relationship between communication and the formation of self identity and maintenance of relationships.

COMM 4810 NONVERBAL COMMUNICATION (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600. Focuses on the theory of non-language based communication and the impact of these messages on the overall communication process.

COMM 4900 INDEPENDENT STUDY IN COMMUNICATION (3). IND. 3. Independent study on a specific topic of interest not already addressed in any regular Communication course. May repeat with a change of topic for a maximum of 6 credit hours. Fall, Spring.
COMM 7820 PUBLIC RELATIONS CAMPAIGNS (3). LEC. 3. Focuses on the application of Public Relations and communication concepts to real campaign challenges.

COMM 7830 PUBLIC RELATIONS CASE STUDIES (3). LEC. 3. Examination of research on Public Relations case studies to provide a theoretical basis for analyzing real-life Public Relations situations.

COMM 7840 COMMUNICATION TRAINING AND CONSULTING (3). LEC. 3. The theory, concepts and skills needed to be an effective communications trainer or consultant.

COMM 7900 INDEPENDENT STUDY (1-3). IND. Conferences, readings, research, and reports in one of the fields listed: a) general communication, b) mass communication, or c) public relations. Course may be repeated for a maximum of 3 credit hours.

COMM 7970 SPECIAL TOPICS IN COMMUNICATION (3). SEM. 3. Advanced treatment of contemporary topics, trends, current research findings and opportunities. May be repeated for credit with change in topic.

COMM 7980 NON-THESIS PROJECT IN COMMUNICATIONS (3-6). LEC. 3. SU. Pr., Minimum 27 graduate hours including COMM 7000, COMM 7010, COMM 7020. Professional experience in communication area of interest. Must include managerial experience. Only 3 hours will apply to the degree.

COMM 7990 RESEARCH AND THESIS (1-6). MST, TD. Course may be repeated with change in topic.

JOURNALISM (JRNL)


JRNL 2210 NEWSWRITING (3). LEC. 2. LAB. 2. Pr., JRNL 1100. Introduction to newswriting techniques, with emphasis on learning news values, recognizing parts of a story and writing stories that meet standards of accuracy, grammar, style, spelling, law and ethics.

JRNL 2310 REPORTING (3). LEC. 2. LAB. 2. Pr., JRNL 1100 and JRNL 2210. Traditional and electronic methods of gathering news; the writing of clear, accurate and meaningful news stories, and codes of ethical journalistic behavior.

JRNL 2320 BASICS OF JOURNALISM (2). LEC. 2. Primarily for non-journalism and non-communications majors. Modern journalistic techniques and practices, with emphasis on daily and weekly newspapers.

JRNL 2910 PRACTICUM IN JOURNALISM (1). LEC. 1. SU. Pr., JRNL 1100 for Journalism majors; JRNL 2320 for College of Education majors. Required for all Journalism majors. Working a minimum of 45 hours for The Auburn Plainsman in reporting, feature writing, editing and design.

JRNL 3220 FEATURE WRITING (3). LEC. 3. Pr., JRNL 1100 and JRNL 2210. Various techniques of writing and selling features, both short and long pieces, for newspapers and magazine markets.

JRNL 3410 PHOTOJOURNALISM (3). LEC. 3. Uses and processes of photography in the newspaper and magazine field. Operation of press cameras and the technique of developing, printing and enlarging of pictures are covered.

JRNL 3470 NEWSPAPER EDITING AND DESIGN (3). LEC. 1. LAB. 4. Pr., JRNL 1100 and JRNL 2210. The basics of newspaper copy editing and design; with emphasis on hands-on techniques.

JRNL 4230 ADVANCED REPORTING (2). LEC. 2. Pr., JRNL 2310, JRNL 3220 and JRNL 3470. Developing and writing news stories under deadline pressure; investigative and interpretive reporting.

JRNL 4320 NEWSPAPER MANAGEMENT (2). LEC. 2. Pr., JRNL 2210, JRNL 3470. All aspects of newspaper operation, with particular emphasis on problems and opportunities facing print-media management.

JRNL 4410 JOURNALISM HISTORY (2). LEC. 2. Issues facing the American press, from colonial times to the present, with emphasis on regional and state issues.

JRNL 4420 SENIOR SEMINAR IN SPECIAL TOPICS (2). LEC. 2. Pr., JRNL 2310, JRNL 3220, JRNL 3410 and JRNL 3470. Research, writing or performance involving a special topic, medium or issue in journalism not covered in other courses.

JRNL 4430 JOURNALISM WORKSHOP (1). LEC. 1. Pr., JRNL 2310, JRNL 3220, JRNL 3470 and departmental approval. Supervised, closely monitored work experience. Should be taken after two consecutive semesters. Students must also enroll in one-hour Journalism Special Studies (JRNL 4930) one semester to complete the three-hour requirement. Credit will not be given for both JRNL 4430 and JRNL 4920.

JRNL 4450 CORPORATE PUBLICATIONS (2). LEC. 2. Pr., JRNL 2310, JRNL 3220. Writing skills and styles required for work as corporate journalists.

JRNL 4460 PRESS LAW AND ETHICS (2). LEC. 2. Professional ethics and principal legal headings of press law with emphasis on libel, invasion of privacy, access to information and advertising law.

JRNL 4470 ADVANCED FEATURE WRITING (2). LEC. 2. Pr., JRNL 2310, JRNL 3220 and JRNL 3470. Feature writing skills and magazine and freelance writing.

JRNL 4480 ADVANCED PUBLICATION DESIGN (3). LEC. 1. LAB. 4. Pr., JRNL 2310, JRNL 3470, JRNL 3220. Desktop publishing knowledge required to produce print publications, including brochures and newsletters, and with exposure to web page, advertising and magazine design.

JRNL 4490 LITERARY JOURNALISM (2). LEC. 2. Pr., JRNL 2310 and JRNL 3220. Creative writing techniques for newspaper and magazine articles, through the study of notable examples of the genre of literary journalism.

JRNL 4900 JOURNALISM INDEPENDENT STUDY (1-4). IND. Research and analysis of specific areas of journalism. Course may be repeated for a maximum of 4 credit hours.

JRNL 4920 JOURNALISM INTERNSHIP (3). LEC. 3. Pr., JRNL 2310, JRNL 3220, and JRNL 3470, and departmental approval. Supervised, closely monitored work experience.

JRNL 4967 HONORS READINGS (1-3). LEC. 3. Pr., Membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

JRNL 4997 HONORS THESIS (1-3). IND. 3. Pr., Membership in the Honors College; departmental approval.

PUBLIC RELATIONS (PRCM)

PRCM 3040 FOUNDATIONS OF PUBLIC RELATIONS (3). LEC. 3. Pr., JRNL 1100 and 2.00 GPA. Communication skills and technologies necessary for successful public relations.

PRCM 4020 STYLE AND DESIGN IN PUBLIC RELATIONS MESSAGES (3). LEC. 3. Pr., JRNL 1100, PRCM 3040, COMM 3500, COMM 3600, RTVF 3300, sophomore standing. Introduction to the use of style and design in public relations messages.

PRCM 4040 CASE STUDIES AND ETHICS IN PUBLIC RELATIONS (3). LEC. 3. Pr., JRNL 1100, PRCM 3040, COMM 3500, COMM 3600, RTVF 3300, sophomore standing. Writing skills necessary for the practice of public relations.

PRCM 4090 PUBLIC RELATIONS CAMPAIGNS (3). LEC. 3. JRNL 1100, RTVF 3300, COMM 3500, COMM 3600, PRCM 4040, PRCM 4080, COMM 4510, Pr., Sophomore standing. Capstone course designed to apply Public Relations and Communication principles to a campaign situation.

PRCM 4900 INDEPENDENT STUDY IN PUBLIC RELATIONS (3). LEC. 3. Pr., COMM 3500, COMM 3600, RTVF 3300. Independent Study on a specific topic of interest not already addressed in any regular Public Relations course. Fall, Spring.

PRCM 4920 INTERNSHIP (3-6). INT. 3. SU. Pr., Senior standing, admission to internship program. Opportunity to apply classroom experience to real job setting. Course may be repeated for a maximum of 6 credit hours.

PRCM 4970 SPECIAL TOPICS IN PUBLIC RELATIONS (3). LEC. 3. Pr., COMM 3500, COMM 3600, RTVF 3300. This course focuses on narrowly-defined Public Relations topics not already covered in the current PRCM curriculum. Fall, Spring.

PRCM 8800 POLITICS OF CONTEMPORARY PUBLIC RELATIONS (3). LEC. 3. Pr., RTVF 3300 and COMM 3500 and COMM 3600 or graduate standing. Examination of research on the political impact of public relations through case studies.

RADIO/TELEVISION/FILM (RTVF)

RTVF 2340 RADIO PRODUCTION (3). LEC. 2. LAB. 2. Pr., departmental approval. Analysis of the creative efforts and responsibilities in the primary stages of radio production. Practice in writing, producing, and voicing live and recorded productions.

RTVF 2350/2353 INTRODUCTION TO FILM STUDIES (3). LEC. 2. LAB. 2. Pr., sophomore standing. Introduction to film analysis, modes of film practice and critical approaches to the study of cinema.


RTVF 2370 ELECTRONIC FIELD PRODUCTION (3). LEC. 2. LAB. 2. Pr., sophomore standing. The principles and techniques of video tape production with emphasis on portable equipment, including production of electronic news gathering projects and short creative field-produced programs.
RTVF 3300 FOUNDATION OF MASS COMMUNICATION (3). LEC. 3. Pr., sophomore standing and 2.00 GPA. Historical and theoretical bases of mass communication in the U.S., emphasizing social, cultural, regulatory and economic aspects.

RTVF 3350 WRITING FOR RADIO, TELEVISION AND FILM (3). LEC. 3. Pr., departmental approval. commands, 2.00 GPA. The study, practice, and development of writing skills and techniques for radio, television, and film, including commercials, features, PSAs, and dramatic scripts.

RTVF 3380 BROADCAST NEWSWRITING (3). LEC. 3. Pr., departmental approval, sophomore standing, and 2.00 GPA. Writing and editing news stories for broadcast.

RTVF 3800 MULTIMEDIA PRODUCTION (3). LEC. 3. Pr., RTVF 2360 or RTVF 2370, and 2.00 GPA. Introduction to elementary multimedia production; mastery of basic authoring techniques in Authorware.

RTVF 3970 SPECIAL TOPICS IN PRODUCTION (3). LEC. 3. Pr., COMM 3500, COMM 3600, RTVF 3300. Specialized topics concentrating on production skills.

RTVF 4200 HISTORY OF AMERICAN BROADCASTING (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600 or departmental approval. The social, economic and technological evolution of radio and television in the United States.

RTVF 4210 POPULAR CULTURE AND MASS COMMUNICATION (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, sophomore standing. Examines myths, icons, rituals, heroes, celebrities, genres, narratives, stereotypes as experienced and presented within communication processes.

RTVF 4240 WOMEN AND MASS MEDIA (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, or departmental approval. Analysis of the relationship between media messages of women and sociocultural definitions of women.

RTVF 4280 DIVERSITY ISSUES IN THE MASS MEDIA (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, or departmental approval. Analysis of the relationship between media messages of minorities and sociocultural definitions of minorities.

RTVF 4300 BROADCAST PROGRAMMING AND CRITICISM (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, sophomore standing. Introduces critical, theoretical, and organizational concepts, strategies, processes, and frameworks for programming for mass media systems.

RTVF 4310 MEDIA AND SOCIETY (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, sophomore standing. Examination of the relationship between the mass communication industry and a mass society.

RTVF 4320 BROADCAST MANAGEMENT (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, sophomore standing. Investigates principles and practices of managing broadcast stations and cable operations.

RTVF 4330 MEDIA LAW AND REGULATION (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, sophomore standing. Legal, professional and ethical constraints on the mass media.

RTVF 4360 HISTORY OF INTERNATIONAL CINEMA (3). LEC. 2, LAB. 2. Pr., RTVF 2350, RTVF 3300, COMM 3500, COMM 3600, sophomore standing or departmental approval. History of international cinema, including national cinemas, film movements, directors, and style.


RTVF 4580 FAME, CELEBRITY, AND MEDIA CULTURE (3). LEC. 3. Pr., RTVF 3300, COMM 3500, COMM 3600, or departmental approval. Examination of celebrity and fame as distinguishing cultural phenomena.

RTVF 4900 INDEPENDENT STUDY IN RADIO/TELEVISION/FILM (3). IND. 3. Pr., COMM 3500, COMM 3600, RTVF 3300. Independent study on a specific topic of interest not already addressed in any regular Radio/Television/Film course. May repeat with a change in topic for a maximum of 6 credit hours. Fall, Spring.

RTVF 4920 INTERNSHIP (3-6). INT. 3. SU. Pr., Senior standing, admission to internship program. Opportunity to apply classroom experience to real job setting. Course may be repeated for a maximum of 6 credit hours.

RTVF 4970 SPECIAL TOPICS IN RADIO/TELEVISION/FILM (3). LEC. 3. Pr., COMM 3500, COMM 3600, RTVF 3300. This course focuses on narrowly-defined Radio/Television/Film topics not already covered in the current RTVF curriculum. May repeat with a change in topic for a maximum of 6 credit hours. Fall, Spring.

Computer Science and Engineering (COMP)
Dr. James Cross - 844-4330
COMP 1 @ 0 COMPUTER COMPETENCY TEST (0). TST. SU. Introduction to personal computers and software applications including word processing, spreadsheets, databases, and presentation graphics; generation and retrieval of information with the Internet; integration of data among applications. Credit for the major will not be given to CSCI and SWEN majors.

COMP 1000 PERSONAL COMPUTER APPLICATIONS (2). LEC. 2. Introduction to personal computers and software applications including word processing, spreadsheets, databases, and presentation graphics; generation and retrieval of information with the Internet; integration of data among applications. Credit for the major will not be given to CSCI and SWEN majors.

COMP 1200 INTRODUCTION TO COMPUTING FOR ENGINEERS AND SCIENTISTS (2). LEC. 2. Computer programming in a high-level language, with emphasis on use of the computer as a tool for engineering or science.

COMP 1201 INTRODUCTION TO COMPUTING LAB (1). LAB. 2. Coreq.: COMP 1200. Laboratory activities focused on computer programming in a high-level language. Fall, Spring.

COMP 2000 NETWORK PROGRAMMING WITH HTML AND JAVA (3). LEC. 3. Pr., COMP 1000 or higher, or ENGR 1110. Introduction to network programming with HTML and Java. Pr.: To build web pages and web-based applications; presentation graphics; retrieval of information from the Internet; integration of data among applications. Credit for the major will not be given to CSCI and SWEN majors. Fall, Spring.


COMP 2210 FUNDAMENTALS OF COMPUTER SCIENCE II (4). LEC. 3. LAB. 3. Pr., COMM 2200. Continuation of COMM 2200 with emphasis on data structures such as lists, trees, graphs and hash tables.

COMP 3000 OBJECT-ORIENTED PROGRAMMING FOR ENGINEERS AND SCIENTISTS (3). LEC. 3. Pr., departmental approval. Fundamentals of object-oriented design and programming principles; data abstraction, identifying objects, problem decomposition, design and implementation of classes. Credit for the major will not be given to CSCI and SWEN majors.

COMP 3220 PRINCIPLES OF PROGRAMMING LANGUAGES (3). LEC. 3. Pr., COMM 2210. Study of programming language principles supporting procedural abstraction, data abstraction, storage allocation, and parallel execution; language types and examples.

COMP 3240 DISCRETE STRUCTURES (3). LEC. 3. Pr., COMM 2200. Characterization of computer science data structures and algorithms in terms of sets and relations, functions, recurrence relations. Use of propositional and predicate calculus to describe algorithms. Proving correctness and running time bounds for algorithms by induction and structural induction.

COMP 3270 INTRODUCTION TO ALGORITHMS (3). LEC. 3. Pr., COMM 3240 or departmental approval. Algorithms for standard computational problems and techniques for analyzing their efficiency; designing efficient algorithms and experimentally evaluating their performance.

COMP 3350 COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE PROGRAMMING (3). LEC. 3. Pr., ELEC 2200 or ELEC 2210. Stored Program Computers, assembly and programming languages; data representation, instruction sets, addressing modes; assembly language programming, loaders linkers, and operating systems.

COMP 3500 INTRODUCTION TO OPERATING SYSTEMS (3). LEC. 3. Pr., COMM 3350 and COMM 2210. Structure and functions of operating systems; processes and process scheduling; synchronization and mutual exclusion; memory management; auxiliary storage management; resource allocation and deadlock; security, privacy, and ethical concerns; design tradeoffs.

COMP 3510 EMBEDDED SYSTEMS DEVELOPMENT (3). LEC. 3. Pr., COMM 3350 or ELEC 2220. Operating system design and analysis for embedded systems: Real-time issues, resource management, scheduling, exception handling, device driver development, kernel development, synchronization, network support.


COMP 4000 SYSTEMS ADMINISTRATION FOR INFORMATION TECHNOLOGY (3). LEC. 3. Pr., COMM 2000 or departmental approval. Principles and techniques of systems administration, including configuration of mail, file servers, print servers, databases systems, and networks. Credit for the major will not be given to majors in CSCI and SWEN. Fall, Spring.

COMP 4270 ADVANCED ALGORITHMS (3). LEC. 3. Pr., COMP 3270 or departmental approval. Fundamentals of designing and analyzing advanced algorithms. Algorithm design theory; computational complexity; relationship of data structures to algorithm design; study of design strategies including divide-and-conquer, the greedy method, and dynamic programming.

COMP 4300 COMPUTER ARCHITECTURE (3). LEC. 3. Pr., COMP 3350. Comparison of computer architectures, emphasizing the relationships between system software and hardware. Includes processor control and datapath organization, memory subsystem design, instruction set design, processor simulation, and quantitative analysis of computer performance.

COMP 4320 INTRODUCTION TO COMPUTER NETWORKS (3). LEC. 3. Pr., COMP 3500 or COMP 3510 or departmental approval. Fundamentals of computer networks, OSI model, LAN, WAN, packet transmission, internetworking, Internet Protocol, WWW and Java technology.

COMP 4640 INTELLIGENT AND INTERACTIVE SYSTEMS (3). LEC. 3. Pr., COMP 3270 or departmental approval. Theory and design of intelligent and interactive software: basic treatments of intelligent agents and human-computer interaction.

COMP 4650 INTERFACE DESIGN FOR WIRELESS APPLICATIONS (3). LEC. 3. Pr., COMP 3270 or departmental approval. Principles of user interface design and usability, for wireless devices: Consequences of low-bandwidth network connections for interface design; consequences of battery power, small screen, other limited resources on interface design; case studies; design project using technology such as WAP.

COMP 4710 SENIOR DESIGN PROJECT (3). LEC. 3. Pr., COMP 3700 or COMP 3710 and senior standing. Development of requirement definitions, architectural design specification, detailed design specification, testing plan and documentation for the software and/or hardware components of a comprehensive project.

COMP 4730 COMPUTER ETHICS (1). LEC. 1. Pr., PHIL 1040. Application of ethical principles to computing-related topics, including privacy, property rights, autonomy, access, and diversity.

COMP 4970 SPECIAL TOPICS (3-4). LEC. Pr., departmental approval. Investigation of current topics in computer science and software engineering. Course may be repeated for a maximum of 6 credit hours.

COMP 4980 SPECIAL PROJECT (1-4). IND. Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours.

COMP 4997 HONORS THESIS (3-6). IND. Pr., membership in the Honors College, departmental approval, CSS or SWEN major. Individual student endeavor consisting of directed research and writing of honors thesis. Course may be repeated for a maximum of 6 credit hours.

COMP 6000/6005 WEB APPLICATION DEVELOPMENT (3). LEC. 3. Pr., Senior or graduate standing or departmental approval. Design and implementation of web sites and associated applications. Emphasis on user interface design and information organization and presentation. Fall, Spring.

COMP 6010/6015 INTERACTIVE APPLICATIONS IN VISUAL BASIC (3). LEC. 3. Pr., COMP 6000 or departmental approval. Design and implementation of applications like simulations, front-ends to Excel for modeling, interfaces to other limited resources on interface design; case studies; design project using technology such as WAP.

COMP 6020/6025 ADV WEB APPLICATION DEVELOPMENT (3). LEC. 3. Pr., COMP 6000 or departmental approval. Design and implementation of interactive web applications. Use of concepts such as security, internationalization, multi-threading and server/client architectures. Fall, Spring.

COMP 6030/6035 OBJECT-ORIENTED TECHNOLOGIES (3). LEC. 3. Pr., COMP 6000 or departmental approval. Object-oriented design and implementation of a variety of applications including databases and intelligent agents with one or more object-oriented programming language.

COMP 6120/6125 DATABASE SYSTEMS I (3). LEC. 3. Pr., COMP 3270. Theoretical and applied issues related to the analysis, design, and implementation of relational database systems.

COMP 6200/6205 THEORETICAL COMPUTER SCIENCE (3). LEC. 3. Pr., COMP 4200 or departmental approval. The nature of the recursive sets and recursively enumerable sets. Decidability. Context-sensitive grammars and linear-bounded automata, including closure properties; oracles; reduction; the arithmetic hierarchy; the analytic hierarchy.

COMP 6210/6215 COMPILER CONSTRUCTION (3). LEC. 3. Pr., COMP 4200. Compiler organization; lexical analysis; parsing; syntax-direction translation; symbol tables; basic dependence analysis; intermediate forms; interpreters vs. compilers; run-time storage management; code generation; error detection and recovery.

COMP 6220/6225 ADVANCED TOPICS IN PROGRAMMING LANGUAGES (3). LEC. 3. Pr., COMP 3220. Advanced topics in programming language concepts, design, and implementation.

COMP 6230/6235 DECLARATIVE PROGRAMMING LANGUAGES AND PRINCIPLES (3). LEC. 3. Pr., COMP 3220. Functional and logic programming theoretical foundations, models and implementation issues; example language studies.

COMP 6280/6286 OBJECT ORIENTED PROGRAMMING LANGUAGES AND PRINCIPLES (3). LEC. 3. Pr., COMP 3220. Object oriented language principles and study of the language support for these principles. Example languages and distributed object programming principles.

COMP 6320/6325 DESIGN AND ANALYSIS OF COMPUTER NETWORKS (3). LEC. 3. Pr., COMP 3270 or departmental approval. Computer networks design, including multiplexing, switching, routing, internetworking, transport protocols, congestion control, and performance evaluation.


COMP 6350/6366 WIRELESS AND MOBILE NETWORKS (3). LEC. 3. Pr., COMP 3350 or departmental approval. Mobile IP, wireless routing, location management, ad-hoc wireless networks, wireless TCP personal communication systems, and GSM.


COMP 6380/6386 PERSONAL AREA NETWORKS (3). LEC. 3. Pr., COMP 4320 or ELEC 6220. Fundamentals of very low power, short-range high-bandwidth personal network technologies such as Bluetooth and direct diffusion.

COMP 6390/6396 3G AND 4G WIRELESS (3). LEC. 3. Coreq., COMP 6360 or ELEC 6110. Exploration of technology types, design issues for handset and network systems, economics. Exploration of standards such as CT2, CT3, IS-91A. Future challenges for 4G.

COMP 6400/6406 FUNDAMENTALS OF COMPUTER GRAPHICS (3). LEC. 3. Pr., COMP 2210, MATH 2660. Graphics hardware and software components, coordinate systems, 2-D and 3-D transformations, 3-D viewing and projection, clipping and windowing, scan conversion and algorithms, visibility determination and shadowing, and software projects using a graphics software package.

COMP 6500/6506 DISTRIBUTED OPERATING SYSTEMS (3). LEC. 3. Pr., COMP 4320. Basic concepts of distributed systems. Concurrent process communication and synchronization mechanisms, distributed process scheduling, distributed file systems, distributed shared memory, distributed system security and case studies.

COMP 6510/6516 NETWORKED MULTIMEDIA SYSTEMS (3). LEC. 3. Pr., COMP 4320 or departmental approval. Basic concepts, architecture and design of networked multimedia systems.


COMP 6600/6606 ARTIFICIAL INTELLIGENCE (3). LEC. 3. Pr., COMP 3270 and COMP 4640 or departmental approval. Introduction to intelligent agents, search knowledge representation and reasoning, machine learning.

COMP 6610/6616 ARTIFICIAL INTELLIGENCE PROGRAMMING (3). LEC. 3. Pr., COMP 6600 or departmental approval. Design and implementation of advanced artificial intelligence techniques including expert systems, planning, logic and constraint programming, knowledge representation and heuristic search methods.

COMP 6620/6626 USER INTERFACE DESIGN AND EVALUATION (3). LEC. 3. Pr., COMP 4640 or departmental approval. Theory and practice of designing interfaces for interactive systems, usability engineering techniques; implementing and evaluating interfaces.

COMP 6700/6706 SOFTWARE PROCESS (3). LEC. 3. Pr., COMP 3700 or COMP 3710 or departmental approval. Process models of the software life cycle as well as methods and tools for software development.

COMP 6710/6716 SOFTWARE QUALITY ASSURANCE (3). LEC. 3. Pr., COMP 3700 or COMP 3710 or departmental approval. Processes, methods, and tools associated with the production of robust, high-quality software.

COMP 6720/6726 REAL TIME AND EMBEDDED SYSTEMS (3). LEC. 3. Pr., COMP 3500. Concepts of real-time and embedded computer systems. Studies of real-time algorithm issues such as timeliness, time-constrained scheduling and communication. Embedded system issues such as limited memory, low power, and high latency communication. Fall, Spring.

COMP 7120/7125 DATABASE SYSTEMS II (3). LEC. 3. Pr., COMP 6120. Theoretical and applied issues related to the analysis, design, and implementation of object-oriented database systems.


COMP 7270/7276 ADVANCED TOPICS IN ALGORITHMS (3). LEC. 3. Pr., COMP 4270 or departmental approval. In-depth study of advanced topics in algorithms.


COMP 7300/7306 ADVANCED COMPUTER ARCHITECTURE (3). LEC. 3. Pr., COMP 4300 or departmental approval. Modern instruction level parallel computer design, including superscalar and very-long instruction word processor design.

COMP 7310/7316 VLSI CAD TOOL DESIGN (3). LEC. 3. Pr., COMP 6210 or departmental approval. Design of CAD tools for VLSI design, including high-level synthesis and hardware-software co-design, logic synthesis, floorplanning, optimization, placement and routing. Software development of a CAD tool as a comprehensive project.

COMP 7320/7326 ADVANCED COMPUTER NETWORKS (3). LEC. 3. Pr., COMP 6320 or departmental approval. Advanced network topics, including ISDN, ATM, active networks, security, Internet, wireless and mobile networks, and network management.

COMP 7330/7336 TOPICS IN PARALLEL AND DISTRIBUTED COMPUTING (3). LEC. 3. Pr., COMP 6330 or departmental approval. Parallel programming languages, environments and tools, parallel algorithms performance issues, distributed memory systems, group communication, fault tolerance.

COMP 7340/7346 HIGH SPEED NETWORKS (3). LEC. 3. Pr., COMP 6320 or departmental approval. High-speed networks design, including ATM and gigabit Ethertns, quality of service, ATM traffic, congestion control, ATM switching, and signaling.

COMP 7350/7356 MULTIMEDIA NETWORKING (3). LEC. 3. Pr., COMP 6320 or departmental approval. Multimedia network requirements, coding, compression, multicast, traffic shaping and analysis, quality of service, scheduling, buffer design and congestion control.

COMP 7360/7366 WIRELESS AND MOBILE NETWORKS (3). LEC. 3. Pr., COMP 6320 or departmental approval. Mobile IP, wireless routing, location management, ad-hoc wireless networks, wireless TCP, personal communication systems, and GSM.

COMP 7400/7406 ADVANCED COMPUTER GRAPHICS (3). LEC. 3. Pr., COMP 6400 or departmental approval. Advanced 3-D topics including visual realism issues, visible surface determination algorithms, illumination and shading models, surface and solid modeling, advanced modeling techniques, special purpose graphics architectures, and animation. Software projects will be assigned.

COMP 7500/7506 ADVANCED TOPICS IN OPERATING SYSTEMS (3). LEC. 3. Pr., COMP 6500 or departmental approval. Advanced topics in operating system concepts, design and implementation.

COMP 7600/7606 COMPUTATIONAL INTELLIGENCE (3). LEC. 3. Pr., COMP 6600 or departmental approval. A study of computational intelligence with emphasis on the design and implementation of neural, genetic and fuzzy computing techniques.

COMP 7610/7616 COMPUTATIONAL COGNITION (3). LEC. 3. Pr., COMP 6600 or departmental approval. Computational models of cognition, including knowledge representations and process mechanisms like means-ends analysis, semantic networks, frames.

COMP 7620/7626 HUMAN-COMPUTER INTERACTION (3). LEC. 3. Coreq., COMP 6620 or departmental approval. Theoretical principles and practical aspects of interaction between humans and computers, design and evaluation of interactive systems.

COMP 7700/7706 SOFTWARE ARCHITECTURE (3). LEC. 3. Pr., COMP 6700 and COMP 6710. Methods and tools related to the analysis, specification and design of software architecture.

COMP 7710/7716 SOFTWARE ENVIRONMENTS (3). LEC. 3. Pr., COMP 6700 and COMP 6710. Issues associated with the design, implementation, and use of software engineering environments.


COMP 7730/7736 FORMAL METHODS FOR SOFTWARE (3). LEC. 3. Pr., COMP 6700 and COMP 6710. Precise, abstract models for characterizing and reasoning about properties of software systems.

COMP 7930 DIRECTED STUDY (1-3). IND. Pr., departmental approval. Course may be repeated with change in topic.

COMP 7950/7956 INTRODUCTION TO GRADUATE STUDY IN COMPUTER SCIENCE AND SOFTWARE ENGINEERING (1). LEC. 1, SU. Introduction to graduate research and study topics in computer science and software engineering.

COMP 7970/7976 SPECIAL TOPICS (1-3). LEC. Course may be repeated with change in topic.

COMP 7980/7986 MASTER OF SOFTWARE ENGINEERING DESIGN PROJECT (1-15). IND., SU. Planning, implementation, and completion of a design project. Project culminates in both a written report and an oral presentation. Course may be repeated with change in topic.

COMP 7990 RESEARCH AND THESIS (1-15). MST, TD. Course may be repeated with change in topic.

COMP 8120 CURRENT TOPICS IN DATABASE SYSTEMS (3). LEC. 3. Pr., COMP 6120. Theoretical and applied research issues related to database systems. Topics will reflect current research in the field.

COMP 8220 RESEARCH TOPICS IN PROGRAMMING LANGUAGES (3). LEC. 3. Pr., COMP 7220. Topics of current research in the area of programming languages, their design and implementation.


COMP 8400 CURRENT TOPICS IN COMPUTER GRAPHICS (3). LEC. 3. Pr., COMP 7400 or departmental approval. In-depth study of current research topics in computer graphics. Topics may include theoretical, performance, implementation, and system integration issues. Extensive literature survey, issue identification, performance comparison, and future research trends will be discussed.

COMP 8500 RESEARCH TOPICS IN OPERATING SYSTEMS (3). LEC. 3. Pr., COMP 7500. Topics of current research in the area of operating systems, their design and implementation.

COMP 8600 ADVANCED TOPICS IN ARTIFICIAL INTELLIGENCE (3). LEC. 3. Pr., COMP 6610 or COMP 7610 or departmental approval. In-depth study of current research topics in Artificial Intelligence, e.g., reasoning mechanisms, heuristic search methods, cognitive modeling.

COMP 8620 ADVANCED TOPICS IN HUMAN-COMPUTER INTERACTION (3). LEC. 3. Pr., COMP 7620 or departmental approval. In-depth study of current research topics in Human-Computer Interaction, e.g., evaluation and assessment methods, multimodal interfaces, educational technology.

COMP 8700/8706 CURRENT TOPICS IN SOFTWARE ENGINEERING (3). LEC. 3. Pr., COMP 6700, COMP 6710, or departmental approval. Current theoretical and applied research issues in software engineering.

COMP 8930 DIRECTED STUDY (1-3). IND. Course may be repeated for a maximum of 6 credit hours.

COMP 8970 SPECIAL TOPICS (1-3). IND. Course may be repeated with change in topic.

COMP 8990 RESEARCH AND DISSERTATION (1-15). DSR, TD. Course may be repeated with change in topic.

Counseling and Counseling Psychology (COUN)

Dr. Holly A. Stadler - 844-2878

COUN 1000 CAREER ORIENTATION AND EXPLORATION (2). LEC. 1, LAB. 2. The process of career decision-making through hands-on activities, in-class exercises and job shadowing.

COUN 2900 INDEPENDENT STUDY (1-3). IND., SU. Reading, research or other work undertaken by a student focused on an area of special interest. Directed by faculty member. Course may be repeated for a maximum of 9 credit hours.

COUN 2940 DIRECTED FIELD EXPERIENCE (1-3). FLD. Pr., departmental approval. Course may be repeated for a maximum of 9 credit hours.
COUN 2970 SPECIAL TOPICS IN COLLEGE STUDENT DEVELOPMENT (1-3). LEC. Pr., Sophomore standing. Selected topics in college student development. Fall, Spring. Course may be repeated for a maximum of 12 credit hours.

COUN 3100 COUNSELING AND HUMAN SERVICES (3). LEC. 3. Pr., junior standing. Counseling concepts and skills appropriate in the helping professions. Not open to graduate students in counseling education.

COUN 7100 INTRODUCTION TO SCHOOL PSYCHOLOGY (3). LEC. 3. Orientation to profession of school psychology and history of the profession, professional roles, ethical and legal standards, and current issues.

COUN 7200 INTRODUCTION TO MEASUREMENT AND ASSESSMENT (3). LEC. 3. Pr., COUN 7100 or COUN 7410, COUN 7420, COUN 7430, COUN 8520. Introduction to the history and theory of measurement and assessment as it applies to counselors and psychologists.


COUN 7230 CAREER DEVELOPMENT AND VOCATIONAL APPRAISAL (3). LEC. 3. Pr., FOUN 7100 or COUN 7200. Career development theories appraising vocationally related interests, aptitudes and personal characteristics. Laboratory practice in test procedures.

COUN 7250 ADVANCED ASSESSMENT AND DIAGNOSIS IN COUNSELING (3). LEC. 3. Pr., COUN 7100 or COUN 7410, COUN 7420, COUN 7430 or COUN 8510, COUN 8520, COUN 8530. Study of major counseling theories.

COUN 7330 COUNSELING APPLICATIONS OF LIFESPAN DEVELOPMENT (3). LEC. 3. Theories and current research in development across the lifespan with emphasis on applications to counseling.

COUN 7320/7326 COUNSELING THEORIES (3). LEC. 3. Coreq., COUN 7100 or COUN 7410, COUN 7420, COUN 7430 or COUN 8510, COUN 8520, COUN 8530. Study of major counseling theories.

COUN 7330 COUNSELING DIVERSE POPULATIONS (3). LEC. 3. Pr., departmental approval. Special counseling and advocacy issues. Needs of diverse populations are considered.

COUN 7340 GROUP COUNSELING (3). LEC. 3. Pr., COUN 7320. Leading, developing, evaluating a counseling group; including group proposal, session development, group dynamics, group leadership and evaluation, treatment planning; group intervention, counseling skills.

COUN 7350 INTRODUCTION TO COUNSELING PRACTICE IN SCHOOLS (3). LEC. 3. SU. Pr., COUN 7320. COUN 7100 or COUN 7400. Methods, interventions and skills essential to counseling. Content is specific to school settings.

COUN 7400 ORIENTATION TO PROFESSIONAL COUNSELING (3). LEC. 3. Pr., departmental approval. Orientation to the counseling field with emphasis on philosophical, historical, psychological, and organizational foundations of professional practice.

COUN 7410 COUNSELING IN THE COMMUNITY (3). LEC. 3. Pr., departmental approval. Counselors in mental health settings (such as community agencies, substance abuse treatment programs). Historical, philosophical, psychological, and sociological foundations of community counseling.

COUN 7420 ORIENTATION TO SCHOOL COUNSELING (3). LEC. 3. Pr., departmental approval. Orientation to the role and activities of the K-12 school counselor. Emphasis on the components of a developmentally-oriented school counseling program.

COUN 7430 COLLEGE STUDENT DEVELOPMENT (3). LEC. 3. Pr., departmental approval. Theory and practice of counseling and student services in higher education.

COUN 7900 INDEPENDENT STUDY (1-3). IND. Independent learning effort directed at desired objectives. Includes evaluation by professor and student at regular intervals. Course may be repeated for a maximum of 9 credit hours.

COUN 7910 PRACTICUM (3). LEC. 3. SU. Pr., COUN 7320, COUN 7350, COUN 7410, COUN 7420, COUN 7430 or COUN 7100; departmental approval. Supervised experiences appropriate to student’s program emphasis. Course may be repeated for a maximum of 9 credit hours.

COUN 7920 INTERNSHIP (1-9). INT. SU. Pr., COUN 7910 and departmental approval. Supervised on-the-job experiences. Course may be repeated for a maximum of 9 credit hours.

COUN 7940 DIRECTED FIELD EXPERIENCE (1-10). FLD. SU. Pr., departmental approval. Course may be repeated for a maximum of 10 credit hours.
CTCT 3100 POWER EQUIPMENT TECHNOLOGY (3). LEC. 2, LAB. 3. Pr., MATH 1130. Repair and maintenance of small air-cooled engines and power equipment in agriculture.

CTCT 3200 RECORDS MANAGEMENT (2). LEC. 2. Pr., satisfactory score on AU Computer Competency Test or COMP 1000 or departmental approval. Integrated records management systems, records management functions, classification systems, micrographics, electronic records, and records management careers.

CTCT 3240 INFORMATION PROCESSING I (3). LEC. 2, LAB. 2. Pr., CTCT 2200 or departmental approval. Exploration of organizational needs for text-based information processing. Functions and capabilities of text-based information processing components.

CTCT 3250 INFORMATION PROCESSING II (3). LEC. 2, LAB. 2. Pr., CTCT 3240 or departmental approval. Decision-making and business problem solving using microcomputer software applications including spreadsheets, database management programs, and operating systems.

CTCT 4000 CLASSROOM/LABORATORY MANAGEMENT, ORGANIZATION AND EVALUATION IN CAREER AND TECHNICAL EDUCATION (3). LEC. 3. Pr., admission to Teacher Education. Organization, objectives, principles, management, and evaluation of career and technical education classrooms, laboratories, and programs.

CTCT 4030 CAREER AND TECHNICAL STUDENT ORGANIZATIONS (3). LEC. 3. Pr., admission to Teacher Education. Survey of career and technical student organizations; procedures involved in developing and implementing informal and co-curricular educational programs for students and preparing students for state and national competitions.

CTCT 4050 METHODS OF TEACHING IN AREA OF SPECIALIZATION (3). LEC. 2, LAB. 2. Pr., Junior standing or admission to Teacher Education. Credit will not be allowed for both CTCT 4050 and CTCT 7050. Methods and techniques of instruction using appropriate instructional materials; planning and evaluation of instruction for programs within career and technical education.

CTCT 4060 PROGRAM PLANNING IN AREA OF SPECIALIZATION (3). LEC. 3. Pr., admission to Teacher Education. Coreq., CTCT 4050. Introduction to principles and practices involved in designing education programs in the area of specialization. Credit will not be given for both CTCT 4060 and CTCT 7060.


CTCT 4160 SUPERVISED AGRICULTURAL EXPERIENCE PROGRAMS (2). LEC. 2. Pr., junior standing. Responsibility for SAEP planning, supervision, and evaluation of entrepreneurial, placement, exploratory, analytical, and experimental SAEPs and record books; completing award applications.

CTCT 4200 MANAGING OFFICE SYSTEMS (3). LEC. 2, LAB. 2. Pr., CTCT 3250 or departmental approval. Capstone course with emphasis on integration of information processing procedures, administrative support, and management functions.

CTCT 4900 DIRECTED INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. The student's learning efforts are guided toward desired objectives. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTCT 4910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA. Pr., SU. Pr., departmental approval. Provides experience relating theory and practice, usually carried on simultaneously. Course may be repeated for a maximum of 6 credit hours.

CTCT 4920 PROFESSIONAL INTERNSHIP IN AREA OF SPECIALIZATION (9). INT. Pr., CTCT 4050 or departmental approval. Supervised internship experiences in a school or other appropriate setting. Evaluation and analysis of the internship experience.

CTCT 4940 DIRECTED FIELD EXPERIENCE IN AREA OF SPECIALIZATION (1-3). FLD. Pr., departmental approval. Supervised occupational work experience in an approved specialization-related occupation. Course may be repeated for a maximum of 3 credit hours.

CTCT 4970 SPECIAL TOPICS IN AREA OF SPECIALIZATION (1-6). LEC. Pr., senior standing or departmental approval. Current or special topics within area of specialization. Course may be repeated for a maximum of 6 credit hours.

CTCT 6000 CAREER AND OCCUPATIONAL INFORMATION (3). LEC. 3. Pr., junior standing. Trends and issues in occupational structure, job qualifications and requirements, and sources of occupational information for new and emerging occupations; analysis of career education models for students.

CTCT 6010 LEARNING RESOURCES IN AREA OF SPECIALIZATION (3). LEC. 3. Pr., CTCT 4050 and junior standing or CTCT 7050 or departmental approval. Selecting, developing, utilizing, and evaluating instructional resources and technology for teaching.

CTCT 6080 COORDINATION AND SUPERVISION OF WORK-BASED LEARNING (3). LEC. 3. Pr., junior standing. Coordination, placement, and supervision of students in work-experience programs; development of employability skills and habits in students.

CTCT 6240 ADMINISTRATIVE MANAGEMENT (3). LEC. 3. Pr., CTCT 4200 or departmental approval and junior standing. Management of office systems, information and personnel. Managing and controlling administrative services.

CTCT 7000 FOUNDATIONS OF VOCATIONAL EDUCATION (3). LEC. 3. Philosophical, historical, economic, and sociological perspectives of vocational education in relation to the organization of vocational education programs.

CTCT 7010 YOUTH PROGRAM DEVELOPMENT (3). LEC. 3. Pr., CTCT 4030 or departmental approval. Developing, managing, and evaluating formal and informal youth education programs; training volunteers for youth development programs; securing and developing supporting resources.

CTCT 7050 METHODS OF TEACHING IN AREA OF SPECIALIZATION (3). LEC. 2, Lab. 2. Pr., admission to 5th-Year Program. Methods and techniques of instruction using appropriate instructional materials; planning and evaluation of instruction for programs within the area of specialization. Credit will not be given for both CTCT 4050 and CTCT 7050.

CTCT 7060 PROGRAM PLANNING IN AREA OF SPECIALIZATION (3). LEC. 3. Pr., admission to 5th-Year Program. Introduction to principles and practices involved in designing educational programs in the area of specialization. Credit will not be given for both CTCT 7060 and CTCT 4060.

CTCT 7100 TEACHING MECHANICAL TECHNOLOGY (3). LEC. 2, LAB. 2. Pr., CTCT 4050 or CTCT 7050 or departmental approval. Theory and practice of managing agricultural mechanics laboratories, theories of machine operation, and practice of maintaining laboratory equipment.

CTCT 7120 COURSES OF STUDY IN AGRICULTURAL EDUCATION (3). LEC. 3. Pr., CTCT 4060 or CTCT 7060 or departmental approval. Emerging technologies in agriculture education; principles and procedures of curriculum construction applied to courses of study in agriscience education.

CTCT 7710 ADVANCED TEACHING METHODS (3). LEC. 3. Pr., CTCT 4050 or CTCT 7050 or departmental approval. Analysis of research in theories of teaching and learning, effective teacher characteristics, learning styles, teaching methodologies, and diversity in teaching.

CTCT 7720 ADVANCED PROGRAM PLANNING IN AREA OF SPECIALIZATION (3). LEC. 3. Pr., CTCT 4060 or CTCT 7060 or departmental approval. Issues affecting the development and management of educational programs; strategies for improving educational programs.

CTCT 7720 PROGRAM EVALUATION (3). LEC. 3. Pr., CTCT 7720 or departmental approval. Principles and procedures used in evaluating vocational, technical, extension and training programs. Alternative approaches to evaluation and practical guidelines for conducting evaluations.

CTCT 7750 ADMINISTRATION OF VOCATIONAL EDUCATION (3). LEC. 2, LAB. 2. Pr., departmental approval. Introduction to concepts, theories and practices related to administration, organizational behavior, and leadership in secondary and post-secondary vocational education programs.

CTCT 7750 COMPREHENSIVE PLANNING IN VOCATIONAL EDUCATION (3). LEC. 2, LAB. 2. Pr., CTCT 7750 or departmental approval. Processes of comprehensive planning for vocational education programs at high school and secondary school levels using local, state, and regional data.

CTCT 7770 CLINICAL SUPERVISION (3). LEC. 3. Pr., CTCT 7710 or departmental approval. Theories, concepts, models, and techniques of student teacher and beginning teacher supervision by administrators, school district personnel, and university supervisors. Recommended for individuals who supervise or plan to supervise student teachers.

CTCT 7780 RESEARCH IN VOCATIONAL AND ADULT EDUCATION (3). LEC. 3. Pr., 3-6 hours of graduate-level statistics, departmental approval. Review, analysis and interpretation of research procedures and data with emphasis on designing new research in vocational and adult education.

CTCT 7810 SUPERVISED COLLEGE TEACHING (1). LEC. 1. Pr., departmental approval. Practical experience in the classroom under the supervision of a faculty mentor. Course may be repeated for a maximum of 2 credit hours.

CTCT 7900 INDEPENDENT STUDY (1-3). IND. Pr., departmental approval. Independent learning effort directed toward desired objectives. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 3 credit hours.

CTCT 7910 PRACTICUM IN AREA OF SPECIALIZATION (1-3). PRA. Pr., departmental approval. Experiences closely relating theory and practice. Course may be repeated for a maximum of 3 credit hours.

CTCT 7920 INTERNSHIP (1-10). INT. Pr., CTCT 7050 or departmental approval. Supervised internship experiences in a school, college or other appropriate setting. Evaluation and analysis of the internship experience. Course may be repeated for a maximum of 10 credit hours.
CTCT 7950 SEMINAR IN AREA OF SPECIALIZATION (1-3). SEM., SU. Pr., departmental approval. Presentation by graduate students of research projects and/or findings. Analysis of procedures and findings. Course may be repeated for a maximum of 3 credit hours.

CTCT 7960 READINGS IN AREA OF SPECIALIZATION (1-3). IND. Pr., departmental approval. Critical analysis of current and classical research and writings. Course may be repeated for a maximum of 3 credit hours.

CTCT 7970 TOPICS IN AREA OF SPECIALIZATION (1-6). LEC. Pr., departmental approval. Current or advanced topics within area of specialization. Course may be repeated for a maximum of 6 credit hours.

CTCT 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval. Course may be repeated for a maximum of 10 credit hours.

CTCT 8730 CURRICULUM DEVELOPMENT IN VOCATIONAL EDUCATION (3). LEC. 3 Pr., CTCT 7730 or departmental approval. Principles involved in vocational education curriculum planning, identification of educational needs of students, selecting technical content, designing curricula, and evaluating materials.

CTCT 8770 SUPERVISION OF INSTRUCTION (3). LEC. 3 Pr., CTCT 7770 or departmental approval. Theories and models to become effective supervisors of vocational and adult education programs; philosophies and styles of supervision used to improve schools, instruction, curriculum and personnel.

CTCT 8800 TEACHER EDUCATION (3). LEC. 3 Pr., departmental approval. Emphasis on beliefs, philosophy, issues, research, roles, student selection, curriculum, methodology, internships, organization, and administration of teacher education programs.

CTCT 8810 SUPERVISED COLLEGE TEACHING (1-10). LEC. 3 NG. Practical experience in the classroom under the supervision of a faculty mentor. Course may be repeated for a maximum of 10 credit hours.

CTCT 8900 ADVANCED INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Independent learning efforts at desired objectives. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTCT 8910 ADVANCED PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA. Pr., departmental approval. Experiences closely relating theory and practice. Course may be repeated for a maximum of 6 credit hours.

CTCT 8920 INTERNSHIP (1-10). INT. Pr., departmental approval. Supervised internship experiences in a school, college or other appropriate setting. Evaluation and analysis of the internship experience. Course may be repeated for a maximum of 10 credit hours.

CTCT 8950 ADVANCED SEMINAR IN AREA OF SPECIALIZATION (1-6). SEM., SU. Pr., departmental approval. Selected concepts and theoretical formulations of common interest. Course may be repeated for a maximum of 6 credit hours.

CTCT 8960 READINGS IN AREA OF SPECIALIZATION (1-6). IND. Pr., departmental approval. Critical analysis of current and classical research and writings. Course may be repeated for a maximum of 6 credit hours.

CTCT 8970 ADVANCED TOPICS IN AREA OF SPECIALIZATION (1-6). LEC. Pr., departmental approval. Current or advanced topics within area of specialization. Course may be repeated for a maximum of 6 credit hours.

CTCT 8980 FIELD PROJECT (1-10).FLD. 1, NG. Pr., departmental approval. Field project. Course may be repeated for a maximum of 10 credit hours.

CTCT 8990 RESEARCH AND DISSERTATION (1-10).DSR. TD. Pr., departmental approval. Course may be repeated for a maximum of 20 credit hours.

EARLY CHILDHOOD EDUCATION (CTEC)

CTEC 3020 PRIMARY MATH AND SCIENCE (3).LEC. 3 Pr., admission to Teacher Education. Exploration of learning and pedagogy for the development of math and science concepts appropriate for children in kindergarten through Grade 3.

CTEC 3030 INTUITIVE THOUGHT AND SYMBOLIC FUNCTION (3). LEC. 3 Pr., admission to Teacher Education. Coreq., CTEC 4911. Young children’s intuitive thought for pre-service teachers.

CTEC 3150 LANGUAGE DEVELOPMENT: IMPLICATIONS FOR THE CHILDHOOD EDUCATOR (3). LEC. 3. Applications of language development theories to teaching children. Emphasis on the effects theories have on curriculum and teaching.

CTEC 3200 A WORKING THEORY FOR THE CONSTRUCTIVIST EDUCATOR (3). LEC. 3 Pr., admission to Early Childhood Teacher Education. Constructivist theory for pre-service teachers preparing to teach at the early childhood level.

CTEC 4200 THE CONSTRUCTIVIST TEACHER: STRATEGIES AND TECHNIQUES (3). LEC. 3 Pr., CTEC 3200 and admission to Teacher Education. Coreq., CTEC 4912. Construction of an operational knowledge of established constructive curriculum strategies and techniques.

CTEC 4210 THE CONSTRUCTIVIST TEACHER: GROWING PROFESSIONALLY (3). LEC. 3 Pr., CTEC 4200. Coreq., CTEC 4920. The roles and responsibilities of being an early childhood professional.

CTEC 4900 INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Reading, research or other work undertaken independently by a student on a content area of special interest. Course may be repeated for a maximum of 6 credit hours.

CTEC 4910 PRACTICUM (1-6). PRA. Pr., departmental approval. Students and faculty cooperatively select and execute an appropriate field experience. Course may be repeated for a maximum of 6 credit hours.

CTEC 4911 PRACTICUM IN THE PRESCHOOL (3). PRA. Pr., CTEC 3030. Lab., CTEC 3200. Laboratory experiences with children from birth to five years of age designed to help students relate theory to practice.

CTEC 4912 PRACTICUM IN THE PRIMARY GRADES (3). PRA. Pr., CTEC 3200. Lab., CTEC 4200. Laboratory experiences with children 5 through 9 years of age help students relate theory to practice.

CTEC 4920 INTERNSHIP (10). INT. Pr., admission to Teacher Education, minimum GPA of 2.5 in professional studies, early childhood teaching field, and overall, completion of early childhood professional sequence. Coreq., CTEC 4210. Experience in a setting serving pre-primary or primary-school children with varying abilities.

CTEC 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College; departmental approval. Individual readings program. Course may be repeated for a maximum of 3 credit hours.

CTEC 4997 HONORS THESIS (1-3). IND. Pr., senior standing, membership in the Honors College; departmental approval. Student thesis is finalized in this course. Course may be repeated for a maximum of 3 credit hours.

CTEC 7200 EARLY CHILDHOOD EDUCATION PERSPECTIVE (3). LEC. 3. Historical overview of current issues, trends, and programs in early childhood education.


CTEC 7260 PLAY AND EARLY CHILDHOOD EDUCATION (3). LEC. 3. Examination of children’s play from a constructivist theoretical perspective and translation of theory into early childhood educational practice.

CTEC 7270 THEORY-BASED PROBLEMS IN EARLY CHILDHOOD EDUCATION (3). LEC. 3. In-depth exploration of a problem related to the thought, writing and research that form the theoretical foundations of constructivist approaches in early childhood education. Course may be repeated for a maximum of 9 credit hours.

CTEC 7510 RESEARCH STUDIES IN EARLY CHILDHOOD EDUCATION (3). LEC. 3. How to read, review, analyze and interpret significant research studies in early childhood education.

CTEC 7520 CURRICULUM AND TEACHING IN EARLY CHILDHOOD EDUCATION (3). LEC. 3. Reappraisal of experiences and content for children by focusing on the nature of the learner and the nature of the knowledge to be learned.

CTEC 7530 ORGANIZATION OF PROGRAM IN EARLY CHILDHOOD EDUCATION (3). LEC. 3. Organization, administration, and supervision of early childhood programs.

CTEC 7540 EVALUATION OF PROGRAMS IN EARLY CHILDHOOD EDUCATION (3). LEC. 3. Assessment and evaluation of all program components from a constructivist perspective.

CTEC 7900 INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Independent learning objectives related to the student’s area of specialization. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTEC 7910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA. Pr., departmental approval. Experience relating theory and practice, usually in a school setting. Course may be repeated for a maximum of 6 credit hours.

CTEC 7920 INTERNSHIP (1-9). INT. Pr., departmental approval. Supervised on-the-job experiences in a school, college or other appropriate setting, accompanied by regularly scheduled, on-campus discussion periods. Course may be repeated for a maximum of 9 credit hours.

CTEC 7970 SPECIAL TOPICS (3-9). LEC. Pr., Departmental Approval. Cooperative pursuit of selected concepts and theories, normally in small groups. Course may be repeated for a maximum of 9 credit hours.

CTEC 7990 RESEARCH AND THESIS (1-10). MST, TD. Course may be repeated with change in topic.

CTEC 8240 RESEARCH IN EARLY CHILDHOOD EDUCATION (3). LEC. 3 Pr., Master’s Degree. Review, analysis and interpretation of available research with emphasis on designing research to meet the needs of young children.
CTEE 8270 THEORY-BASED PROBLEMS IN EARLY CHILDHOOD EDUCATION (3). LEC. 3. Pr., Master's Degree. In-depth exploration of problems related to the thought, writings, and research that form the theoretical foundations of constructivist approaches to early childhood education. Course may be repeated for a maximum of 6 credit hours.


CTEE 8850 CONSTRUCTIVIST INVESTIGATIONS IN EARLY CHILDHOOD SETTINGS (3). LEC. 3. Pr., Master's Degree. Analysis and interpretation of the design of constructivist investigation.

CTEE 8950 ALTERNATIVE RESIDENCE SEMINAR (2-4). SEM. 2. SU. Pr., enrollment in Alternative Residence Program. Must complete this two semester sequence during the fall and winter semesters. Credit does not count toward minimum requirements for the doctoral program.

CTEE 8970 SPECIAL TOPICS (3-9). LEC. Pr., Departmental Approval. Cooperative pursuit of selected concepts and theories, normally in small groups. Course may be repeated for a maximum of 9 credit hours.

CTEE 8980 FIELD PROJECT (1-3). FLD. NG. Pr., departmental approval. Course may be repeated for a maximum of 3 credit hours.

CTEE 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

EDUCATIONAL CURRICULUM (CTEE)


CTEE 4020 CURRICULUM: LANGUAGE ARTS (3). LEC. 2. LAB. 3. Pr., admission to Teacher Education. Coreq., CTEE 4010, CTEE 4920, CTEE 4950. Content and methodology of teaching language arts (reading, writing, listening, speaking, and viewing) in kindergarten through grade six in order to develop communicative competence.


CTEE 4900 INDEPENDENT STUDY (1-6). IND. SU. Pr., departmental approval. Reading, research, or other work undertaken by a student focused on a content area of special interest. The student is directed by a faculty member. Course may be repeated for a maximum of 6 credit hours.

CTEE 4910 PRACTICUM (1-6). PRA. Pr., departmental approval. Students and faculty cooperatively select an appropriate field experience. Course may be repeated for a maximum of 6 credit hours.

CTEE 4920 INTERNSHIP (5-10). MST. 5, TD. Pr., departmental approval. Provides individual students with experience relating theory and practice, usually in a school setting. Course may be repeated for a maximum of 6 credit hours.

CTEE 4950 PROFESSIONAL DEVELOPMENT SEMINAR (1-4). IND. 1. SU. Pr., admission to Elementary Teacher Education Program. Reflection, exploration, and study of elementary education practices in kindergarten through grade six. Course may be repeated for a maximum of 4 credit hours.

CTEE 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College; departmental approval. Individual readings program. Course may be repeated for a maximum of 3 credit hours.

CTEE 4970 SPECIAL TOPICS (1-6). IND. Pr., senior standing; departmental approval. Cooperatively selected concepts and theories pursued, normally in small groups. Course may be repeated for a maximum of 6 credit hours.

CTEE 4997 HONORS THESIS (1-3). IND. Pr., senior standing, membership in the Honors College; departmental approval. The student thesis is finalized in this course. Course may be repeated for a maximum of 3 credit hours.

CTEE 7010 APPROACHES TO TEACHING (3). LEC. 3. Organizational patterns, planning and approaches to instruction in the elementary school.

CTEE 7490 THE ELEMENTARY SCHOOL PROGRAM (3). LEC. 3. Major curriculum areas and teaching practices in the modern elementary school. Implications of research and theory for the total elementary school program.

CTEE 7510 RESEARCH STUDIES IN EDUCATION IN AREAS OF SPECIALIZATION (3). RES. 3. Pr., supervision. Analysis and interpretation of data with emphasis on designing research to meet the changing needs of the school.

CTEE 7520 CURRICULUM AND TEACHING IN AREAS OF SPECIALIZATION (3). LEC. 3. Teaching practices and re-appraisal of selecting experiences and content for curriculum improvement.

CTEE 7530 ORGANIZATION OF PROGRAMS IN ELEMENTARY EDUCATION (3). LEC. 3. Organization and development of basic and supplementary materials for guiding teachers and school systems in improvement of curriculum and teaching practices.

CTEE 7540 EVALUATION OF PROGRAMS IN AREAS OF SPECIALIZATION (3). LEC. 3. Evaluation methods and exploration of evaluation literature in areas of specialization.

CTEE 7900 INDEPENDENT STUDY (1-6). IND. SU. Pr., departmental approval. Independent study related to student’s respective areas of specialization. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTEE 7910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA. SU. Pr., departmental approval. Provides individual students with experience relating theory and practice, usually in a school setting. Course may be repeated for a maximum of 6 credit hours.

CTEE 7920 INTERNSHIP (1-9). INT. SU. Pr., departmental approval. Supervised on-the-job experiences in a school, college or other appropriate setting, accompanied by regularly scheduled, on-campus discussion periods. Course may be repeated for a maximum of 9 credit hours.

CTEE 7970 SPECIAL TOPICS (1-6). LEC. Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours.

CTEE 7970 RESEARCH AND THESIS (1-10). MST. TD. Pr., Master's Degree. Research plan and thesis. Course may be repeated for a maximum of 10 credit hours.

CTEE 8950 ALTERNATIVE RESIDENCE SEMINAR (2). LEC. 2. Pr., enrollment in Alternative Residence Program. Students must complete this two semester sequence during the fall and winter semesters. Credit does not count toward minimum requirements for the doctoral program.

CTEE 8970 SPECIAL TOPICS (1-6). LEC. Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours.

CTEE 8980 FIELD PROJECT (1-10). FLD. NG. Pr., course may be repeated for a maximum of 20 credit hours.

MIDDLE SCHOOL EDUCATION (CTMD)

CTMD 4010 TEACHING MATHEMATICS: MIDDLE SCHOOL (4). LEC. 2. LAB. 4. Pr., CTSE 4040 or departmental approval. Specific teaching strategies for a comprehensive middle school program grades 4-8.

CTMD 4190 CURRICULUM AND TEACHING IN THE MIDDLE SCHOOL (3). LEC. 2. LAB. 2. Pr., FOUN 3000; admission to Teacher Education; junior standing; or departmental approval. To introduce and prepare undergraduate education students for the middle school student, middle school teaching, and middle level philosophy while incorporating reflective decision making.

CTMD 4900 INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Independent study directed at desired objectives. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTMD 4910 PRACTICUM IN MIDDLE SCHOOL EDUCATION (1-6). PRA. SU. Pr., departmental approval. Provides experience relating theory and practice, usually carried on simultaneously. Course may be repeated for a maximum of 6 credit hours.

CTMD 4920 INTERNSHIP (9). INT. 9. SU. Pr., CTSE 4150 and CTSE 4160. Coreq., CTSE 4200. Supervised teaching in a public middle or secondary school, accompanied by scheduled discussions to analyze and evaluate the intern’s experience.

CTMD 4970 SPECIAL TOPICS (1-4). IND. Course may be repeated for a maximum of 4 credit hours.

CTMD 7900 INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Independent study directed toward desired objectives related to the respective areas of specialization. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTMD 7910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA. SU. Pr., departmental approval. Experience relating theory and practice, usually in a school setting. Course may be repeated for a maximum of 6 credit hours.

CTMD 7970 SPECIAL TOPICS (1-6). LEC. Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours.

MUSIC EDUCATION (CTMU)

CTMU 3040 MUSIC AND RELATED ARTS (4). LEC. 2. LAB. 4. Pr., admission to Teacher Education. Interdisciplinary instruction appropriate for students’ developmental characteristics which synthesize the content, professional resources, curriculum goals and instructional strategies of music.
CTMU 4900 INDEPENDENT STUDY (1-6). IND., SU. Pr., departmental approval. Independent reading, research or other work focused on a content area of special interest. The student is directed by a faculty member. Course may be repeated for a maximum of 6 credit hours.

CTMU 4910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA., SU. Pr., departmental approval. Cooperatively selected field experience. Course may be repeated for a maximum of 6 credit hours.

CTMU 4920 INTERNSHIP (9). INT. 9, SU. Pr., departmental approval. Coreq., CTSE 4200. Supervised on-the-job experience in a school, college or other appropriate setting, accompanied by regularly scheduled discussions with supervising faculty provide evaluation and analysis of the intern experience.

CTMU 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College; departmental approval. Individual readings program. Course may be repeated for a maximum of 3 credit hours.

CTMU 4997 HONORS THESIS (1-3), IND. Pr., senior standing; membership in the Student Honors Council; departmental approval. The student’s thesis is finalized in this course. Course may be repeated for a maximum of 3 credit hours.

CTMU 6940 ELEMENTARY/MIDDLE SCHOOL MUSIC METHODS (3). LEC. 3. Pr., Admission to Teacher Education Methodology, materials, organization and activities for elementary and middle school music programs. Includes professional field experiences in public school music programs.

CTMU 6960 SECONDARY MUSIC METHODS (3). LEC. 3. Pr., admission to Teacher Education Methodology, materials, organization and activities for secondary music programs. Includes professional field experiences in public school music programs.

CTMU 7510/7516 RESEARCH STUDIES IN MUSIC EDUCATION (3). RES. 3. Research, analysis and interpretation of available research with emphasis on designing new research to meet the changing needs of school musicians.

CTMU 7520/7525 CURRICULUM AND TEACHING IN MUSIC EDUCATION (3). LEC. 3. Teaching practices and evaluation of experiences and content for curriculum improvements. Students develop recommendations for music curriculum.

CTMU 7530/7536 ORGANIZATION OF PROGRAM IN MUSIC EDUCATION (3). LEC. 3. Program, organization and development of basic and supplementary materials for guiding teachers, facilities and school systems in continuous improvement of curriculum and teaching practices in music education.

CTMU 7540 EVALUATION OF PROGRAM IN MUSIC EDUCATION (3). LEC. 3. Evaluation and investigation of teaching effectiveness including the utilization of human and material resources and the coordination of areas of specialization and issues in evaluation which are unique to music education settings.

CTMU 7550 APPLICATIONS OF TECHNOLOGY IN MUSIC EDUCATION (3). LEC. 3. An overview of applications of current technology in music classroom, studios, and offices.

CTMU 7560/7566 DIGITAL MEDIA PRODUCTION FOR MUSIC EDUCATION (3). LEC. 3. Pr., CTMU 7550 or departmental approval. Current tools, skills, and concepts for creating aural and visual interactive applications.

CTMU 7570 MUSIC INSTRUCTION MULTIMEDIA RESEARCH AND DEVELOPMENT (3). LEC. 3. Pr., CTMU 7550 or departmental approval. Current research music instructional technology, design of interactive applications.

CTMU 7900 INDEPENDENT STUDY (1-6). IND., SU. Pr., departmental approval. Independent study directed toward desired objectives related to student’s respective areas of specialization. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTMU 7910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA., SU. Pr., departmental approval. Experience relating theory and practice, usually in a school setting. Course may be repeated for a maximum of 6 credit hours.

CTMU 7920 INTERNSHIP (1-9). INT., SU. Pr., departmental approval. Supervised on-the-job experiences in a school, college or other appropriate setting, accompanied by regularly scheduled, on-campus discussion periods. Course may be repeated for a maximum of 9 credit hours.

CTMU 7970 SPECIAL TOPICS (1-6). LEC. Pr., Departmental Approval. Provides an opportunity for graduate students and professors to pursue cooperatively selected topics.

CTMU 7990 RESEARCH AND THESIS (1-10). MST, TD. Course may be repeated with change in topic.

CTMU 8950 ALTERNATIVE RESIDENCE SEMINAR (2). SEM. 2, SU. Pr., enrollment in Alternative Residence Program. Students must complete this two semester sequence during the fall and winter semesters. Credit does not count toward minimum requirements for the doctoral program.

CTMU 8980 FIELD PROJECT (1-3), FLD. NG. Course may be repeated for a maximum of 3 credit hours.

CTMU 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Course may be repeated with change in topic.

READING EDUCATION (CTRD)


CTRD 3710 FUNDAMENTALS OF LANGUAGE AND LITERACY INSTRUCTION II (3). LEC. 2, LAB. 2. Pr., CTRD 3700, admission to Teacher Education. Research-based theory and teaching strategies to meet the language and literacy needs of all children, especially those at risk of reading difficulties. Includes laboratory teaching experience.

CTRD 4900 INDEPENDENT STUDY (1-6). IND., SU. Pr., departmental approval. Independent reading, research, or other work focused on a content area of special interest. The student is directed by a faculty member. Course may be repeated for a maximum of 6 credit hours.

CTRD 6030 THE READING OF ADOLESCENTS (3). LEC. 3. Pr., CTRD 6710 and admission to Teacher Education or departmental approval. Reading patterns of adolescents and uses of young adult literature in reading and English language arts programs, grades 6-12.

CTRD 6700 DEVELOPMENTAL READING K-12 (3). LEC. 3. Pr., admission to Teacher Education. Theoretical and research foundations for a balanced approach to reading assessment and instruction, K-12.

CTRD 7670 LITERACY AND INQUIRY IN THE CONTENT AREAS: GRADES 6-12 (3). LEC. 3. Pr., admission to Teacher Education. Strategies to enhance literacy and inquiry for student’s content-area learning in the middle and secondary school.


CTRD 7910 RESEARCH STUDIES IN READING EDUCATION (3). RES. 3. Review, analysis, and interpretation of available research with emphasis on designing new research to meet the changing needs of the school.

CTRD 7920 CURRICULUM AND TEACHING IN READING EDUCATION (3). LEC. 3. Teaching practices and reappraisal of selecting experiences and content for curriculum improvement.

CTRD 7930 ORGANIZATION OF PROGRAM IN READING EDUCATION (3). LEC. 3. Program, organization and development of basic and supplementary materials for guiding teachers, faculties and school systems in the continuous improvement of curriculum and teaching practices.

CTRU 7540 EVALUATION OF PROGRAM IN READING EDUCATION (3). LEC. 3. Evaluation and investigation of teaching effectiveness with attention also given to the utilization of human and material resources and the coordination of areas of specialization.

CTRU 7900 INDEPENDENT STUDY (1-6), IND., SU. Pr., departmental approval. Independent study directed toward desired objectives related to respective areas of specialization. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTRU 7910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA., SU. Pr., departmental approval. Experience relating theory and practice, usually in a school setting. Course may be repeated for a maximum of 6 credit hours.

CTRU 7920 INTERNSHIP (1-9). INT., SU. Pr., departmental approval. Supervised on-the-job experiences in a school, college or other appropriate setting, accompanied by regularly scheduled, on-campus discussion periods. Course may be repeated for a maximum of 9 credit hours.

CTRU 7970 SPECIAL TOPICS (1-6). LEC. Pr., Departmental Approval. Provides an opportunity for graduate students and professors to pursue cooperatively selected topics.

CTRU 7990 RESEARCH AND THESIS (1-10). MST, TD. Course may be repeated with change in topic.

CTRU 8950 ALTERNATIVE RESIDENCE SEMINAR (2). SEM. 2, SU. Pr., enrollment in Alternative Residence Program. Students must complete this two semester sequence during the fall and winter semesters. Credit does not count toward minimum requirements for the doctoral program.

CTRU 8980 FIELD PROJECT (1-10), FLD., SU. Course may be repeated for a maximum of 10 credit hours.

CTRU 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Course may be repeated with change in topic.

SECONDARY EDUCATION (CTSE)

CTSE 1010 DEVELOPMENTAL STUDIES: ENGLISH LANGUAGE ARTS (2). LEC. 1, LAB. 2. Pr., departmental approval. Develops reading/study and composition skills conducive to successful college study. Credit not counted toward graduation. Course may be repeated for a maximum of 4 credit hours.

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CTSE 1020 DEVELOPMENTAL STUDIES: MATHEMATICS (2). LEC. 1. LAB. 2. Pr., departmental approval. Develops mathematics skills conducive to successful college study. Credit not counted toward graduation. Course may be repeated for a maximum of 4 credit hours.


CTSE 4070 CURRICULUM AND TEACHING I: FOREIGN LANGUAGE (4). LEC. 2. LAB. 4. Pr., admission to Teacher Education. Strategies for teaching foreign language students with a special emphasis on developing good instruction for comprehensible input and emerging speech tasks.

CTSE 4080 CURRICULUM AND TEACHING II: FOREIGN LANGUAGE (4). LEC. 2. LAB. 4. Pr., CTSE 4070. Teaching strategies based on language acquisition theories that are appropriate for teaching foreign language students.

CTSE 4090 CURRICULUM AND TEACHING I: SCIENCE (4). LEC. 2. LAB. 4. Pr., Admission to Teacher Education. Planning, teaching strategies, evaluation techniques and classroom management procedures needed to be a successful science teacher.


CTSE 4150 CURRICULUM AND TEACHING I: ENGLISH LANGUAGE ARTS (4). LEC. 2. LAB. 4. Pr., senior standing; CTSE 6010, CTSE 6020, FOUN 3000; admission to Teacher Education or departmental approval. Teaching the expressive English language arts, writing and speaking, in middle and high school classrooms.

CTSE 4160 CURRICULUM AND TEACHING II: ENGLISH LANGUAGE ARTS (4). LEC. 2. LAB. 4. Pr., junior standing; CTSE 4150, CTRD 6050, CTRD 6710 and admission to Teacher Education or departmental approval. Teaching the receptive English language arts; reading, listening, and viewing; in middle and high school classrooms.

CTSE 4200 MANAGING MIDDLE AND HIGH SCHOOL CLASSROOMS (3). LEC. 3. Pr., senior or graduate student. Coreq., CTSE 4920 or CTSE 7920. The role of the teacher in classroom management. Methods for developing a positive learning environment.

CTSE 4210 SOCIAL SCIENCE CONCEPTS AND METHODS (3). LEC. 3. Pr., 15 hours in social sciences (2000 level or above) and pending internship. For pre-service teachers. Organizing social science disciplinary knowledge into an integrated framework that is meaningful, useful, and relevant to high school students.

CTSE 4900 INDEPENDENT STUDY (1-6). IND., SU. Pr., departmental approval. Independent reading, research, or other work focused on a content area of special interest. The student is directed by a faculty member. Course may be repeated for a maximum of 6 credit hours.

CTSE 4910 PRACTICUM (1-6). PRA., SU. Pr., departmental approval. Cooperatively selected field experience. Course may be repeated for a maximum of 6 credit hours.

CTSE 4920 INTERNSHIPS (9). INT. 9. SU. Pr., CTSE 4100 and departmental approval. Coreq., CTSE 4200. Supervised teaching in a public secondary school, accompanied by scheduled discussions to analyze and evaluate the Intern’s experience.

CTSE 4967 HONORS READINGS (1-3). IND., SU. Pr., membership in the Honors College; departmental approval. Individual readings program. Course may be repeated for a maximum of 3 credit hours.

CTSE 4970 SPECIAL TOPICS (1-4). IND. Pr., departmental approval. Cooperatively selected concepts and theories pursued, normally in small groups. Course may be repeated for a maximum of 4 credit hours.

CTSE 4997 HONORS THESIS (1-3). IND., SU. Pr., membership in the Honors College. The student thesis is finalized in this course. Course may be repeated for a maximum of 3 credit hours.

CTSE 6010 LANGUAGE STUDY FOR TEACHERS (3). LEC. 3. Pr., junior standing or departmental approval. Theories of language development and language study applicable to middle and high school classrooms; implications for teaching grammar, usage, dialects, and semantics.

CTSE 6020 RHETORIC AND COMPOSITION FOR TEACHERS (3). LEC. 3. Pr., junior standing. Theories of rhetoric and composition applicable to middle and high school classrooms; implications for planning writing curricula, instruction, and assessment/evaluation.

CTSE 6490 THE SECONDARY SCHOOL PROGRAM (3). LEC. 3. Pr., departmental approval. Implications of research and theory for the total secondary school program.

CTSE 7510 RESEARCH STUDIES IN AREA OF SPECIALIZATION (3). LEC. 3. Research methodology, landmark studies, critique and application of research in the area of specialization.

CTSE 7520 CURRICULUM AND TEACHING IN AREA OF SPECIALIZATION (3). LEC. 3. Nature of learners and of knowledge and implications for building curricula and planning instruction in the area of specialization.

CTSE 7530/7536 ORGANIZATION OF PROGRAM IN AREA OF SPECIALIZATION (3). LEC. 3. Program models, components, and standards in the area of specialization.


CTSE 7900 INDEPENDENT STUDY (1-6). IND., SU. Pr., departmental approval. Independent study directed toward desired objectives related to their respective areas of specialization. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

CTSE 7910 PRACTICUM IN AREA OF SPECIALIZATION (1-6). PRA., SU. Pr., Departmental approval. Experience relating theory and practice, usually in a school setting. Course may be repeated for a maximum of 6 credit hours.

CTSE 7920 INTERNSHIP (1-9). INT., SU. Pr., departmental approval. Supervised teaching in a public secondary school, accompanied by scheduled discussions to analyze and evaluate the intern’s experience. Course may be repeated for a maximum of 9 credit hours.

CTSE 7970 SPECIAL TOPICS (1-6). LEC. Pr., departmental approval. Provides an opportunity for the graduate student and professor to pursue selected topics in-depth. Course maybe repeated for a maximum of six credit hours. Course may be repeated for a maximum of 6 credit hours.

CTSE 7990 RESEARCH AND THESIS (1-10). MST, TD. Course may be repeated with change in topic.

CTSE 8950 ALTERNATIVE RESIDENCE SEMINAR (2). SEM., SU. Pr., Enrolled in Alternative Residence Program. Required of students in alternative residence plan. These students must complete this two semester sequence during the fall and winter semesters. Credit does not count toward minimum requirements for the doctoral program.

CTSE 8980 FIELD PROJECT (1-3). FLD., SU.

CTSE 8990 RESEARCH AND DISSERTATION (1-10). DSIR, TD. Course may be repeated with change in topic.

Economics (ECON)

Dr. James E. Long - 844-4910


ECON 2030 PRINCIPLES OF MACROECONOMICS (3). LEC. 3. Pr., ECON 2020 or ECON 2027, 2.2 GPA. Economic principles emphasizing economic aggregates, including: measuring economic performance, macroeconomic theory, inflation and unemployment, money and banking and fiscal and monetary policy.

ECON 2037 HONORS PRINCIPLES OF MACROECONOMICS (3). LEC. 3. Pr., ECON 2020 or ECON 2027, membership in the Honors College, 2.2 GPA. Economic principles emphasizing economic aggregates, including: measuring economic performance, macroeconomic theory, inflation and unemployment, money and banking and fiscal and monetary policy.

ECON 3020 INTERMEDIATE MICROECONOMICS (3). LEC. 3. Pr., ECON 2020 or ECON 2027, 2.2 GPA. Theory of pricing under varying market conditions and distribution of income among the factors of production.

ECON 3100 LAW AND ECONOMICS (3). LEC. 3. Pr., ECON 2020 or ECON 2027, 2.2 GPA. Description of the many substantive areas in which law has an economics foundation and an analysis of how law affects economic relations.
ECON 3200 MONEY AND BANKING (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. Theoretical and institutional analysis of monetary systems, foreign exchange and commercial banking.

ECON 3300 ECONOMICS OF SPORTS (3). LEC. 3. Pr., ECON 2020 or ECON 2037, 2.2 GPA. Economic analysis of professional and collegiate sports, including the structure of competition and performance in individual and team sports.

ECON 3400 FORENSIC ECONOMICS (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. Application of economic analysis to matters of litigation, especially the calculation of economic damages, or economic loss.

ECON 3500 COMPARATIVE ECONOMIC SYSTEMS (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. Analysis of alternative government approaches to solving basic economic problems.

ECON 3700 HISTORY OF ECONOMIC THOUGHT (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. The development of economic ideas, principles and systems of analysis from early times to the present.

ECON 3800 PUBLIC CHOICE (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. Economic analysis of public sector decision making. Emphasis on actions taken by voters, bureaucrats, lobbyists and elected to influence public sector outcomes.

ECON 4000 ECONOMICS OF WORK AND PAY (3). LEC. 3. Pr., ECON 2020 or ECON 2030 and departmental approval, 2.2 GPA. Theoretical and institutional examination of the labor market, including wage theories, unionism, occupational choice and public policy.

ECON 4100 INDUSTRIAL ORGANIZATION (3). LEC. 3. Pr., ECON 2030 or ECON 2037, ECON 3020, 2.2 GPA. Relationship of market structure to the pricing behavior and economic performance of firms. Topics include regulation, research and development and technical change.

ECON 4200 GOVERNMENT, BUSINESS AND SOCIETY (3). LEC. 3. Pr., ECON 2030 or ECON 2037, ECON 3020, 2.2 GPA. Economic role of government in a free enterprise economy. Application of microeconomic theory to policy issues, particularly antitrust and regulation.

ECON 4300 INTERNATIONAL ECONOMICS (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. International trade and monetary economics. Causes and effects of international trade and trade policy, foreign exchange markets, international investment.

ECON 4500 ECONOMIC HISTORY OF EUROPE (3). LEC. 3. Pr., ECON 2030 or 2037 or departmental approval, 2.2 GPA. Survey of the economic development of Europe and the resulting impact on the U.S. and the world economies.

ECON 4600 ECONOMIC HISTORY OF THE UNITED STATES (3). LEC. 3. Pr., ECON 2030 or ECON 2037, or departmental approval, 2.2 GPA. Survey of the economic advancement of the United States from European origins to the present.

ECON 4700 BUSINESS HISTORY OF THE UNITED STATES (3). LEC. 3. Pr., ECON 2030 or ECON 2037, or departmental approval, 2.2 GPA. The study of business as the driving force in American economic history.

ECON 4920 INTERNSHIP (1-3). INT., SU. Pr., ECON 2030 or ECON 2037 and departmental approval, 2.2 GPA. Course may be repeated for a maximum of 3 credit hours.

ECON 4967 HONORS READINGS (1-3). IND. Pr., ECON 3020; membership in the Honors College, departmental approval, 2.2 GPA. Directed readings on a topic of special interest. Course may be repeated for a maximum of 3 credit hours.

ECON 4970 SPECIAL PROBLEMS (1-3). IND., SU. Pr., ECON 3020 and departmental approval, 2.2 GPA. Investigation and research into economic problems of special interest to the student and instructor. Course may be repeated for a maximum of 6 credit hours.

ECON 4997 HONORS THESIS (1-3). IND. Pr., ECON 3020; membership in the Honors College; departmental approval, 2.2 GPA. Directed honors thesis research. Course may be repeated for a maximum of 3 credit hours.

ECON 6020 ADVANCED MICROECONOMICS (3). LEC. 3. Pr., ECON 3020, MATH 1610 or higher, 2.2 GPA. Mathematical analysis of market-based pricing and production. Includes the economics of information and uncertainty, and strategic behavior.

ECON 6030 MACROECONOMIC THEORY AND POLICY (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. Analysis of the national economy and impact of government policies on aggregate economic variables.

ECON 6100 ECONOMICS OF GROWTH AND DEVELOPMENT (3). LEC. 3. Pr., ECON 2030 or ECON 2037, 2.2 GPA. Cause/effects of economic growth and development. Measuring growth, role of government policy, growth and trade, investment, etc.

ECON 6200 URBAN AND REGIONAL ECONOMIC DEVELOPMENT (3). LEC. 3. Pr., ECON 2030 or ECON 2037, ECON 3020, 2.2 GPA. Nature/causes of state/local economic development, including plant location, residential location, interregional trade and factor flows, public policy.

ECON 6600 BUSINESS AND ECONOMIC FORECASTING (3). LEC. 3. Pr., ECON 2030 or ECON 2037, STAT 2610 or STAT 2610, or departmental approval, 2.2 Pr., GPA. Interpretation of macroeconomic forecasting methods and development of competency in forecasting at the firm level.

ECON 6700/6706 HEALTH ECONOMICS (3). LEC. 3. Pr., ECON 3020 or departmental approval, 2.2 GPA. Analysis of the economics of health care, including demand for and supply of health care, and health care policy.

ECON 6800 GOVERNMENT SPENDING AND TAXATION (3). LEC. 3. Pr., ECON 3020 or departmental approval, 2.2 GPA. The economic rationale for government expenditures, economic consequences of public spending, and methods of taxation and funding of government programs.

ECON 7000 MANAGERIAL ECONOMICS (3). LEC. 3. Pr., Consent of MBA program director. Microeconomic theories of the firm and of markets, with emphasis on their applications to current business issues.

ECON 7110 MICROECONOMICS I (3). LEC. 3. Pr., ECON 3020 or departmental approval. Consumer behavior and market models of competition and monopoly. Traditional and contemporary theories of consumer/household behavior under constraint; models of competitive behavior.

ECON 7120 MICROECONOMICS II (3). LEC. 3. Pr., ECON 7110 or departmental approval. Analysis of producer behavior, including production theory, cost theory, profit maximization, theories of various market structures and derived demand for inputs.


ECON 7210 MACROECONOMICS I (3). LEC. 3. Pr., ECON 6030 or departmental approval. Evaluation of fundamental theoretical and policy-oriented issues in macroeconomics, emphasizing post-Keynesian developments.

ECON 7220 MACROECONOMICS II (3). LEC. 3. Pr., ECON 6030 or departmental approval. Foundations of macroeconomics, neoclassical growth theory, overlapping generations models, optimal saving, open economy macroeconomics, macrodynamics.

ECON 7310 ECONOMETRICS I (3). LEC. 3. Pr., departmental approval. Advanced treatment of the standard linear model of least square theory, including assumptions and properties of the SLR, and the statistical testing of behavioral hypotheses.

ECON 7320 ECONOMETRICS II (3). LEC. 3. Pr., ECON 7310. Econometric techniques employed in advanced empirical research. Topics include estimation and inference in simultaneous equation systems, limited dependent variables, non-nested testing, time-series analysis.

ECON 7410 HISTORY OF ECONOMIC THOUGHT I (3). LEC. 3. Pr., ECON 3700 or departmental approval. Analysis and study of classical contributions to economics, from early times to Karl Marx.


ECON 7600 ECONOMIC HISTORY OF THE UNITED STATES (3). LEC. 3. Pr., ECON 2030 or ECON 2037, or departmental approval. Survey of the economic advancement of the United States from European origins to the present.

ECON 7790 RESEARCH AND THESIS (1-6). MST, TD. Pr., departmental approval. Course may be repeated with change in topic.

ECON 8110 ADVANCED MICROECONOMICS I (3). LEC. 3. Pr., ECON 7120. Advanced analysis, integrating the economics of time and uncertainty into mainstream price theory.

ECON 8120 ADVANCED MICROECONOMICS II (3). LEC. 3. Pr., ECON 7120. Advanced analysis, integrating imperfect information and strategic behavior into economic models of trade and investment.

ECON 8210 TOPICS IN MACROECONOMICS (3). LEC. 3. Pr., ECON 7220 or departmental approval. Goals, procedures and achievements in attaining monetary objectives domestically and abroad. Emphasis on macro-money models and effects of monetary policy on economic activity.

ECON 8310 MICROECONOMETRICS (3). LEC. 3. Pr., ECON 7320. Analysis of limited dependent variable models, including Logit, Probit and Tobit models, censored and truncated regression models, frontier models and mixture models.

ECON 8420 ECONOMIC INSTITUTIONS AND CONTEMPORARY ECONOMICS THEORY (3). LEC. 3. Pr., departmental approval. How contemporary economic theory helps explain the emergence, hey-day and decline of economic institutions, including “Social” and regulatory institutions.

ECON 8510 ECONOMICS OF TAXATION (3). LEC. 3. Pr., ECON 7120 or departmental approval. Examines tax structures in the U. S. evaluates tax reform proposals and the effects of taxation on resource allocation and economic welfare.

ECON 8520 PUBLIC CHOICE (3). LEC. 3. Pr., departmental approval. Advanced analysis of governmental expenditures and other not-for-profit sectors of the economy.

ECON 8530 ECONOMIC ANALYSIS OF THE LAW (3). LEC. 3. Pr., ECON 3020 and departmental approval. Advanced analysis of the substantive areas in which law has an economic foundation and ways law affects economic relations.

ECON 8540 SEMINAR IN ENVIRONMENTAL ECONOMICS (3). LEC. 3. Pr., ECON 3020 and departmental approval. Advanced analysis of pricing and allocation of renewable and non-renewable resources.

ECON 8550 EXTERNALITIES AND PUBLIC GOODS (3). LEC. 3. Pr., ECON 7120 or departmental approval. Advanced analysis of pricing and allocation of economic goods when property rights are not well defined.

ECON 8610 INDUSTRIAL ORGANIZATION I (3). LEC. 3. Pr., ECON 7120 or departmental approval. Determinants of market structure, effects of market structure on industry performance, theory of the firm, research and development, advertising and vertical integration.

ECON 8620 INDUSTRIAL ORGANIZATION II (3). LEC. 3. Pr., ECON 7120 or departmental approval. Primary focus is on case studies in the history and current practice of regulation in the United States at all levels.


ECON 8810 LABOR MARKET ANALYSIS (3). LEC. 3. Pr., ECON 7110 or departmental approval. Analysis of labor markets, and determination of wages and other terms of employment. Emphasis on academic studies of labor market issues.

ECON 8820 TOPICS IN LABOR ECONOMICS (3). LEC. 3. Pr., ECON 7110 or departmental approval. Selected topics, including education and on-the-job training. Labor mobility/immigration, employment discrimination, and the impact of labor unions.

ECON 8970 SPECIAL PROBLEMS (1-3). LEC., SU. Pr., departmental approval. Variable content in the economics area. Course may be repeated for a maximum of 3 credit hours.

ECON 8980 ECONOMICS WORKSHOP (1). LEC. 1. Pr., departmental approval. Individual research project, presentations, and discussion of the economics profession.

ECON 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Pr., departmental approval. Course may be repeated with change in topic.

Interdepartmental Education (EDUC)

William A. Spencer - 844-4460

EDUC 3000 DIVERSITY OF LEARNERS AND SETTINGS (6). LEC. 6. Exploration of socio-cultural factors, individual differences, and exceptionalities of learners; understanding diversity and communicating with students with differing cultural backgrounds, abilities, and values.

Educational Foundations, Leadership and Technology (EFLT)

William A. Spencer - 844-4460

ADED 4050 METHODS OF TEACHING IN ADULT EDUCATION (3). LEC. 2, LAB. 2. Methods and techniques of instruction using appropriate instructional materials; planning and evaluation of instruction for programs within adult education.

ADED 4600 NATURE OF ADULT EDUCATION (3). LEC. 3. Pr., junior standing. History and principles of adult education applied to the development and implementation of programs in remedial, occupational, continuing, and life-long learning. Credit will not be allowed for both ADED 4600 and ADED 7600.

ADED 4610 DIRECTED WORK EXPERIENCE (3). LEC. 3. Pr., ADED 4600 and junior standing, or departmental approval. In-service, supervised work experience individually designated for part-time or summer work experience.

ADED 4620 COMMUNITY CONCEPTS, PROGRAMS, AND RESOURCES IN ADULT EDUCATION (3). LEC. 3. Pr., ADED 4600 or departmental approval. Processes by which adult education is merged with community organizations to maximize the effective use of physical and human resources. Credit will not be allowed for both ADED 4620 and ADED 7620.

ADED 4660 TEACHING IN THE NON-SCHOOL SETTING (3). LEC. 3. Pr., junior standing or departmental approval. Planning, conducting, and supervising instruction for adults in varied non-school settings.

ADED 4900 DIRECTED INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Independent study directed toward desired objectives. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

ADED 4910 PRACTICUM IN ADULT EDUCATION (1-6). PRA., SU. Pr., departmental approval. Experience relating theory and practice, usually carried on simultaneously. Course may be repeated for a maximum of 6 credit hours.

ADED 4920 PROFESSIONAL INTERNSHIP IN ADULT EDUCATION (9). INT. 9. SU. Pr., Adult Education majors. ADED 4660. Supervised internship experiences in a school or other appropriate setting. Evaluation and analysis of the internship experience.

ADED 4970 SPECIAL TOPICS IN ADULT EDUCATION (1-6). LEC. Pr., senior standing or departmental approval. Current or special topics within adult education. Course may be repeated for a maximum of 6 credit hours.

ADED 6010/6016 LEARNING RESOURCES IN AREA OF SPECIALIZATION (3). LEC. 3. Pr., ADED 4050 and junior standing, or ADED 7050, or departmental approval. Selecting, developing, utilizing, and evaluating instructional resources and technology for teaching.

ADED 6600/6606 NATURE OF ADULT EDUCATION (3). LEC. 3. Pr., junior standing or above. Departmental approval. History and principles of adult education applied to the development and implementation of programs in remedial, occupational, continuing, and life-long learning.

ADED 6640/6646 TEACHING THE DISADVANTAGED ADULT (3). LEC. 3. Pr., ADED 4600 and junior standing, ADED 7600, or departmental approval. Problems of the disadvantaged adult with emphasis on the unique sociological, psychological, and physiological factors that influence learning and participation in remedial learning activities.

ADED 7050 METHODS OF TEACHING IN ADULT EDUCATION (3). LEC. 2, LAB. 2. Pr., admission to Fifth-Year Program. Methods and techniques of instruction using appropriate instructional materials; planning and evaluation of instruction for programs within adult education. Credit will not be given for both ADED 4050 and ADED 7050.

ADED 7060 CURRICULUM AND PROGRAM PLANNING IN ADULT EDUCATION (3). LEC. 3. Pr., admission to Fifth-Year Program. Introduction to principles and practices involved in designing education programs in the area of specialization.

ADED 7600 NATURE OF ADULT EDUCATION (3). LEC. 3. History and principles of adult education applied to the development and implementation of programs in remedial, occupational, continuing, and life-long learning. Credit will not be given for both ADED 4600 and ADED 7600.

ADED 7620 COMMUNITY CONCEPTS, PROGRAMS, AND RESOURCES IN ADULT EDUCATION (3). LEC. 3. Pr., ADED 7600 or departmental approval. Processes by which adult education is merged with community organizations to maximize the effective use of physical and human resources. Credit will not be given for both ADED 4620 and ADED 7620.

ADED 7640 WORKFORCE EDUCATION (3). LEC. 3. Pr., ADED 6640 or departmental approval. Identification and evaluation of basic skills problems in the workplace. Strategies for addressing workplace education issues.

ADED 7900 INDEPENDENT STUDY (1-3). IND. Pr., departmental approval. Independent study directed toward desired objectives. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 3 credit hours.

ADED 7910 PRACTICUM IN ADULT EDUCATION (1-3). PRA., SU. Pr., departmental approval. Experiences closely relating theory and practice, usually carried on simultaneously. Course may be repeated for a maximum of 10 credit hours.

ADED 7950 SEMINAR IN ADULT EDUCATION (1-3). SEM., SU. Presentation of research projects, analysis of procedures and findings. Course may be repeated for a maximum of 3 credit hours.

ADED 7960 READINGS IN ADULT EDUCATION (1-3). IND. Pr., departmental approval. Critical analysis of current and classical research and writings. Course may be repeated for a maximum of 6 credit hours.
ADED 7970 TOPICS IN ADULT EDUCATION (1-6). LEC. Pr., departmental approval. Current or advanced topics within area of specialization. Course may be repeated for a maximum of 6 credit hours.

ADED 7990 RESEARCH AND THESIS (1-10). LEC. Pr., departmental approval. Individualized support and direction for students writing their thesis. Course may be repeated with change in topic.

ADED 8900 ADVANCED INDEPENDENT STUDY IN ADULT EDUCATION (1-6). LEC. Pr., departmental approval. Independent study directed toward desired objectives. Includes evaluation at regular intervals by professor and student. Course may be repeated for a maximum of 6 credit hours.

ADED 8910 ADVANCED PRACTICUM IN ADULT EDUCATION (1-6). LEC. Pr., departmental approval. Experiences closely relating theory and practice, usually carried on simultaneously. Course may be repeated for a maximum of 6 credit hours.

ADED 8920 INTERNSHIP (1-10). LEC. Pr., departmental approval. Supervised internship experiences in a school, college, or other appropriate setting. Evaluation and analysis of the internship experience. Course may be repeated for a maximum of 10 credit hours.

ADED 8950 ADVANCED SEMINAR IN ADULT EDUCATION (1-6). SEM. Presentation by graduate students of research projects and/or analysis of procedures and findings. Course may be repeated for a maximum of 6 credit hours.

ADED 8960 READINGS IN ADULT EDUCATION (1-6). LEC. Pr., departmental approval. Critical analysis of current and classical research writings. Course may be repeated for a maximum of 6 credit hours.

ADED 8970 ADVANCED TOPICS IN ADULT EDUCATION (1-6). LEC. Pr., departmental approval. Current or advanced topics within adult education. Course may be repeated for a maximum of 6 credit hours.

ADED 8980 FIELD PROJECT (1-10). LEC. Pr., departmental approval. Course may be repeated for a maximum of 10 credit hours.

ADED 8990 RESEARCH AND DISSERTATION (3-10). LEC. Pr., departmental approval. Individualized support and direction for students writing their dissertation. Course may be repeated for a maximum of 10 hours.

EDDL 7200 SUPERVISION AND PERSONNEL MANAGEMENT (3). LEC. Pr., Supervision theory and practice with responsibility for leadership in the recruitment and development of employees. Course may be repeated for a maximum of 6 credit hours.

EDDL 7210 MULTI-PROFESSIONAL LEadership (3). LEC. Pr., Theories, concepts and principles of leadership from a multi-disciplinary, multi-professional perspective. Students will apply knowledge to practice in diverse settings and situations. Required for Class “A” Certification.

EDDL 7220 ORGANIZATIONAL AND SCHOOL MANAGEMENT (3). LEC. Pr., Procedures and practices in school educational management. Covers basic concepts of management, facilities, student activities, library services, transportation, and student records. Required for Class “A” Certification.

EDDL 7230 STUDENT SERVICES ADMINISTRATION IN POST-SECONDARY EDUCATION (3). LEC. Pr., Organization, administration and evaluation of student personnel services in post-secondary education.

EDDL 7240 LEADERSHIP IN LEGAL ISSUES (3). LEC. Pr., Constitutional and statutory provisions for education and an analysis of judicial decisions affecting education K-16. Required for Class “A” Certification.

EDDL 7270 OVERVIEW OF POST-SECONDARY EDUCATION (3). LEC. Pr., Overview of the history and evolution of post-secondary education in North America.

EDDL 7330 INTRODUCTION TO CURRICULUM AND INSTRUCTIONAL LEADERSHIP (3). LEC. Pr., Principles of curriculum development and the leadership skills required to enact it with emphasis on school settings. Required for Class “A” Certification.

EDDL 7340 OVERVIEW OF CURRICULUM PROCESSES (3). LEC. Pr., Elements of curriculum as a field of study; the first course required for the ASC concentration in curriculum; an overview of curriculum history, processes, models, and designs.

EDDL 7900 INDEPENDENT STUDY (1-9). LEC. Pr., Independent study directed toward desired objectives. Includes evaluation by professor and student at regular intervals. Course may be repeated for a maximum of 9 credit hours.

EDDL 7910 PRACTICUM IN ATHLETIC ADMINISTRATION (1-6). LEC. Pr., Departmental approval. Experience in the management of specific administrative offices. Course may be repeated for a maximum of 6 credit hours.

EDDL 7920 ADMINISTRATIVE INTERNSHIP (1-6). LEC. Pr., Departmental approval. Opportunities for interns to internalize and employ administrative skills learned during graduate course work. Required for Class “A” Certification. Course may be repeated for a maximum of 6 credit hours.

EDDL 7970 SPECIAL PROBLEMS (1-9). LEC. Pr., Variable content for advanced studies in the area of educational leadership. Required for Class “A” Certification. Course may be repeated for a maximum of 9 credit hours.

EDDL 8200 ASSESSMENT AND EVALUATION IN LEARNING ORGANIZATIONS (3). LEC. Pr., Study of assessment and evaluation practices that enable learning organizations to use data for decision-making purposes.

EDDL 8220 PERSONAL AND PROFESSIONAL DEVELOPMENT (3). LEC. Pr., Includes theoretical frameworks and applications for successful and systematic mentoring of professionals in organizations. Required class “AA” certification.

EDDL 8230 SYSTEMIC PLANNING AND BUDGETING (3). LEC. Pr., Covers the components and implementation of a comprehensive, ongoing planning and budgeting program for learning organizations. Required for class “AA” certification.

EDDL 8240 TRENDS AND ISSUES IN EDUCATIONAL ADMINISTRATION (3). LEC. Pr., Trends and issues affecting educational institutions with particular attention to development of administrative procedures to cope with educational changes. Required for class “AA” certification.

EDDL 8250 ORGANIZATIONAL POWER, POLITICS AND POLICY FORMATION (3). LEC. Pr., Analysis of social forces, antecedent movements, and political actions affecting organizations. Required for Class “AA” Certification.

EDDL 8270 LEADERSHIP IN FINANCE AND MANAGEMENT (3). LEC. Pr., Educational finance including revenues, expenditures, cost, budgeting and accounting, and the local, state and federal role in supporting education. Required for Class “AA” Certification.

EDDL 8300 CURRICULUM THEORY AND PRACTICE (3). LEC. Pr., Coreq., and departmental approval. Advanced course dealing with application of curriculum theories with an emphasis on the impact of philosophical and theoretical beliefs on practice. Required for Class “AA” Certification.

EDDL 8310 LEADERSHIP IN THE DEVELOPMENT AND APPLICATION OF CURRICULUM THEORY AND DESIGN (3). LEC. Pr., Coreq., and departmental approval. Application of transformative leadership in the design, delivery, and evaluation of curriculum in a wide variety of organizational settings.

EDDL 8320 CURRICULUM LEADERSHIP FOR ORGANIZATIONS (3). LEC. Pr., Coreq., and departmental approval. Advanced course dealing with application of curriculum theories with an emphasis on the impact of philosophical and theoretical beliefs on practice. Required for Class “AA” Certification.

EDDL 8340 TRANSFORMATIONAL PROCESSES AND ORGANIZATIONAL CHANGE (3). LEC. Pr., Organizational and transformational change at personal, interpersonal, and institutional levels.

EDDL 8400 ETHICS FOR LEADERS (3). LEC. Pr., Theory and practice of ethics and the role of ethical and personal integrity for leaders in the context of educational organizations and the communities they serve.

EDDL 8410 INSTITUTIONAL RESEARCH AND DECISION SUPPORT (3). LEC. Pr., Components of institutional research and assessment programs that can support the comprehensive planning, decision support, and management needs of the institution.

EDDL 8810 DOCTORAL SEMINAR IN EDUCATIONAL LEADERSHIP I (2). LEC. Pr., Professional and social integration into the doctoral program; structured inquiry, professional dialogue, and reflective thinking.

EDDL 8820 DOCTORAL SEMINAR IN EDUCATIONAL LEADERSHIP II (2). LEC. Pr., Acceptance into the Educational Leadership Doctoral Program.

EDDL 8810, Professional and social integration into the doctoral program; structured inquiry, professional dialogue, and reflective thinking.

EDDL 8830 DOCTORAL SEMINAR IN EDUCATIONAL LEADERSHIP III (2). LEC. Pr., Acceptance into Educational Leadership Doctoral Program and EDDL 8810 and EDDL 8820. Professional and social integration into the doctoral program; structured inquiry, professional dialogue, and reflective thinking.

EDDL 8840 ALTERNATIVE RESIDENCY SEMINAR I (2). LEC. Pr., Acceptance into Educational Leadership Doctoral Program.

EDDL 8850 ALTERNATIVE RESIDENCY SEMINAR II (2). LEC. Pr., Acceptance into Educational Leadership Doctoral Program.

EDDL 8840, Professional and social integration into the doctoral program; structured inquiry, professional dialogue, and reflective thinking. Permits students to achieve full-time residency.

EDDL 8850 ALTERNATIVE RESIDENCY SEMINAR III (2). LEC. Pr., Acceptance into Educational Leadership Doctoral Program.

EDDL 8840 and EDDL 8850. Intensive study in leadership including self-assessment, structured inquiry, dialogue, and reflective thinking. Permits students to achieve full-time residency.

EDDL 8860 ALTERNATIVE RESIDENCY SEMINAR III (2). LEC. Pr., Acceptance into Educational Leadership Doctoral Program.

EDDL 8840 and EDDL 8850. Intensive study in leadership including self-assessment, structured in-

EDLD 8940 DIRECTED FIELD EXPERIENCE IN EDUCATIONAL LEADERSHIP (1-6). FL. Field-based experience in diverse settings to develop knowledge, skills, and abilities in an area of special interest. Course may be repeated for a maximum of 6 credit hours.

EDLD 8990 RESEARCH AND DISSERTATION (3-10). DS. Individualized support and direction for students writing their dissertation. Course may be repeated for a maximum of 10 hours. Course may be repeated with change in topic.

EDUCATIONAL MEDIA (EDMD)

EDMD 3000 INTRODUCTION TO INSTRUCTIONAL TECHNOLOGY (1). LEC. 1. Basics of current and emerging instructional and communication technologies with primary emphasis on computer use.

EDMD 3300 UTILIZATION OF INSTRUCTIONAL TECHNOLOGY FOR EDUCATORS (2). LEC. 1. LAB. 2. Basics of current and emerging instructional & communication technologies with primary emphasis on curricular integration. Location, selection, and application of technology resources (WWW, commercially authored software, etc.) for curricular needs with emphasis on development and evaluation of instructional settings.

EDMD 6000 INSTRUCTIONAL TECHNOLOGY FOR TEACHING AND LEARNING (3). LEC. 3. Introduction to the systematic application of instructional technologies in teaching and learning environments.

EDMD 6100 MEDIA FOR CHILDREN (3). LEC. 3. Examination and evaluation of current literature in print and other formats, including oral literature. Focuses on literary and instructional criteria for selecting and utilizing media.

EDMD 7000 INSTRUCTIONAL DESIGN AND DEVELOPMENT (3). LEC. 3. Theory, problems, procedures, and standards in the utilization of technology in instructional design and development.


EDMD 7020 PRINCIPLES OF GRAPHIC DESIGN FOR INSTRUCTION (3). LEC. 3. Principles of graphic design and visual literacy to facilitate the presentation of information. Criteria for graphics utilization examined.

EDMD 7100 SELECTION AND USE OF MEDIA FOR YOUTH (3). LEC. 3. Evaluation, selection, and use of print and non-print media for youth, including materials for multi-cultural, special and gifted education.

EDMD 7110 BIBLIOGRAPHIC DESCRIPTION, ORGANIZATION AND CONTROL (3). LEC. 3. Principles and procedures of describing, classifying and organizing resources with applications using new technologies.

EDMD 7120 INFORMATION SOURCES, SERVICES AND INSTRUCTION (3). LEC. 3. An overview of information needs, services, and print and electronic resources; ways to teach information literacy skills.

EDMD 7130 ADMINISTRATION OF MEDIA AND TECHNOLOGY SERVICES (3). LEC. 3. Functions of and planning for media and technology services. Budget, evaluation, facilities, guidelines, legal issues, personnel and policies.

EDMD 7200 COMPUTER-BASED INSTRUCTIONAL DESIGN (3). LEC. 3. Applying computer-based instructional design skills, students will develop instructional products using desktop publishing, hypermedia and optical technologies.

EDMD 7210 INTEGRATION OF TECHNOLOGY INTO CURRICULUM (3). LEC. 3. Learner competence in integration of technology into curriculum, including designing and writing software and plans for using computers in instruction.


EDMD 7300 RESEARCH IN INSTRUCTIONAL TECHNOLOGY (3). LEC. 3. Pr., FOUN 7200. A forum for sharing research perspectives, exploring processes involved in defining research problems and analyzing research theories, problems, and methods in instructional technology.

EDMD 7310 EVALUATION OF MEDIA AND TECHNOLOGY PROGRAMS (3). LEC. 3. Factors contributing to effective media and technology programs. Understanding of research process and experience with media and technology services assumed.

EDMD 7320 ADVANCED INFORMATION SOURCES AND SERVICES (3). LEC. 3. Electronic databases, advanced searching techniques, information representation, and the role of the media specialist in networking and creating electronic information sources.
ELEC 3320 ELECTROMAGNETICS FOR WIRELESS COMMUNICATIONS
LEC. 3. Pr., ELEC 3310. Maxwell's equations and circuit theory used in the study of transmission lines and guided waves, with an emphasis on fiber optics, electromagnetic compatibility and interference, antennas and radiation, and satellite communication systems.

ELEC 3400 COMMUNICATION SYSTEMS (3). LEC. 3. Pr., ELEC 3800. Pulse code modulation, line coding, information rate, equalization, amplitude modulation, angle modulation, noise in communication systems.

ELEC 3500 CONTROL SYSTEMS (3). LEC. 3. Pr., ELEC 2120. Analog and Discrete Transfer function models, system response specifications, control system characteristics, root locus analysis and design, frequency response analysis and design.

ELEC 3600 ELECTRIC POWER ENGINEERING (3). LEC. 3. Pr., ELEC 2110. Introduction to the basic concepts in electric power engineering.

ELEC 3700 ANALOG ELECTRONICS (3). LEC. 3. Pr., ELEC 2210, ELEC 2120. Design and analysis of single-stage and multistage transistor amplifiers; biasing for integrated circuit design; small-signal modeling; operational amplifier circuits; IC design techniques; noise and RF amplifiers; D/A and A/D converters.


ELEC 3820 INDUSTRIAL INSTRUMENTATION (3). LEC. 2, LAB. 3. Pr., ELEC 3810. Principles of instrumentation. The detection and measurement of physical quantities with emphasis on sensors and signal processing. Programmable logic controllers. (Not open to Electrical Engineering majors).

ELEC 4000 SENIOR DESIGN PROJECTS (3). LEC. 3. Pr., ELEC 3340, ELEC 3320, ELEC 3400, ELEC 3500, ELEC 3600, ELEC 3700 and departmental approval; or ELEC 3500, ELEC 3700, ELEC 4200, COMP 3500, COMP 3270 and departmental approval. Particular project sections may have additional prerequisites. Coreq., One of ELEC 3320, ELEC 3400, ELEC 3500, ELEC 3600, ELEC 3700, ELEC 4200, COMP 3500 or COMP 3270 may be taken concurrently. A capstone design project which draws on the accumulated curricular experience and additional sections may have additional requirements.

ELEC 4200 DIGITAL SYSTEM DESIGN (2). LEC. 2. Pr., ELEC 2220. Hierarchical, modular design of digital systems, synchronous and asynchronous sequential circuit analysis and design, programmable logic devices and field programmable gate arrays, and circuit simulation for design verification and analysis.

ELEC 4800 INSTRUMENTATION ENGINEERING (3). LEC. 2, LAB. 3. Pr., ELEC 3040 or ELEC 3050. Study and application of sensors, instrumentation and computer technology to research and industrial process control.

ELEC 4970 SPECIAL TOPICS IN ELECTRICAL ENGINEERING (1-5). IND. Pr., departmental approval. Course may be repeated for a maximum of 15 credit hours.

ELEC 4980 SPECIAL PROJECTS IN ELECTRICAL ENGINEERING (1-3). IND. Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours.

ELEC 4997 HONORS THESIS (1-6). IND. Pr., ELEC major; membership in the Honors College; departmental approval. Directed research and writing of honors thesis. Course may be repeated for a maximum of 6 credit hours.

ELEC 6100/6106 WIRELESS COMMUNICATION SYSTEMS (3). LEC. 3. Pr., ELEC 3400, ELEC 3320. Introduction to mobile cellular radio and wireless personal communications, cellular concept, mobile radio propagation, modulation techniques, multiple access techniques, wireless systems and standards.

ELEC 6100/6116 WIRELESS NETWORKS (3). LEC. 3. Pr., ELEC 6100. Introduction to wireless broadband, satellite communication, wireless local area networks, Bluetooth and Home RF standards and inherent protocol and wireless access.

ELEC 6120/6126 TELECOMMUNICATION NETWORKS (3). LEC. 3. Pr., ELEC 3400. Plain Old Telephone System (POTS), Public Switching Telephone Network (PSTN), circuit switching, packet switching, frame relay, local subscriber loop, trunk, Signal System 7 (SS7), ISDN, DSL, ATM, SONET, wavelength division multiplexing (WDM), SMDS, voice over IP, network management.


ELEC 6150/6156 INFORMATION SECURITY (3). LEC. 3. Pr., Senior Standing and departmental approval. Emerging protocols, standards and technologies of information security; design of information network security, firewall, virtual private networks and secured applications.

ELEC 6200/6206 COMPUTER ARCHITECTURE AND DESIGN (3). LEC. 3. Pr., ELEC 2220 or COMP 3350. Structural organization and hardware design of digital computers; register transfers; micro-operations, control units and timing; instruction set design; input/output devices, multiprocessors, automated hardware design aids.

ELEC 6210/6216 PERSONAL COMPUTER SYSTEM DESIGN (3). LEC. 3. Pr., ELEC 2220 or COMP 3350. Personal computer hardware components, microprocessors, motherboard design, cache and main memory technologies and subsystems, standard expansion buses and interfacing.

ELEC 6220/6226 INFORMATION NETWORKS AND TECHNOLOGY (3). LEC. 3. Pr., ELEC 2220 or COMP 3350. Architectures, protocols, standards and technologies of information networks; design and implementation of information networks based on requirements; applications of information networks for data, audio and video communications.

ELEC 6230/6236 PARALLEL PROCESSING (3). LEC. 3. Pr., ELEC 2220 or COMP 3350. Hardware components of multiprocessor systems including processor, inter-connection, memory and control architectures; software elements of parallel processing.


ELEC 6250/6256 COMPUTER-AIDED DESIGN OF DIGITAL CIRCUITS (3). LEC. 3. Pr., ELEC 2220 or COMP 3350. Computer-automated design of digital logic circuits, using discrete gates, programmable logic devices, and standard cells, hardware description languages, circuit simulation for design verification and analysis, fault diagnosis and testing.

ELEC 6260/6266 EMBEDDED COMPUTING SYSTEMS (3). LEC. 3. Pr., ELEC 2220 or COMP 3350. The design of systems containing embedded computers. Microcontroller technology, assembly language and C programming, input/output interfacing, data acquisition hardware, interrupts, and timing. Real-time operating systems and application programming. Embedded system application examples.

ELEC 6310/6316 DESIGN OF ANTENNAS AND ANTENNA SYSTEMS (3). LEC. 3. Coreq., ELEC 3320. Application of electromagnetic and circuit concepts to the design of practical antennas and antenna systems.


ELEC 6350/6356 RADAR AND SONAR PRINCIPLES (3). LEC. 3. Pr., ELEC 3320, ELEC 3800. Study of the fundamentals of RADAR systems including detection of non-deterministic signals in noise, and introduction to the principles of wave echoes with emphasis on SONAR systems.


ELEC 6420/6426 WIRELESS COMMUNICATIONS SYSTEMS (3). LEC. 3. Pr., ELEC 3400. Introduction to mobile cellular radio and wireless personal communications, cellular concept, mobile radio propagation, modulation techniques, multiple access techniques, wireless systems and standards.

ELEC 6430/6436 DIGITAL IMAGE PROCESSING (3). LEC. 3. Pr., ELEC 3400, ELEC 3800. Digital image processing concepts and applications such as enhancement, restoration and compression.

ELEC 6510/6516 MODELING AND SYSTEM IDENTIFICATION (3). LEC. 3. Pr., ELEC 3500 and ELEC 3800 or departmental approval. Development of physical models (linear and nonlinear) from first principles and estimation of model parameters from experimental data. System identification in closed loop. Data collection under output feedback.

ELEC 6550/6556 DISCRETE EVENT/DDED CONTROL SYSTEMS (3). LEC. 3. Pr., ELEC 3500. Discrete state equation models, control system characteristics, pole placement design and implementation, estimator design and implementation.

ELEC 6540/6546 MODERN CONTROLLER TECHNOLOGIES (3). LEC. 2, LAB. 3. Pr., ELEC 3500 or departmental approval. Controller technologies used in industrial and research practice. PID, auto-tuning PID, programmable logic controllers, personal-computer based controllers, microcontrollers, digital signal processors.

ELEC 6650/6656 POWER SYSTEM ANALYSIS (3). LEC. 3. Pr., ELEC 3600 or departmental approval. Power system modeling, power flow analysis, analysis of faulted power systems.


ELEC 6650/6656 POWER SYSTEM PROTECTION (3). LEC. 3. Pr., ELEC 3600. Fault analysis using symmetrical components. Power switchgear, including switches, disconnects, fuses, relays and circuit breakers. Fundamentals of electric power system protection, including bus, transformer and line protection.


ELEC 6720/6736 MICROELECTRONIC FABRICATION (3). LEC. 2. LAB. 3. Pr., ELEC 2210 or departmental approval. Introduction to monolithic integrated circuit technology. Bipolar and MOS processes and structures. Elements of layout, design, fabrication, and applications. Experiments in microelectronic technologies.

ELEC 6740/6746 ELECTRONICS MANUFACTURING (3). LEC. 2. LAB. 3. Pr., ELEC 3700 or departmental approval. Materials and processes used to manufacture electronic products. Particular attention is given to substrate technology and electronics assembly.

ELEC 6750/6756 INTRODUCTION TO PLASMA ENGINEERING (3). LEC. 3. Pr., ELEC 3320 or departmental approval. Electrical breakdown and discharges in gases, basic plasma theories, applications of plasmas, plasma processing for non-electronic applications.

ELEC 6760/6766 SOLID STATE SENSORS (3). LEC. 3. Pr., ELEC 3700 or departmental approval. Theory, technology and design of micro-mechanical sensors, electrochemical microsensors, photodetectors, and integrated smart sensors.

ELEC 6770/6776 VLSI DESIGN (3). LEC. 3. Pr., ELEC 2210, ELEC 2220. Review of MOS transistor fundamentals, CMOS logic circuits; VLSI fabrication and design rules; clocking strategies and sequential design; performance estimation.
ELEC 7730/7736 ADVANCED PLASMA PROCESSING FOR MICROELECTRONIC FABRICATION (3). LEC. 3. Pr., ELEC 6750 or departmental approval. Plasma reactor design and process optimization, plasma-assisted etching and deposition processes, plasma-assisted oxidation and surface modification processes, plasma polymerization, plasma-induced damages to semiconductor devices.

ELEC 7740/7746 ELECTRONIC PACKAGING (3). LEC. 3. Pr., ELEC 6740 or departmental approval. Design issues in the packaging of electronics. Emphasis is placed on physical design, electrical performance, thermal characteristics and mechanical stress-induced failures.


ELEC 7770/7776 ADVANCED VLSI DESIGN (3). LEC. 3. Pr., ELEC 6770 or departmental approval. Review of CMOS logic circuits; impact of fabrication issues on design; high speed switching circuits; high performance memory structures; advanced clocking strategies and clock distribution; performance optimization; deep submicromonas design issues; ASIC design flow; logic synthesis, placement and routing; design verification; low power design.

ELEC 7780/7786 RF MICROELECTRONICS (3). LEC. 3. Pr., ELEC 6780 or departmental approval. Techniques used in the design of monolithic integrated circuits for RF applications.

ELEC 7900 INDEPENDENT STUDY IN ELECTRICAL ENGINEERING (1-3). IND. Pr., departmental approval. Course may be repeated for a maximum of 3 credit hours.

ELEC 7950 ELECTRICAL ENGINEERING SEMINAR (1-10). SEM., SU. Pr., departmental approval. Course may be repeated for a maximum of 10 credit hours.

ELEC 7970/7976 SPECIAL TOPICS IN ELECTRICAL ENGINEERING (1-5). LEC. Pr., departmental approval. Course may be repeated for a maximum of 9 credit hours.

ELEC 7990 RESEARCH AND THESIS (1-6). MST, TD. Course may be repeated for a maximum of 6 credit hours.

ELEC 8310 ADVANCED TOPICS IN ELECTROMAGNETICS (3). LEC. 3. Pr., ELEC 7320. Continued development of analytical and numerical applications of Maxwell's equations in arbitrary media in both the frequency and time domains. Includes individual and group projects.

ELEC 8410 SPECTRAL ESTIMATION AND SYSTEM IDENTIFICATION (3). LEC. 3. Pr., ELEC 7410. Elements of parameter estimation theory; Nonparametric spectral estimation; periodogram and spectral windows; Parametric approaches; applications; higher-order spectral analysis; input-output system identification.


ELEC 8710 ADVANCED TOPICS IN SEMICONDUCTOR DEVICES (3). LEC. 3. Pr., ELEC 6710. Advanced treatment of selected topics in semiconductor devices. Course may be repeated for a maximum of 6 credit hours.

ELEC 8780 CONTEMPORARY TOPICS IN ELECTRONIC CIRCUIT DESIGN (3). LEC. 3. Pr., ELEC 6780 or departmental approval. Contemporary topics in electronic circuit design such as Delta-Sigma A/D and D/A conversion, switched capacitor circuitry, continuous time and discrete time filter design, communication electronics. Course may be repeated for a maximum of 6 credit hours.

ELEC 8900 INDEPENDENT STUDY IN ELECTRICAL ENGINEERING (1-3). IND. Pr., departmental approval. Course may be repeated for a maximum of 3 credit hours.

ELEC 8970 SPECIAL TOPICS IN ELECTRICAL ENGINEERING (1-5). LEC. Pr., departmental approval. Course may be repeated for a maximum of 9 credit hours.

ELEC 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Course may be repeated for a maximum of 20 credit hours.


ENGL 1107 HONORS WRITING SEMINAR I (3). LEC. 3. Pr., membership in the Honors College. English Composition Core. Topics in writing for students in Honors.

ENGL 1120 ENGLISH COMPOSITION II (3). LEC. 3. Pr., Grade of C or better in ENGL 1100. English Composition core. Emphasis on research.

ENGL 1800 ORAL PROFICIENCY IN ENGLISH FOR INTERNATIONAL STUDENTS (3). LEC. 3. SU. Skills that international students need to communicate orally in English.

ENGL 1820 CLASSROOM COMMUNICATION SKILLS FOR INTERNATIONAL TEACHING ASSISTANTS (3). LEC. 3. SU, Pr., graduate standing. Oral language skills required for effective classroom communication.

ENGL 1900 WRITING PROFICIENCY IN ENGLISH FOR INTERNATIONAL STUDENTS (3). LEC. 3. SU. Skills that international students need to undertake successful research writing in English.

ENGL 2120 UNDERSTANDING POETRY (3). LEC. 3. Pr., ENGL 1100 or ENGL 1107. Approaches to reading and writing about poetry.

ENGL 2140 UNDERSTANDING FICTION (3). LEC. 3. Pr., ENGL 1100 or ENGL 1107. Approaches to reading and writing about fiction.

ENGL 2160 UNDERSTANDING DRAMA (3). LEC. 3. Pr., ENGL 1100 or ENGL 1107. Approaches to reading and writing about drama.

ENGL 2200 GREAT BOOKS I (3). LEC. 3. Pr., Grade of C or better in ENGL 1120 or ENGL 1127. Literature Core. Significant texts in Western Civilization: ancient Greece through the Renaissance.

ENGL 2207 HONORS GREAT BOOKS I (3). LEC. 3. Pr., Grade of C or better in ENGL 1127; membership in the Honors College. Literature Core. Significant texts in Western Civilization: ancient Greece through the Renaissance.

ENGL 2210 GREAT BOOKS II (3). LEC. 3. Pr., ENGL 2200. Literature Core. Significant texts in Western Civilization: 17th century to the present.

ENGL 2217 HONORS GREAT BOOKS II (3). LEC. 3. Pr., ENGL 2207 and membership in the Honors College. Literature Core. Significant texts in Western civilization: 17th century to the present.

ENGL 3040 TECHNICAL WRITING (3). LEC. 3. Pr., ENGL 1102 or ENGL 1127; junior standing. Credit will not be given for both ENGL 3040 and ENGL 3080.

ENGL 3080 BUSINESS WRITING (3). LEC. 3. Pr., ENGL 1102 or ENGL 1127; junior standing. Credit will not be given for ENGL 3080 and ENGL 3040. Writing in business management or governmental service fields.

ENGL 3110 SURVEY OF LINGUISTICS (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. The structure of language, especially American English sounds, words, and syntax, along with study in such areas as dialects and language change.

ENGL 3190 STUDIES IN CHILDREN’S LITERATURE (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127.

ENGL 3350 CLASSICAL MYTHOLOGY (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. The character and influence of Greek and Roman mythology.

ENGL 3360 THE BIBLE FOR STUDENTS OF LITERATURE (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Biblical backgrounds to English and American literature; the Bible as literature.

ENGL 3530 SURVEY OF BRITISH LITERATURE I (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. British literature from its beginnings to the end of the 18th century.

ENGL 3540 SURVEY OF BRITISH LITERATURE II (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. British literature from the end of the 18th century to the present. Empathy and time and discrete time filter design.

ENGL 3700 SURVEY OF AMERICAN LITERATURE (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. American literature from its beginnings to the present.

ENGL 3840 LITERATURE AND CULTURE (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. The relation of literary works to their cultural contexts.

ENGL 3870 WORLD ENGLISH LITERATURES (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Non-British and non-American literature written in English.

ENGL 4000 ADVANCED COMPOSITION (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127; junior standing. Theory and practice of expository and argumentative writing.
ENGL 4010 THE PERSONAL ESSAY (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. History, reading, analysis, and writing of the personal essay.

ENGL 4030 INTERPRETING TEXTS (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Theory and practice of interpreting literary and non-literary texts.

ENGL 4140 LANGUAGE VARIATION (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Social, regional, and contextual forces that contribute to dialect diversity.

ENGL 4150 TOPICS IN LANGUAGE STUDY (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Concentrated investigation of varying topics in linguistics or rhetoric. Course may be repeated for a maximum of 6 credit hours.

ENGL 4180 RHETORICAL THEORY AND PRACTICE (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Classical and contemporary rhetorical theory, rhetorical analysis, and modern stylistics applied to a variety of literary and non-literary texts.

ENGL 4200 FICTION WRITING I (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Introduction to the craft of fiction writing; reading, studying, and writing short stories.

ENGL 4210 FICTION WRITING II (3). LEC. 3. Pr., ENGL 4200, ENGL 1120 or ENGL 1127. Advanced fiction writing.

ENGL 4220 POETRY WRITING I (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Introduction to the craft of poetry writing; reading, studying, and writing poems.

ENGL 4230 POETRY WRITING II (3). LEC. 3. Pr., ENGL 4220, ENGL 1120 or ENGL 1127. Advanced poetry writing.

ENGL 4240 SPECIAL PROJECT IN CREATIVE WRITING (3). LEC. 3. Pr., ENGL 4220 or ENGL 4240. Course may be repeated for a maximum of 6 credit hours.

ENGL 4300 CHAUCER (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. The major works of Chaucer in Middle English.

ENGL 4310 BRITISH DRAMA, BEGINNINGS TO 1642 (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. English (ENGL)
ENGL 7010 TECHNICAL AND PROFESSIONAL COMMUNICATION: ISSUES AND APPROACHES (3). LEC. 3. Introduction to the history, practice, and profession of technical and professional communication.

ENGL 7020 THE PEDAGOGY OF TECHNICAL AND PROFESSIONAL COMMUNICATION (3). LEC. 3. Methods, practices, and theories of technical and professional communication for prospective teachers.

ENGL 7030 STUDIES IN TECHNICAL AND PROFESSIONAL COMMUNICATION (3). LEC. 3. Extensive study of selected types of research and writing for special purposes and novel situations. Course may be repeated for a maximum of 6 credit hours.


ENGL 7050 STUDIES IN COMPOSITION (3). LEC. 3. The advanced study of an approach or an issue in composition studies. Course may be repeated for a maximum of 9 credit hours.

ENGL 7130 FICTION WRITING (3). LEC. 3. Workshop in the craft and writing of fiction. Course may be repeated for a maximum of 6 credit hours.

ENGL 7140 POETRY WRITING (3). LEC. 3. Workshop in the craft and writing of poetry. Course may be repeated for a maximum of 6 credit hours.

ENGL 7150 BRITISH LITERATURE TO 1500 (3). LEC. 3. Major works and genres in Middle English and related literary traditions.

ENGL 7160 BRITISH LITERATURE: 1500-1660 (3). LEC. 3. Major literary movements, authors, and/or genres.

ENGL 7170 BRITISH LITERATURE: 1660-1800 (3). LEC. 3. Major literary movements, authors, and/or genres.

ENGL 7180 BRITISH LITERATURE: 1800-1900 (3). LEC. 3. Major literary movements, authors, and/or genres.

ENGL 7190 AMERICAN LITERATURE TO 1900 (3). LEC. 3. Major literary movements, authors, and/or genres.

ENGL 7200 BRITISH AND AMERICAN LITERATURE SINCE 1900 (3). LEC. 3. Major literary movements, authors, and/or genres.

ENGL 7230 OLD ENGLISH LANGUAGE AND LITERATURE (3). LEC. 3. Anglo-Saxon language, literature, and culture.

ENGL 7250 ENGLISH LANGUAGE LEARNING AND DEVELOPMENT (3). LEC. 3. Theories underlying the learning of English, especially as a non-native language.


ENGL 7280 STUDIES IN LINGUISTICS (3). LEC. 3. A topic or topics in English linguistics, e.g., historical syntax, dialectology, phonology. Course may be repeated for a maximum of 9 credit hours.

ENGL 7300 RHETORIC: THEORY AND PRACTICE (3). LEC. 3. Issues and developments in rhetorical theory and analysis, with special attention to the rhetoric of written texts. Course may be repeated for a maximum of 9 credit hours.

ENGL 7570 MAJOR BRITISH AUTHOR(S) (3). LEC. 3. One or more major authors or a single work by a major author. Course may be repeated for a maximum of 9 credit hours.

ENGL 7580 MAJOR AMERICAN AUTHOR(S) (3). LEC. 3. One or more major authors or a single work by a major author. Course may be repeated for a maximum of 9 credit hours.

ENGL 7650 STUDIES IN POETRY (3). LEC. 3. Poetry of one or more literary periods or a poetic genre such as the lyric or the epic. Course may be repeated for a maximum of 9 credit hours.

ENGL 7660 STUDIES IN DRAMA (3). LEC. 3. Drama of one or more literary periods or a problem in the aesthetics of the dramatic art. Course may be repeated for a maximum of 9 credit hours.

ENGL 7670 STUDIES IN FICTION (3). LEC. 3. Fiction of one or more literary periods or a problem in the art of fiction. Course may be repeated for a maximum of 9 credit hours.

ENGL 7740 BRITISH LITERATURE AND CULTURE (3). LEC. 3. The relations between one or more literary works and their cultural context. Course may be repeated for a maximum of 9 credit hours.

ENGL 7760 AMERICAN LITERATURE AND CULTURE (3). LEC. 3. The relations between one or more literary works and their cultural context. Course may be repeated for a maximum of 9 credit hours.

ENGL 7770 MINORITY AMERICAN LITERATURE (3). LEC. 3. Study of minority American literature and literary theories of ethnicity and race. Course may be repeated for a maximum of 9 credit hours.

ENGL 7800 STUDIES IN CRITICAL THEORY (3). LEC. 3. A survey of literary theory or close study of varieties of contemporary critical theory. Course may be repeated for a maximum of 9 credit hours.

ENGL 7810 STUDIES IN COMPARATIVE LITERATURE (3). LEC. 3. Comparative study of authors, genres, or issues from two or more cultures or critical perspectives. Course may be repeated for a maximum of 9 credit hours.

ENGR 1100 ENGINEERING ORIENTATION (0). LEC. 1. SU. Pr., pre-engineering students. Introduction to the College of Engineering and its resources, exploration of engineering careers, orientation to campus resources and facilities, and assistance with academics and transition to college.

ENGR 1110 INTRODUCTION TO ENGINEERING (2). LEC. 1, LAB. 3. Introduction to engineering design, engineering teams, graphical presentation, technical writing, oral presentation.

ENGR 1200 GRAPHICAL COMMUNICATION AND DESIGN (3). LEC. 2, LAB. 3. Coreq., COMP 1200. Graphical concepts and projective geometry relating to spatial visualization and communication in design, including technical sketching, instrument drawing and computer-aided drafting and design.

ENGR 2010 THERMODYNAMICS (3). LEC. 2, LAB. 3. Pr., CHEM 1100 or CHEM 1110, MATH 1620 or MATH 1720. Coreq., CHEM 2100, CHEM 2101, and PHYS 1600. Principles and applications of thermodynamics to engineering problems. Laboratory includes multi-disciplinary team projects on thermodynamics applications and fundamentals of engineering thermodynamics.

ENGR 2050 STATICS (3). LEC. 3. Pr., PHYS 1600. Coreq., MATH 2630. Principles of vectors, forces, moments, free body diagrams, force systems, 2-D and 3-D equilibrium, friction, geometric properties of plane areas.

ENGR 2070 MECHANICS OF MATERIALS (3). LEC. 3. Pr., ENGR 2050. Coreq., MATH 2650. Principles of stress and strain; stress-strain relationships; uniaxially loaded members; torsion; bending; beam shear; shear, moment and thrust diagrams; transformed sections; column buckling.

ENGR 2100 FUNDAMENTALS OF ENGINEERING MECHANICS (3). LEC. 3. Pr., PHYS 1600. Basic principles of two-dimensional force systems, free body diagrams, concepts of stress and strain, centroids of composite areas, kinematics and kinetics of particles and rigid bodies.

ENGR 2200 INTRODUCTION TO THERMODYNAMICS, FLUIDS AND HEAT (3). LEC. 2, LAB. 3. Pr., CHEM 1030, PHYS 1610, MATH 2650. Coreq., MATH 2650. Principles and applications of thermodynamics, fluids and heat.

ENGR 2350 DYNAMICS (3). LEC. 3. Pr., ENGR 2050. Fundamental principles of dynamics including kinematics and kinetics of particles, kinematics and kinetics of rigid bodies, mass moments of inertia, three-dimensional dynamics of rigid bodies, and simple harmonic motion.


ENGR 4957 ENGINEERING HONORS SEMINAR (3). SEM. 3. Pr., junior standing; membership in the Honors College, departmental approval. Topics of interest to honors students and engineering faculty. Interaction with successful engineering alumni.

ENGR 4970 CAPSTONE PROJECT I: DESIGN PROPOSAL (1). LEC. 3. Coreq., BUSI 4540. Processes to develop and present design proposal for cooperating industry. Credit will not be given for both BUSI 4970 and ENGR 4970.

ENGR 4980 CAPSTONE PROJECT II: DESIGN PROJECT (3). LEC. 3. Pr., BUSI 4970 or ENGR 4970. Cross-functional team design projects sponsoring industry.


ENTM 4040 INSECTS AFFECTING HUMANS, DOMESTIC ANIMALS AND WILDLIFE (3). LEC. 3. Pr., BIOL 1030 or ENTM 3040 or departmental approval. Insects and other arthropods which attack animals or otherwise cause problems of public-health, veterinary, or wildlife importance. Fall.

ENTM 4220 INSECT MORPHOLOGY (4). LEC. 3. LAB. 4. Pr., ENTM 3040, ENTM 4020 or departmental approval. Form and function in insects and related arthropods emphasizing morphological characteristics used in insect identification. Spring.

ENTM 4300 SYSTEMATIC ENTOMOLOGY (4). LEC. 3. LAB. 4. Pr., ENTM 3040 or ENTM 4020 or departmental approval. Learn to use the tools of the taxonomist to identify common families of insects. A collection is required. Field trips will be taken. Fall.

ENTM 4920 ENTOMOLOGY INTERNSHIP (5). INT. 5. SU. Practical professional experience under the supervision of internship faculty and/or representatives of state, federal or private agency. Summer.

ENTM 4970 SPECIAL PROBLEMS (1-3). LEC. Pr., senior standing; departmental approval. Credit to be arranged. Course may be repeated for a maximum of 3 credit hours.

ENTM 4997 HONORS THESIS (1-6). IND. Pr., junior or senior standing; membership in the Honors College; departmental approval. Course may be repeated for a maximum of 6 credit hours.

ENTM 6010 ENTOMOLOGY FOR EDUCATORS (4). LEC. 4. LAB. 3. Pr., BIOL 1030. Biology and diversity of insects and related arthropods with applications for educators. An insect collection and an entomological exposition are required. Summer.


ENTM 6140 AQUATIC INSECTS (4). LEC. 3. LAB. 3. Pr., ENTM 3040 or BIOL 4010 or departmental approval. Biology and ecology of aquatic and semi-aquatic insects. Laboratory sessions focus on identification at the family and generic levels, and experience in collecting and field techniques. Spring.

ENTM 6150 ARACHNOLOGY (4). LEC. 3. LAB. 3. Pr., ENTM 3040 or departmental approval. Biology, behavior and systematics of all arachnid groups, with major emphasis on spiders and mites. Fall.

ENTM 6200 INSECT PHYSIOLOGY (4). LEC. 3. LAB. 3. Pr., ENTM 3040 or departmental approval. Introduction to insect physiology stressing structure and function of each organ system. Methods used in physiological research will be emphasized. Spring.

ENTM 6220 INSECT ECOLOGY (4). LEC. 3. LAB. 3. Pr., BIOL 3060 or departmental approval. Ecological interactions of insects and their environment, with emphasis on herbivory, predation, parasitism and mutualism, as well as population and community dynamics. Fall.


ENTM 6340 URBAN FOREST INSECTS (3). LEC. 2. LAB. 3. Pr., ENTM 2150, ENTM 3040 or ENTM 4020. Identification, importance, biology and management of principal insects of the urban forest. Fall.

ENTM 6350 INTEGRATED FOREST PEST MANAGEMENT (3). LEC. 2. LAB. 3. Pr., ENTM 2150, FORY 3100. Identification, principles of integrated management, and computer modeling of insects and fungi that attack forest and shade trees. Fall.

ENTM 6360 LANDSCAPE ENTOMOLOGY (4). LEC. 3. LAB. 3. Pr., BIOL 1020 or BIOL 1030. Identification and management of arthropod pests in the landscape. Recognition of pests and damage to trees, turf and ornamental plants. Fall.


ENTM 7190 PLANT AND ANIMAL INTERACTIONS (3). LEC. 3. Pr., BIOL 3060 or departmental approval. Ecological and evolutionary interrelationships emphasizing pollination biology, seed dispersal and plant-herbivore interactions. Spring.

ENTM 7720 INSECT MORPHOLOGY (5). LEC. 3. LAB. 6. Pr., ENTM 3040, or ENTM 4020 or departmental approval. Comparative external anatomy and generalized internal structures of insects. Characteristics used in taxonomy will be emphasized. Credit will not be given for both ENTM 4220 and ENTM 7720. Spring.

ENTM 7300 SYSTEMATIC ENTOMOLOGY (5). LEC. 3. LAB. 6. Pr., ENTM 3040, or ENTM 4020 or departmental approval. Principles of systematics and identification of insects through orders, families, genera, and species. Collections are required. Credit will not be given for both ENTM 4300 and ENTM 7300. Fall.

ENTM 7330 MEDICAL-VETERINARY ENTOMOLOGY (4). LEC. 3. LAB. 3. Pr., ENTM 3040 or BIOL 6110, or departmental approval. Insects, mites, and other arthropods of medical or veterinary importance, identification of species, their biology and role as vectors of disease agents. Fall.

ENTM 7345 TROPICAL BIOLOGY: AN ECOCLOGICAL APPROACH (8). LEC. 4. LAB. 12. Pr., 15 hours of biological courses at or above the 7000 level; departmental approval. The biology of insects in the tropics.

ENTM 7920 GRADUATE INTERNSHIP (3). LEC. 3. Pr., M.Ag. candidates or departmental approval. Practical professional experience under supervision of faculty internship adviser. Course may be repeated for a maximum of 12 credit hours.

ENTM 7990 SEMINAR (1). SEM. Pr., Presentation and discussion of scientific literature of thesis research findings. Required of all M.S. candidates.

ENTM 7970 SPECIAL PROBLEMS AND TOPICS (1-5). LEC. Discussion groups on specific topics, assigned readings, or laboratory and field research. Course may be repeated for a maximum of 5 credit hours.

ENTM 7990 RESEARCH AND THESIS (1-10). MST. Pr., admission to the M.S. Program. Topics may focus on technical laboratory problems or field research related to arthropod biology. Course may be repeated with change in topic.

ENTM 8950 SEMINAR (1). LEC. Pr., Presentation and discussion of scientific literature or dissertation research findings. Required of all Ph.D. students.

ENTM 8870 SPECIAL PROBLEMS OR TOPICS (1-5). LEC. Pr., admission to the Ph.D. Program. Research projects or study topics at an advanced level directed by individual faculty members. Course may be repeated for a maximum of 5 credit hours.

ENTM 8990 RESEARCH AND DISSERTATION (1-10). DSR. Pr., admission to the Ph.D. program. Course may be repeated with change in topic.

Environmental Science (ENVI)

Dr. Joe Morgan - 844-4326

ENVI 1010 INTRODUCTION TO ENVIRONMENTAL SCIENCE (0). LEC. Pr., Introduction to the environmental science field and the ENVI major.

ENVI 1020 FUNDAMENTALS OF ENVIRONMENTAL SCIENCE (2). LEC. Pr., Survey of fundamental concepts, issues, and concerns related to environmental science.

ENVI 2010 INTRODUCTION TO ENVIRONMENTAL SCIENCE (1). LEC. 1. Pr., Departmental approval. Discussion of current issues in environmental science.

Finance (FINC)

Dr. Daniel Page - 844-5344

FINC 2400 PERSONAL FINANCE (3). LEC. 3. Plans for managing personal financing problems involving insurance, housing, household budgeting, investments, personal and bank loans, personal credit and time value of money.

FINC 3200 RISK AND INSURANCE (3). LEC. 3. Pr., 2.2 GPA and junior standing. Essentials of risk management, with emphasis on the use of insurance, including the characteristics of property, liability, life and health insurance.

FINC 3100 PRINCIPLES OF BUSINESS FINANCE (3). LEC. 3. Pr., 2.2 GPA and junior standing. Fundamental principles and practices as applied to the purchase, sale and lease and management of real estate.

FINC 3100 PRINCIPLES OF BUSINESS FINANCE (3). LEC. 3. Pr., 2.2 GPA and junior standing. Fundamental principles and practices as applied to the purchase, sale and lease and management of real estate.

FINC 3610 PRINCIPLES OF BUSINESS FINANCE (3). LEC. 3. Pr., 2.2 GPA, ACCT 2110 and junior standing. Corporate finance from the perspective of a financial manager. Topics include financial planning and forecasting, cash budgeting, capital budgeting, basic valuation, dividends.
FINC 3620 SMALL BUSINESS FINANCE (3). LEC. 3. Pr., FINC 3610 and 2.2 GPA. Financial control, financial forecasting, working capital and sources of financing in a small and closely-held business environment.

FINC 3630 ADVANCED BUSINESS FINANCE (3). LEC. 3. Pr., 2.2 GPA, FINC 3610 and STAT 2610. In-depth analysis of financial concepts including valuation, capital budgeting, cost of capital, leasing, financial analysis, and working capital management.

FINC 3640 INVESTMENTS (3). LEC. 3. Pr., 2.2 GPA and FINC 3610. Types of investment security markets, investment instruments, concepts and strategies for institutional and individual investors.

FINC 3700 FINANCIAL MARKETS AND INSTITUTIONS (3). LEC. 3. Pr., 2.2 GPA and FINC 3610. Overview of the financial system, organization and regulation of financial markets and institutions, the behavior and structure of interest rates.


FINC 4220 LIFE INSURANCE (3). LEC. 3. Pr., 2.2 GPA, FINC 3200 or departmental approval. Individual life, health, annuity contracts and other investments, with a focus on financial planning, estate planning and business continuation arrangements.

FINC 4250 REAL ESTATE INVESTMENT (3). LEC. 3. Pr., 2.2 GPA, FINC 3610 and FINC 3250. Analysis and evaluation of real estate investments including cash flow measurement for both residential and commercial investment projects.

FINC 4510 MULTINATIONAL FINANCIAL MANAGEMENT (3). LEC. 3. Pr., 2.2 GPA and FINC 3610. Advantages and problems associated with the modern multinational corporation, including analysis of currency risk, hedging and political risk.

FINC 4520 INTERNATIONAL FINANCIAL MARKETS (3). LEC. 3. Pr., 2.2 GPA, FINC 4510 or departmental approval. Analysis of multinational financial markets, their use by the multinational corporation in managing currency risk, as a source of funds, and for portfolio investment.

FINC 4530 FINANCIAL STRATEGY (3). LEC. 3. Pr., 2.2 GPA, ACCT 3110 and FINC 3630. The advanced application of corporate finance through case analysis, company analysis and current topics.


FINC 4660 SECURITY ANALYSIS (3). LEC. 3. Pr., 2.2 GPA, ACCT 3110, FINC 3630 and FINC 3640. Analysis, techniques and selection of securities to meet specific investment objectives. Focus on individual security analysis and portfolio management.

FINC 4680 FINANCIAL ENGINEERING (3). LEC. 3. Pr., 2.2 GPA, FINC 3630 or FINC 3640 or FINC 3700. Examination of derivative securities with emphasis on applying derivative securities to the management of corporate financial risk.

FINC 4700 MANAGEMENT OF FINANCIAL INSTITUTIONS (3). LEC. 3. Pr., 2.2 GPA and FINC 3700. Management strategies for firms including management of credit, liquidity, capital and interest rate risks in a regulated environment.

FINC 4900 INDEPENDENT STUDY (1-3). IND., SU. Pr., 2.2 GPA and departmental approval. Advanced individual research and study in finance under the direction of a faculty member. Course may be repeated for a maximum of 6 credit hours.

FINC 4920 INTERNSHIP (1-6). INT., SU. Pr., 2.2 GPA and departmental approval. The internship program offers the opportunity to gain relevant and meaningful work experience. Course may be repeated for a maximum of 9 credit hours.

FINC 4970 SPECIAL TOPICS (3). IND. Pr., 2.2 GPA and departmental approval. Specialized topics and current developments and innovations in finance. Course may be repeated for a maximum of 6 credit hours.

FINC 4997 HONORS THESIS (1-6). IND. Pr., Membership in the Honors College and departmental approval. Course may be repeated for a maximum of 6 credit hours.

FINC 7410/7416 BUSINESS RISK MANAGEMENT (3). LEC. 3. Pr., departmental approval. An analysis of business risk and the risk management methods, including loss control, insurance and other forms of risk financing, used to handle these risks.

FINC 7510/7516 MULTINATIONAL FINANCIAL MANAGEMENT (3). LEC. 3. Pr., FINC 7600 or BUSI 7110 or departmental approval. Finance-related problems of the multinational firm, emphasizing currency markets and derivatives, accounting and operational issues, and management of exchange and political risk.

FINC 7600/7606 ADVANCED CORPORATE FINANCE (3). LEC. 3. Pr., FINC 3610 or departmental approval. Intensive study of theory and problems in corporate finance from an internal decision making point of view.

FINC 7620/7626 ADVANCED REAL ESTATE FINANCE (3). LEC. 3. Pr., FINC 7600 or BUSI 7110 or departmental approval. Study of real estate markets including regulatory and legal issues, valuation of income producing property, financing sources, corporate real estate, investment performance measurement.

FINC 7630/7636 HEALTH CARE FINANCE (3). LEC. 3. Pr., FINC 7600 or BUSI 7110 or departmental approval. Techniques and analysis of financial management in a health care setting. Emphasis on financial planning and forecasting, budgeting, capital investment analysis in the regulated healthcare marketplace.

FINC 7640/7646 ADVANCED INVESTMENTS (3). LEC. 3. Pr., FINC 7600 or BUSI 7110 or departmental approval. Types of investment securities, regulation and operation of securities markets and the theory and practice of investments.

FINC 7650/7656 APPLIED FINANCIAL MANAGEMENT (3). LEC. 3. Pr., FINC 7600 or BUSI 7110 or departmental approval. The integration of financial theory with practice through spreadsheets, case analysis, company analysis and current topics in finance.

FINC 7660/7666 SECURITY ANALYSIS AND MANAGEMENT (3). LEC. 3. Pr., FINC 7600 or BUSI 7110 or departmental approval. Advanced analytical methods for security valuation, managing investment portfolios, and developing appropriate investment strategies.


FISH 2130 RECREATIONAL FISHING (2). LEC. 2. A review of species, gear and features of various sport fisheries with emphasis on Southeastern practices. Spring.

FISH 3950 UNDERGRADUATE SEMINAR (1-3). IND., SU. Pr., departmental approval. In-depth research and study under the direction of a faculty member. Topics are variable within finance and finance-related areas. Course may be repeated for a maximum of 6 credit hours.

FISH 7970/7976 SPECIAL TOPICS (1-3). IND. Pr., departmental approval. Specialized topics in finance and finance-related areas not otherwise covered in existing courses. Course may be repeated for a maximum of 6 credit hours.

FISH 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval. Course may be repeated with change in topic.

Fisheries and Allied Aquacultures (FISH)

Dr. David B. Rouse - 844-4786

FISH 4715 COMMERCIAL MARINE FISHERIES OF ALABAMA (2). LEC. 2. Exploitation and biology of marine organisms of Alabama and adjoining Gulf of Mexico with emphasis on distribution, harvest, processing and economic value. Taught at Dauphin Island Sea Lab. Summer.

FISH 4920 INTERNSHIP (1-10). INT., SU. Pr., junior standing and departmental approval. Discipline-related learning while employed with cooperating private industry or public agency. Course may be repeated for a maximum of 10 credit hours.

FISH 4967 HONORS READING (1-4). IND. Pr., membership in the Honors College; FISH major; departmental approval. Course may be repeated for a maximum of 4 credit hours.

FISH 4970 UNDERGRADUATE SPECIAL PROBLEMS (1-4). IND. Pr., junior standing and departmental approval. Course may be repeated for a maximum of 4 credit hours.

FISHERIES AND ALLIED AQUACULTURES (FISH)
FISH 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College; FISH major; departmental approval. Course may be repeated for a maximum of 3 credit hours.

FISH 6120 PROFESSIONAL AND RESEARCH ORIENTATION (2). LEC. 2. Concepts of professionalism, professional ethics, technical writing, research design and operations. Fall.

FISH 6210 PRINCIPLES OF AQUACULTURE (3). LEC. 3. Pr., BIOL 1030. Principles underlying aquatic productivity and levels of management as demonstrated by present practices of aquaculture around the world. Fall.

FISH 6215 MARINE AQUACULTURE (2). LEC. 1, LAB. 2. Introduction to culture of marine species with emphasis in nutrition and feeding, reproductive biology, production techniques, processing, marketing and economics. Taught at the Dauphin Island Sea Lab, Summer.

FISH 6220 WATER SCIENCE (3). LEC. 3. Pr., CHEM 1040, FISH 2100, or departmental approval. Properties of water, the water cycle, basic water chemistry and water quality with emphasis on water in managed ecosystems. Fall.

FISH 6240 HATCHERY MANAGEMENT (4). LEC. 2, LAB. 8. Pr., FISH 6210. Study of warm-water hatchery techniques and application of those techniques in the field. Spring.


FISH 6410 INTRODUCTION TO FISH HEALTH (2). LEC. 2. Pr., BIOL 1030. Introduction to parasitic, bacterial and viral pathogens of wild and cultured finfish and shellfish. Fall.

FISH 6425 MARINE FISH DISEASES (4). LEC. 3, LAB. 3, Pr., BIOL 1030, BIOL 3200 or departmental approval. Introduction to diseases of marine finfish and shellfish and practical techniques used to isolate and identify diseases. Taught at Dauphin Island Sea Lab. Summer, First Term. Summer.

FISH 6510 FISHERIES BIOLOGY AND MANAGEMENT (3). LEC. 2, LAB. 4. Pr., BIOL 1030. An overview of fisheries management with particular emphasis on freshwater examples introducing students to the basic tools and complex issues of fisheries. Fall.

FISH 6520 SMALL IMPOUNDMENT MANAGEMENT (3). LEC. 5, LAB. 10. Pr., BIOL 1030. Major aspects of primarily recreational fishing pond management, including construction, stocking, water quality management, harvest strategy, diagnosis of problems and communication of analyses. Summer.

FISH 6630 FACILITIES FOR AQUACULTURE (3). LEC. 2, LAB. 4. Principles and practice of site selection, design and construction of aquacultural facilities, with emphasis on impoundments and ponds. Fall.

FISH 6650 FISH AND SEAFOOD PROCESSING TECHNOLOGY (3). LEC. 3. Pr., CHEM 2030, BIOL 3200. Emphasis on important species, market forms, preservation techniques, and rules and regulations of the seafood industry. Summer.

FISH 6670 FISHERIES AND AQUACULTURE EXTENSION METHODS (2). LEC. 2. Concepts and practices pertaining to aquacultural extension organization, administration, program development and implementation. Summer.

FISH 6725 MARINE IchTHYology (6). LEC. 6. Pr., BIOL 3060, FISH 6380 and departmental approval. Coreq., Admission to Gulf Coast Research Laboratory. General background in the biology of marine fishes and their taxonomy. Offered only at the Gulf Coast Research Laboratory, Ocean Springs, MS. Summer.


FISH 6745 MARINE FISHERIES MANAGEMENT (4). LEC. 4. Pr., departmental approval. Coreq., admission to GCRL. Overview of practical marine fishery management problems. Offered only at the Gulf Coast Research Laboratory, Ocean Springs, MS. Summer.

FISH 7030 ADVANCED IchTHYology (6). LEC. 6, LAB. 32. Pr., BIOL/FISH 6380. Summer, second term. 5 week course. Survey of biodiversity of freshwater fishes in the southeastern United States through intensive field sampling. Credit will not be given for both FISH 7030 and BIOL 7030. Summer.


FISH 7270 CRUSTACEAN AND MOLLUSCAN AQUACULTURE (3). LEC. 3. Pr., FISH 6210 or departmental approval. General biology and culture techniques of the major shrimp, crawfish and shellfish species cultured throughout the world. Spring.

FISH 7330 RESERVOIR LIMNOLOGY (3). LEC. 2, LAB. 5. Pr., FISH 6320. Consideration of the ecological characteristics of reservoirs as they relate to modern concepts of ecosystem management. Even years. Summer.

FISH 7340 FISH ECOLOGY (3). LEC. 2, LAB. 3. Pr., BIOL 3060 or equivalent. Study of interactions among fish and their environment. Laboratory will emphasize critical literature reading and experimental approaches. Even years. Fall.

FISH 7360 MANAGEMENT OF AQUATIC FLORA IN FISHERIES AND AQUACULTURE (4). LEC. 3, LAB. 6. Pr., BIOL 6120 or equivalent or departmental approval. Role of aquatic vegetation in fish production, its utilization and control. Odd years. Summer.


FISH 7420 FISH DISEASES (4). LEC. 3, LAB. 3, Pr., BIOL 3200 or Departmental Approval. Coreq., FISH 6410. Diagnostic techniques for viral, bacterial, fungal and parasitic diseases of fishes, including etiologic agents, geographical ranges, species susceptibility, clinical signs, clinical pathology, epidemiology and management. Fall.


FISH 7450 FISH PATHOLOGY (3). LEC. 2, LAB. 3. Pr., FISH 6410. Morphological and physiological changes in fish with infectious or non-infectious diseases. Even years. Fall.

FISH 7460 CLINICAL FISH DISEASE DIAGNOSIS (1-3). LEC. Pr., FISH 6410, FISH 7420, FISH 7430. Practical experience in necropsy of diseased fish. Identification of causative agents and prescription of appropriate disease control. Course may be repeated for a maximum of 3 credit hours.

FISH 7530 FISH POPULATION DYNAMICS (3). LEC. 2, LAB. 4. Pr., FISH 6510, STAT 7040. Derivation of fish population estimates, growth, recruitment and mortality; use of modeling techniques to assess exploited fish populations. Even years. Spring.

FISH 7540 QUANTITATIVE TECHNIQUES IN FISHERY ASSESSMENT (3). LEC. 2, LAB. 4. Pr., FISH 6510, STAT 7040. Quantitative techniques to assess and manage fish populations in freshwater. The laboratory will analyze actual fisheries data using SAS on personal computers. Old years. Spring.

FISH 7640 FISH NUTRITION (3). LEC. 3. Pr., ANSI 7210. Fundamental and applied aspects of fish nutrition, including nutrient requirements, physiology of food assimilation, feed preparation and practical feeding. Summer.

FISH 7641 FISH NUTRITION LABORATORY (2). LEC. 6. Coreq., FISH 7640. Laboratory exercises in analysis of fish feeds and formulation and proportion of fish feeds. Summer.


FISH 7920 INTERNSHIP IN FISHERIES AND AQUACULTURE (1-10). INT., SU. Pr., departmental approval. Field experience in aquaculture, fisheries or aquatic resource management on farm or with research, extension or aquatic
management agency. Course may be repeated for a maximum of 10 credit hours.

**FISH 7950 SEMINAR** (1). SEM. 1. SU. Acquaint students with current research and related activities.

**FISH 7970 SPECIAL PROBLEMS** (1-5). IND. Credit to be arranged. Individualized work and study in consultation with faculty member on problem of mutual concern. May include directed readings and research. Course may be repeated for a maximum of 5 credit hours.

**FISH 7990 RESEARCH AND THESIS** (1-10). MST, TD. Credit to be arranged. Course may be repeated with change in topic.

**FISH 8950 SEMINAR** (1). SEM. 1. SU. Acquaint students with current research and related activities.

**FISH 8970 SPECIAL PROBLEMS** (1-5). LEC. 3. Individualized work and study in consultation with faculty member on problem of mutual concern. May include directed readings and research. Course may be repeated for a maximum of 5 credit hours.

**FISH 8990 RESEARCH AND DISSERTATION** (1-10). DSR, TD. Course may be repeated with change in topic.

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**Foreign Languages and Literatures (FLNG)**

**FLFR 1000 ELEMENTARY FRENCH ABROAD** (1-10). FL. Pr., departmental approval. Course work at the elementary level. This credit may substitute for required 1000 level courses in French. Course may be repeated for a maximum of 10 credit hours.

**FLFR 1010 ELEMENTARY FRENCH I** (4). LEC. 3. LAB. 2. Basic language skills with emphasis on conversation. For students with less than two years of high school French. Exposure to culture.

**FLFR 1020 ELEMENTARY FRENCH II** (4). LEC. 3. LAB. 2. Pr., FLFR 1010 or two or more years of high school French. Basic language skills with emphasis on conversation. Exposure to culture. Fulfills College of Liberal Arts core foreign language requirement.

**FLFR 1960 READING PROFICIENCY IN FRENCH** (3). LEC. 3. SU. For graduate students, who should consult their advisors for specific departmental language requirements. May not be used to fulfill undergraduate language requirements.

**FLFR 2000 INTERMEDIATE FRENCH ABROAD** (1-10). FL. Pr., departmental approval. For course work at the intermediate level, taken on an approved study program abroad. The student should consult with the French undergraduate advisor for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

**FLFR 2010 INTERMEDIATE FRENCH I** (4). LEC. 3. LAB. 2. Pr., FLFR 1020 or 4 or more years of high school French or departmental approval. Language skills, grammar review, readings in French culture, literature and history.


**FLFR 3000 JUNIOR/ADVANCED FRENCH ABROAD** (1-9). FL. Pr., departmental approval. Course work at the junior/advanced level, taken on an approved study program abroad. The student should consult with the French undergraduate advisor for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 9 credit hours.

**FLFR 3010 FRENCH PHONETICS AND DICTION** (3). LEC. 3. Pr., FLFR 2020 or departmental approval. Practice in spoken, everyday French, based on texts and situations concerning contemporary life, especially in France.

**FLFR 3030 FRENCH CONVERSATION** (3). LEC. 3. Pr., FLFR 2020 or departmental approval. Practice in spoken, everyday French, based on texts and situations concerning contemporary life, especially in France.

**FLFR 3040 FRENCH COMPOSITION** (3). LEC. 3. Pr., FLFR 2020 or departmental approval. Review of grammar and practice in writing on topics ranging from descriptions and personal opinions to current affairs and social problems.

**FLFR 3100 INTRODUCTION TO FRENCH LITERATURE** (3). LEC. 3. Pr., FLFR 3030 and FLFR 3040 or departmental approval. Provides grounding in basic analytical approaches, language and organizational skills needed to discuss French literature effectively and coherently, orally or in writing.

**FLFR 3110 FRENCH CIVILIZATION** (3). LEC. 3. Pr., FLFR 2020 or departmental approval. Consideration of topical aspects of the cultural heritage of France, as reflected in present day life patterns, traditions and institutions.

**FLFR 3140 SURVEY OF FRENCH LITERATURE I** (3). LEC. 3. Pr., FLFR 3100 or departmental approval. The Middle Ages to the 1800s. Coherent and effective writing in French.

**FLFR 3150 SURVEY OF FRENCH LITERATURE II** (3). LEC. 3. Pr., FLFR 3100 or departmental approval. Readings in French literature from the 19th Century to the present (prose, theatre, and poetry), centered on a theme or topic.

**FLFR 3310 BUSINESS FRENCH** (3). LEC. 3. Pr., One FLFR 3000-level course. Internship practice in preparing commercial correspondence and reading contracts, agreements, and related documents in French. Emphasis will be placed on the acquisition of a business-oriented vocabulary.

**FLFR 3510 TOPICS IN FRENCH LITERATURE AND CULTURE (IN ENGLISH)** (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Topics drawing on French literature, history, fine arts, or arts in general interest to students with little or no previous study of French.

**FLFR 3900 INDEPENDENT STUDY IN FRENCH LANGUAGE, LITERATURE OR CULTURE** (1-3). IND. Pr., Two 3000 - level FLFR courses and departmental approval in an area of special interest to the superior student in French. Course may be repeated for a maximum of 6 credit hours.

**FLFR 4000 SENIOR/ADVANCED FRENCH ABROAD** (1-9). FLD. Pr., departmental approval. Course work at the senior/advanced level, taken on an approved study program abroad. The student should consult with the undergraduate advisor for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 9 credit hours.

**FLFR 4020 ADVANCED GRAMMAR AND STYLISTICS** (3). LEC. 3. Pr., FLFR 3040 or equivalent. Practice in writing and analyzing French texts, with emphasis on advanced grammar topics and stylistics.

**FLFR 4030 FRENCH CONTINUING CONVERSATION** (1). LEC. 1. Pr., FLFR 3030 and FLFR 3040 or departmental approval. Continuing practice in spoken French to maintain and upgrade proficiency. Major credit will not be given for FLFR or FLFT majors. Course may be repeated for a maximum of 2 credit hours.

**FLFR 4040 FRENCH CONTINUING COMPOSITION** (3). LEC. 3. Pr., FLFR 3030 and FLFR 3040 or departmental approval. Continuing practice in written French to maintain and upgrade proficiency.

**FLFR 4310 FRENCH FOR INTERNATIONAL TRADE** (3). LEC. 3. Pr., FLFR 3310 or departmental approval. Practical exercises in preparing and translating trade correspondence and documents in French as well as assigned group work and case studies under simulated real life pressures.

**FLFR 4410 ADVANCED TOPICS IN FRENCH LITERATURE, CULTURE OR LANGUAGE** (3). LEC. 3. Pr., Three 3000-level French courses or departmental approval. The study of a special aspect or theme of the French Language, Literature, or Culture. Course may be repeated for a maximum of 9 credit hours.

**FLFR 4610 FRENCH FOR FASHION & APPAREL MERCHANDISING I** (3). LEC. 3. Pr., Two 3000 - level French courses or departmental approval. French vocabulary and the understanding of French concepts used in the fashion and apparel industry, including, types of garments, textiles and accessories, and apparel design, display, advertising and merchandising.

**FLFR 4620 FRENCH FOR FASHION & APPAREL MERCHANDISING II** (3). LEC. 3. Pr., Two 3000 - level courses and FLFR 4610 or departmental approval. In-depth study of the language and style used in the design, advertising, and merchandising of French fashion, including trends among various French designers, their products, and their clientele.

**FLFR 4740 TRANSLATION** (3). LEC. 3. Pr., FLFR 3040 and 9 hours of 3000-level or higher FLFR credit. Basic techniques and problem areas in translating from French into English and from English into French.

**FLFR 4900 ADVANCED INDEPENDENT STUDY IN FRENCH LANGUAGE, LITERATURE OR CULTURE** (1-3). IND. Pr., Three 3000-level courses in French and departmental approval. Directed study in area of special interest for the superior student in French. Course may be repeated for a maximum of 6 credit hours.

**FLFR 4980 SENIOR CAPSTONE** (1). IND. 1. SU. Pr., senior standing. French major. Assessment of language skills through written paper and oral exam. Fall, Spring.

**FLFR 6310 FRENCH FOR INTERNATIONAL TRADE** (3). LEC. 3. Pr., Four 3000-level FLFR courses or departmental approval, or graduate standing. Practice in handling, preparing and translating international trade correspondence documents and related legal procedures in French. Development of case studies and other international trade group work in French and in English under simulated real life pressures.

**FLFR 6970 SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS** (3). LEC. 3. Pr., At least four FLFR 3000-level courses or departmental approval, or graduate standing. Review of principal grammatical structures, develop skills through appropriate exercises and class assignments, and improve stylistic sensitivity by exposure to a variety of language samples.

**FLFR 6980 SEMINAR IN FRENCH LITERARY GENRES AND MOVEMENTS** (3). SEM. 3. Pr., four FLFR 3000-level courses or departmental approval, or graduate standing. Seminar in advanced languages skills or topics from French...
literary genres and movements. Course may be repeated for a maximum of 6 credit hours.

FLGR 7000 GRADUATE FRENCH ABROAD (1-9). FLD. Pr., departmental approval. For course work at the graduate level taken on an approved study program abroad. Course may be repeated for a maximum of 9 credit hours.

FLGR 7010 ADVANCED FRENCH CIVILIZATION (3). LEC. 3. Pr., departmental approval. An in-depth study of French civilization with emphasis on the relationship of history, arts, and literature from prehistoric times to the present.

FLGR 7020 ADVANCED COMPOSITION AND STYLISTICS (3). LEC. 3. Pr., Graduate status, or departmental approval. Acquisition of advanced writing skills in French. Techniques and strategies of appropriate stylistic expression through analysis of various sources of texts; literary, historical, commercial, popular, etc.

FLGR 7900 INTRODUCTION TO COLLEGE-LEVEL FRENCH INSTRUCTION (1). LEC. 1. SU. Pr., departmental approval. Orientation to French graduate studies. Introduction to College-level French instruction, critical observation of performance and guidance by designated instructors. This course must be taken every semester while student is holding a teaching assistantship.

FLGR 7430 FRENCH PRESS (3). LEC. 3. Pr., departmental approval. Political, intellectual and cultural events in France, Europe, and the world as reflected in major French daily and weekly publications.

FLGR 7740 ADVANCED TRANSLATION (3). LEC. 3. Pr., Graduated status, or departmental approval. Acquisition of skills for translation from French to English and from English to French using a wide variety of texts, including historical, literary, commercial, and popular sources.

FLGR 7920 FOREIGN LANGUAGE CAREER INTERNSHIP (1-6). INT. Pr., departmental approval. Experiential learning either in the business community or in university-sponsored programs outside the United States. Course may be repeated for a maximum of 6 credit hours.

FLGR 7930 SPECIAL TOPICS IN LANGUAGE SKILLS (3). LEC. 3. Course may be repeated for a maximum of 6 credit hours.

FLGR 7960 DIRECTED READINGS IN FRENCH LANGUAGE, LITERATURE OR CULTURE (1-3). IND. Pr., departmental approval. Study in a specialized area under close supervision of an instructor. Course may be repeated for a maximum of 6 credit hours.

FLGR 7970 SEMINAR IN FRENCH LITERATURE, CULTURE OR LANGUAGE (1-3). SEM. Pr., Graduate standing and departmental approval. The detail study of a specific aspect of the French language, literature, or culture. Fall. Course may be repeated for a maximum of 9 credit hours.

GREEK (FLGK)

FLGK 1010 ELEMENTARY CLASSICAL GREEK I (4). LEC. 3. LAB. 2. Classical Greek. Introduction to the knowledge and skills necessary for reading ancient Greek. Fall.


FLGK 3110 CLASSICAL GREEK LITERATURE (3). LEC. 3. LAB. 2. Pr., FLGK 2010 or departmental approval. Advanced readings in ancient Greek prose and poetry. Course may be repeated with change in topic.

FLGK 3510 CLASSICAL GREEK LITERATURE AND CULTURE IN TRANSLATION (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Classical Greek cultural practices and ideology with a focus on literary evidence. Readings in English.

FLGK 3900 INDEPENDENT STUDY IN ANCIENT GREEK LITERATURE (1-3). IND. Pr., FLGK 2010, departmental approval. Independent study of classical Greek text(s). Topic proposed by student in conjunction with faculty adviser. Course may be repeated with change in topic.

GERMAN (FLG)

FLGR 1000 ELEMENTARY GERMAN ABROAD (1-10). IND. Pr., departmental approval. Course work at the elementary level. This credit may substitute for required 1000 level courses in German. Course may be repeated for a maximum of 10 credit hours.

FLGR 1010 ELEMENTARY GERMAN I (4). LEC. 3. LAB. 2. Fundamentals of German language skills stressed. Exposure to Germanic civilization. For students with no previous background or less than two years of high school German.

FLGR 1020 ELEMENTARY GERMAN II (4). LEC. 3. LAB. 2. Pr., FLGR 1010 or departmental approval. Review of basic German grammar and vocabulary. Fundamentals of German language skills with progressive emphasis on conversation. Fulfills the College of Liberal Arts foreign language core requirement.

FLGR 1960 READING PROFICIENCY IN GERMAN (3). LEC. 3. SU. Pr., graduate standing. Reading proficiency for graduate students, who should consult their advisors for specific departmental language requirements. May not be used to satisfy undergraduate language requirements. Fall.

FLGR 2000 INTERMEDIATE GERMAN ABROAD (1-10). FLD. Pr., departmental approval. Course work at the intermediate level taken on an approved study program abroad. The student should consult with the German undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

FLGR 2010 INTERMEDIATE GERMAN I (4). LEC. 3. LAB. 2. Pr., FLGR 1020 or 4 years of high school German, or departmental approval. Language skills stressed; structural review and composition; readings in German literature and German civilization.


FLGR 3000 JUNIOR/ADVANCED GERMAN ABROAD (1-10). FLD. Pr., departmental approval. Course work at the advanced level taken on an approved study program abroad. The student should consult with the German undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

FLGR 3010 BEGINNING GERMAN COMPOSITION AND CONVERSATION (3). LEC. 3. Pr., FLGR 2010 or equivalent. Concentration on developing skills in written and spoken German. Review of German grammar and syntax, vocabulary building. Work in German phonology. Fall.

FLGR 3020 INTERMEDIATE GERMAN COMPOSITION AND CONVERSATION (3). LEC. 3. Pr., FLGR 3010 or equivalent. Further development of skills in written and spoken German. Continued review of selected topics of grammar and syntax, and vocabulary acquisition. Spring.

FLGR 3030 ADVANCED GERMAN COMPOSITION AND CONVERSATION (3). LEC. 3. Pr., FLGR 3020 or equivalent. Intensive practice and refinement of skills in written and spoken German. Strategies of vocabulary acquisition and retention. Fall.

FLGR 3100 INTRODUCTION TO GERMAN LITERATURE (3). LEC. 3. Pr., FLGR 2010 or departmental approval. Basic literary genres and major figures in German literature from the 18th century to the present; literary methodologies and bibliographical tools. Required of all German majors. Fall.

FLGR 3110 GERMAN CULTURE AND CIVILIZATION I (3). LEC. 3. Pr., FLGR 2010 or departmental approval. Social, political and cultural history of Germany from the Germanic tribes to 1945. Fall.

FLGR 3120 GERMAN CULTURE AND CIVILIZATION II (3). LEC. 3. Pr., FLGR 2010 or departmental approval. Social, political and cultural history of Germany from 1945 to the present. Spring.

FLGR 3150 SELECTED TOPICS IN GERMAN LITERATURE, LANGUAGE AND CULTURE (3). LEC. 3. Pr., FLGR 2020 or departmental approval. Critical study of specific literary, linguistic and/or cultural topics in German studies. Course may be repeated with change in topic.

FLGR 4000 SENIOR/ADVANCED GERMAN ABROAD (1-10). FLD. Pr., departmental approval. Course work at the senior/advanced level taken on an approved study program abroad. The student should consult with the German undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

FLGR 4110 MASTERPIECES OF GERMAN LITERATURE I (3). LEC. 3. Pr., FLGR 3010 or departmental approval. Selected readings by representative authors from the periods of German Classicism, Romanticism, Naturalism and Realism. Fall.

FLGR 4120 MASTERPIECES OF GERMAN LITERATURE II (3). LEC. 3. Pr., FLGR 3010 or departmental approval. Selected readings by representative authors from the periods of the early 20th century, Weimar Republic, and Post-War Germany. Winter.

FLGR 4150 GERMAN DRAMA (3). LEC. 3. Pr., Three FLGR 3000-level German courses or departmental approval. Consideration, analysis and criticism of selected German theater works by representative authors. Fall.

FLGR 4160 CONTEMPORARY GERMAN LITERATURE (3). LEC. 3. Pr., 3 FLGR 3000-level German courses or departmental approval. Consideration, analysis and criticism of recent selected German literary works. Winter.

FLGR 4310 GERMAN FOR BUSINESS AND ECONOMICS I (3). LEC. 3. Pr., FLGR 2020 or departmental approval. Emphasis on speaking, listening, read-
ing and writing skills in professional, commercial German. Familiarization with German and European business practices. Fall.


**FLGR 4510 GERMAN LITERATURE TRANSLATION I** (3). LEC. 3. Pr., departmental approval. From Goethe to Thomas Mann. Reading and analysis of significant literary works by major German writers from 1750 to 1945. Fall.

**FLGR 4520 GERMAN LITERATURE TRANSLATION II** (3). LEC. 3. Pr., departmental approval. Postwar German literature. Reading and analysis of significant literary works by major German writers from 1945 to the present. Spring.

**FLGR 4900 INDEPENDENT WORK IN GERMAN** (1-3). IND. Pr., at least one FLGR 4000-level German course, departmental approval. Directed study in an area of special interest for the superior student in German. Course may be repeated for a maximum of 6 credit hours.

**FLGR 4910 PRACTICUM IN GERMAN** (1-6). PRA. Pr., departmental approval. Number of hours and applicability toward major to be determined in consultation with the adviser. Course may be repeated for a maximum of 6 credit hours.

**FLGR 4950 SEMINAR IN GERMAN LITERATURE** (3). SEM. 3. Pr., FLGR 3010 or departmental approval. Readings in German literature from selected periods or in selected genres.

**FLGR 4980 SENIOR CAPSTONE** (1). IND. 1. SU. Pr., senior standing. German major. Assessment of language skills through written paper and oral exam. Fall, Spring.

**ITALIAN (FLIT)**

**FLIT 1000 ELEMENTARY ITALIAN ABROAD** (1-10). IND. Pr., departmental approval. Course work at the elementary level taken on an approved study program abroad. The student should consult the Italian undergraduate adviser for an estimate of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

**FLIT 1010 ELEMENTARY ITALIAN I** (4). LEC. 3. LAB. 2. For students with little or no knowledge of Italian. Basic language skills. Exposure to culture. Fall.

**FLIT 1020 ELEMENTARY ITALIAN II** (4). LEC. 3. LAB. 2. Pr., FLIT 1010 or departmental approval. Continuation of basic language skills. Exposure to culture. FALL. Completes the College of Liberal Arts foreign language core requirement. Spring.

**FLIT 2000 INTERMEDIATE ITALIAN ABROAD** (1-6). FLD. Pr., departmental approval. Course work at the intermediate level taken on an approved study program abroad. The student should consult with the Italian undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

**FLIT 2010 INTERMEDIATE ITALIAN I** (4). LEC. 3. LAB. 2. Pr., FLIT 2000 or departmental approval. Special emphasis on conversation and Italian culture. Language skills stressed, grammar review. Fall.


**FLIT 3000 JUNIOR/ADVANCED ITALIAN ABROAD** (1-9). FLD. Pr., departmental approval. Course work at the junior/advanced level taken on an approved study program abroad. The student should consult with the Italian undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

**FLIT 3110 SPECIAL TOPICS IN ITALIAN** (3). LEC. 3. Pr., FLIT 2010 or departmental approval. Supplementary instruction in Italian language, literature, culture.

**FLIT 3510 INTRODUCTION TO ITALIAN CULTURE IN ENGLISH** (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127. Significant aspects of Italian culture, as reflected in arts, film, literature, history.

**FLIT 3900 INDEPENDENT STUDY IN ITALIAN** (1-3). IND. Pr., departmental approval. Directed study in an area of special interest for the superior student in Italian. Course may be repeated with change in topic.

**JAPANESE (FLJP)**


**LATIN (FLGN)**


**FLNG 1020 ELEMENTARY LATIN II** (4). LEC. 3. LAB. 2. Pr., FLNG 1010 or departmental approval. Introduction to the knowledge and skills necessary for reading classical Latin. Fulfills College of Liberal Arts core foreign language requirement. Spring.

**FLNG 2010 INTERMEDIATE LATIN I** (4). LEC. 3. LAB. 2. Pr., FLNG 1020 or 4 years of high school Latin or departmental approval. Review of classical Latin grammar with reading of selections from Latin literature. Fall.


**FLNG 3110 LATIN LITERATURE** (3). LEC. 3. Pr., FLNG 2010 or departmental approval. Advanced readings in Latin prose and poetry. Course may be repeated with change in topic.

**FLNG 3510 ROMAN LITERATURE AND CULTURE IN TRANSLATION** (3). LEC. 3. Pr., ENGL 1120. Roman cultural practices and ideology with a focus on literary evidence. Readings in English.

**FLNG 3900 INDEPENDENT STUDY IN LATIN LITERATURE** (1-3). IND. Pr., FLNG 2010 or departmental approval. Independent study of Latin Text(s). Topic proposed by student in conjunction with faculty adviser. Course may be repeated with change in topic.

**FLNG 3960 READING PROFICIENCY IN LATIN** (3). LEC. 3. Pr., graduate standing and FLNG 1020 or departmental approval. To prepare graduate students to pass the graduate proficiency exam in Latin. Students should check with their Graduate Director for Departmental language requirements before enrolling.

**FOREIGN LANGUAGE (FLNG)**

**FLNG 1000 ELEMENTARY FOREIGN LANGUAGE ABROAD** (1-10). FLD. Pr., departmental approval. For languages not currently taught in the department of Foreign Languages and Literatures, but taken through approved distance learning or study abroad programs. Credit awarded in consultation with departmental adviser. Course may be repeated for a maximum of 10 credit hours.

**FLNG 2000 INTERMEDIATE FOREIGN LANGUAGE** (1-10). LEC. Pr., departmental approval. For languages not currently taught in the Department of Foreign Languages and Literatures, but taken through approved distance learning or study abroad programs. Credit awarded in consultation with departmental adviser. Course may be repeated for a maximum of 10 credit hours.

**FLNG 4997 HONORS THESIS** (1-6). IND. Pr., membership in the Honors College; departmental approval. Directed readings and research culminating in a thesis. Course may be repeated for a maximum of 6 credit hours.

**RUSSIAN (FLRU)**


**FLRU 2010 INTERMEDIATE RUSSIAN I** (4). LEC. 3. LAB. 2. Pr., FLRU 1020 or departmental approval. Stress on language skills, structural review and composition. Continued exposure to Russian civilization.


**FLRU 2510 RUSSIAN CULTURE (IN ENGLISH)** (3). LEC. 3. Intensive exposure to Russian culture from the 10th century to the Revolution as reflected in the fine arts and literature.

**FLRU 2520 RUSSIA TODAY (IN ENGLISH)** (3). LEC. 3. Intensive introduction to Russian culture from the Revolution to the present, as reflected in the fine arts and literature.
FLSP 1000 ELEMENTARY SPANISH ABROAD (1-10). FLD. Pr., departmental approval. Course work at the elementary level. This credit may substitute for required 1000 level courses in Spanish. Course may be repeated for a maximum of 10 credit hours.

FLSP 1010 ELEMENTARY SPANISH I (4). LEC. 3. LAB. 2. Basic language skills stressed with progressive emphasis on conversation. Exposure to Hispanic civilization. For students with less than 2 years of high school Spanish.


FLSP 1950 READING PROFICIENCY IN SPANISH (3). LEC. 3. SU. Pr., departmental approval. Reading proficiency in Spanish. Course work at the intermediate level taken on an approved study program abroad. The student should consult with the Spanish undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

FLSP 2010 INTERMEDIATE SPANISH I (4). LEC. 3. LAB. 2. Pr., FLSP 1020 or departmental approval. A review of grammatical structures, development of reading and writing skills, and increased understanding of Hispanic cultures. Fall, Spring.

FLSP 2020 INTERMEDIATE SPANISH II (4). LEC. 3. LAB. 2. Pr., FLSP 2010 or departmental approval. Continued review of grammatical structures, development of reading and writing skills, and increased understanding of Hispanic cultures. Fall, Spring.

FLSP 2000 JUNIOR ADVANCED SPANISH ABROAD (1-9). FLD. Pr., departmental approval. Course work at the junior/advanced level taken on an approved study program abroad. The student should consult with the Spanish undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 10 credit hours.

FLSP 3010 SPANISH PHONETICS (3). LEC. 3. Pr., FLSP 2020 or departmental approval. Training in practical phonetics with an emphasis on pronunciation and intonation. Fall, Spring.

FLSP 3020 SPANISH SYNTAX (3). LEC. 3. Pr., FLSP 2020 or departmental approval. Sentence structure in Spanish emphasizing the interrelationship among the various parts of speech. Fall, Spring.

FLSP 3030 SPANISH CONVERSATION (3). LEC. 3. Pr., FLSP 2020 or departmental approval. Intensive practice in the Spanish language and review of vocabulary and structure. Course may be repeated for a maximum of 6 credit hours. Fall, Spring.


FLSP 3110 SPANISH CIVILIZATION I (3). LEC. 3. Pr., FLSP 3040. Culture of Spain up to 1700. Emphasis on geographical, historical, political, and social forces in Hispanic civilization. Fall.

FLSP 3120 SPANISH CIVILIZATION II (3). LEC. 3. Pr., FLSP 3040. Culture of Spain from 1700 to the present. Emphasis on geographical, historical, social, artistic, spiritual and political forces in Spanish civilization. Spring.

FLSP 3210 SPANISH AMERICAN CIVILIZATION I (3). LEC. 3. Pr., FLSP 3040. Intensive exposure to the culture of Spanish America from Pre-Colombian times through the independence movement. Fall.

FLSP 3220 SPANISH AMERICAN CIVILIZATION II (3). LEC. 3. Pr., FLSP 3040. Development of reading and writing skills, and increased understanding of Hispanic cultures. Fall.

FLSP 3310 COMMERCIAL SPANISH TRANSLATION (3). LEC. 3. Pr., FLSP 3040. Introduction to the techniques of English/Spanish and Spanish/English translation in a commercial environment, including correspondence, technical documents, advertising and oral translation. Fall.

FLSP 4000 SENIOR ADVANCED SPANISH ABROAD (1-9). FLD. Pr., departmental approval. Course work at the senior/advanced level taken on an approved study program abroad. The student should consult with the Spanish undergraduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 9 credit hours.

FLSP 4020 CONTINUING SPANISH SYNTAX (1-3). IND. Pr., departmental approval. Continuing practice in Spanish syntax. Course may be repeated for a maximum of 3 credit hours.

FLSP 4030 CONTINUING SPANISH CONVERSATION (1-3). IND. Pr., departmental approval. Continuing practice in Spanish conversation. Course may be repeated for a maximum of 3 credit hours.

FLSP 4040 CONTINUING SPANISH SYNTAX (1-3). IND. Pr., departmental approval. Continuing practice in Spanish composition. Course may be repeated for a maximum of 3 credit hours.

FLSP 4110 MASTERPIECES OF SPANISH LITERATURE (3). LEC. 3. Pr., FLSP 3040. Major works of Spanish literature from medieval times to the present. Fall.


FLSP 4210 MASTERPIECES OF SPANISH AMERICAN LITERATURE (3). LEC. 3. Pr., FLSP 3040. Major works of Spanish American literature from Colonial times to the present. Fall.


FLSP 4420 TOPICS IN HISPANIC LITERATURE AND CULTURE (3). LEC. 3. Pr., FLSP 3040. An analysis of the cultural milieu which influences artistic creativity within a historical perspective. Spring.

FLSP 4510 SPANISH LITERATURE TRANSLATION (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127 or departmental approval. Major works of Spanish literature in English translation.

FLSP 4520 SPANISH AMERICAN LITERATURE IN TRANSLATION (3). LEC. 3. Pr., ENGL 1120 or ENGL 1127 or departmental approval. Major works of Spanish American literature in English translation.

FLSP 4910 PRACTICUM IN SPANISH (1-3). PRA. Pr., departmental approval. Academic credit for practical work experience related to the major field. Course may be repeated for a maximum of 3 credit hours.

FLSP 4980 SENIOR CAPSTONE (1). IND. 1, SU. Pr., senior standing. Spanish major. Assessment of language skills through written paper and oral exam. Fall, Spring.

FLSP 6000 ADVANCED SPANISH PHONETICS (3). LEC. 3. Pr., Four 3000-level Spanish courses or departmental approval. Advanced training in Spanish phonetics with specific course materials determined by needs of students.

FLSP 6020 ADVANCED SPANISH SYNTAX (3). LEC. 3. Pr., Four 3000-level Spanish courses or departmental approval. Advanced training in Spanish syntax and stylistics with specific course materials determined by needs of students.

FLSP 7000 GRADUATE SPANISH ABROAD (1-9). FLD. Pr., departmental approval. Course work at the graduate level taken on an approved study program abroad. The student should consult with the Spanish graduate adviser for an estimation of credit prior to going abroad. Course may be repeated for a maximum of 9 credit hours.

FLSP 7010 HISTORY OF THE SPANISH LANGUAGE (3). LEC. 3. The dichronic study of the development of the Spanish language from its Latin origins to the present.

FLSP 7020 SPANISH LINGUISTICS (3). LEC. 3. A synchronic study of the Spanish language focusing on phonology, morphology, syntax and lexicos, taking into consideration dialectical differences.

FLSP 7050 LITERARY CRITICISM AND THEORY (3). LEC. 3. A study of contemporary literary criticism and theory as it relates to Spanish and Spanish American literature.

FLSP 7060 RESEARCH METHODS (1). LEC. 1, SU. An introduction to the methods of scholarly investigation in literary history and criticism. Credit may not be used to satisfy degree requirements.

FLSP 7090 INTRODUCTION TO COLLEGE-LEVEL SPANISH INSTRUCTION (1). LEC. 1, SU. Instruction for graduate teaching assistants including critical observation in performance and guidance by a designated supervisory professor. Required of all students who hold a graduate teaching assistantship. Credit may not be used to satisfy degree requirements.

FLSP 7110 MEDIEVAL SPANISH LITERATURE (3). LEC. 3. A critical and historical study of medieval Spanish literature through representative texts from the various genres of the period.
FLSP 7120 16TH CENTURY SPANISH LITERATURE (3). LEC. 3. A critical and historical study of representative literary works in all genres from around 1492 to the end of the 16th Century.

FLSP 7130 17TH CENTURY SPANISH LITERATURE (3). LEC. 3. A critical and historical study of representative literary works in all genres in the 17th Century with emphasis on Baroque literature.


FLSP 7160 20TH CENTURY SPANISH LITERATURE (3). LEC. 3. A critical and historical study of 20th-century Spanish literature from the perspective of the Generation of 98 to Spanish post-war literature through representative works in all genres.

FLSP 7170 CONTEMPORARY SPANISH LITERATURE (3). LEC. 3. A critical and historical study of contemporary literature from the Spanish Civil War to the present through representative works in all genres.

FLSP 7210 COLONIAL SPANISH-AMERICAN LITERATURE (3). LEC. 3. A critical and historical study of representative literary genres and authors of Vice Regal America from Spanish transcription of Pre-Columbian works to those just prior to the Wars of Independence.

FLSP 7220 SPANISH AMERICAN POETRY I (3). LEC. 3. A critical and historical study of the development of Spanish American poetry from 1824 to the first generation of Modernism.

FLSP 7230 SPANISH AMERICAN POETRY II (3). LEC. 3. A critical and historical study of the development of Spanish American Poetry from Post-Modernism to the present.

FLSP 7240 SPANISH AMERICAN POST-COLONIAL PROSE TEXTS TO THE NEW NARRATIVE (3). LEC. 3. A critical and historical study of representative essayists and fiction writers of the 19th and 20th centuries predating the New Narrative.

FLSP 7250 THE NEW NARRATIVE IN SPANISH AMERICAN FICTION: MODERNIST AND POST-MODERNIST TEXTS (3). LEC. 3. A critical and historical study of major works of Modernist and Postmodernist fiction that achieved international acclaim during the second half of the 20th century.

FLSP 7270 SPANISH AMERICAN THEATER (3). LEC. 3. A critical and historical study of the development of Spanish American Theater in the 19th and 20th Century with emphasis on the contemporary period.

FLSP 7970 SEMINAR IN LINGUISTICS, LITERATURE, AND CULTURE (3). SEM. 3. An in-depth study of a movement of author(s) or an analysis of the cultural milieu which influences creativity. Course may be repeated with change in topic.

FLSP 7990 RESEARCH AND THESIS (1-10). MST. TD. Directed readings and research culminating in a thesis. Course may be repeated with change in topic.

Forestry and Wildlife Sciences (FOWS)
Dean Richard Brinker - 844-1007

FOREST ENGINEERING (FOEN)

FOEN 3000 INTRODUCTION TO FORESTRY OPERATIONS (1). LAB. 3. Pr., FORY major. Introduction to basic field operations in Forestry including site preparation and planting, harvesting and primary manufacturing processes. Summer.

FOEN 3040 FOREST SURVEYING (3). LEC. 1. LAB. 8. Pr., FORY major. Basic land surveying concepts and procedures as applied to Forestry. Use of basic surveying instruments and calculations for land areas, boundaries, and topographic features.

FOEN 4220 LOW-VOLUME ROAD DESIGN (3). LEC. 2. LAB. 3. Pr., FOEN 3040. BSEN 3230. Engineering design of low volume, unpaved roads, especially for forestry applications, including preconstruction planning, construction and maintenance, horizontal and vertical alignment, earthwork volume and distribution analysis, cost analysis, and Best Management Practices. Fall.

FOEN 4730 APPLICATION OF TIMBER HARVESTING TECHNIQUES (2). LEC. 1. LAB. 3. Pr., FOEN 6700. Business considerations including safety, regulations, contracts, deeds and cost accounting and analysis combined with equipment operation and maintenance. Fall.

FOEN 4900 SPECIAL PROBLEMS IN FOREST ENGINEERING (1-4). IND. Pr., departmental approval. Faculty supervision of individual student investigations of specialized problems in forest engineering. Course may be repeated for a maximum of 12 credit hours.

FOEN 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College; departmental approval. Topics of an undergraduate nature pertinent to Forest Engineering. Course may be repeated for a maximum of 3 credit hours.

FOEN 4970 SPECIAL TOPICS IN FOREST ENGINEERING (1-4). LEC. Pr., departmental approval. Individual or small group study of a specialized area in forest engineering. Course may be repeated for a maximum of 12 credit hours.

FOEN 4997 HONORS THESIS (1-6). IND. Pr., membership in the Honors College; departmental approval. Directed research and Honors Thesis. Course may be repeated for a maximum of 6 credit hours.

FOEN 6230 ENGINEERED WOOD STRUCTURE DESIGN (3). LEC. 2, LAB. 3, Pr., FOPR 2070. Load, deflection criteria; engineering characteristics of wood; designing wood components and mechanical connections; shear walls and diaphragms; trusses; bridges; post-frame construction. Fall.

FOEN 6700 HARVESTING (3). LEC. 2, LAB. 3. Pr., FORY 3100. Analysis of the administration of timber harvest, equipment choice, planning methods, movement of timber products, machine and system costs, balancing of harvesting systems, logging safety, and environmental impact. Spring.


FOEN 6900 SPECIAL PROBLEMS IN FOREST ENGINEERING (1-4). IND. Pr., departmental approval. Faculty supervision of individual student investigations of advanced specialized problems in forest engineering. Course may be repeated for a maximum of 12 credit hours.

FOEN 6970 SPECIAL TOPICS IN FOREST ENGINEERING (1-4). IND. Pr., departmental approval. Individual or small group study of an advanced specialized area in forest engineering. Course may be repeated for a maximum of 12 credit hours.

FOEN 7970 SPECIAL TOPICS IN FOREST ENGINEERING (1-4). IND. Pr., departmental approval. Individual or small group study of an advanced specialized area in forest engineering. Course may be repeated for a maximum of 12 credit hours.

FOREST PRODUCTS (FOPR)

FOPR 3390 INTRODUCTION TO WOOD SCIENCE AND FOREST PRODUCTS (3). LEC. 2. LAB. 3. Pr., FORY 3020. The basic properties of wood and their impact on the manufacture of forest products. Identification of important products and woods.


FOPR 4930 DIRECTED STUDY (1-3). IND. Pr., departmental approval. Study of timely topics in forest products on an as needed or as available basis. Course may be repeated for a maximum of 6 credit hours.


FOPR 6300 MECHANICAL AND PHYSICAL PROPERTIES OF WOOD (3). LEC. 2. LAB. 3. Pr., FOPR 4200. Mechanical and physical properties of wood and factors affecting their structural performance, including wood-moisture relationships, density, specific gravity, thermal, electrical and acoustical properties.

FOPR 6350 FOREST PRODUCTS PRODUCTION AND OPERATIONS MANAGEMENT (3). LEC. 3. Pr., FOPR 3390. Production and operations management concepts, principles and techniques applied to wood products manufacturing. Problem situation analyses with emphasis on economic decision making.

FOPR 6360 FOREST PRODUCTS MARKETING (3). LEC. 3. Pr., FOPR 3390. Managerial approach to marketing of forest products. In-depth examination of major forest products markets, the Marketing Mix concept, and marketing strategy and tactics.

FOPR 6500 MODERN SAWMILL TECHNOLOGY AND OPERATIONS MANAGEMENT (3). LEC. 3. Pr., FOPR 3390. Design, operation and management of sawmills with emphasis on computer-aided processing and decision making.
FORY 6440 INTERNATIONAL FORESTRY (2). LEC. 2. Pr., senior standing. Presentation of the world's forested ecosystems, their characteristics, silviculture, utilization, international trade and policies affecting their sustainable use.

FORY 6480 GIS DATABASE DESIGN AND ANALYSIS (2). LEC. 2. Pr., departmental approval. Geographic information system database planning, design, creation, management and analysis using a project oriented approach.

FORY 6650 URBAN FORESTRY (3). LEC. 2. LAB. 3. Pr., FORY 3100 or HORT 3220. Principles and concepts of tree establishment, management and health in an urban environment. Case studies of urban forestry programs are presented.

FORY 7110 ADVANCED FOREST SOILS (3). LEC. 2. LAB. 3. Pr., AGRN 2040, FORY 6230. Forest soil processes for the individual tree, forest community, and the forest ecosystem.


FORY 7150 FOREST HEALTH (3). LEC. 3. LAB. 3. Pr., FORY 3020 or BIOL 3060. Ecology. Importance, taxonomy, identification and integrated pest management strategies of principle disease, insect and abiotic disorders of forest and shade trees from seedlings to maturity and forest products. Fall.

FORY 7170 ECOPHYSIOLOGY OF FOREST TREES (3). LEC. 3. Pr., BIOL 3100 or FORY 3200. Interactions among the environment, silvicultural practices, physiological mechanisms and tree growth. Integration of root, shoot and foliar functions and leaf, and tree and stand level processes.

FORY 7220 LANDSCAPE ECOLOGY (3). LEC. 3. Pr., BIOL 3060, or FORY 4230 or BIOL 6140. The development and dynamics of spatial heterogeneity, interactions and exchange across heterogeneous landscapes and the influence of spatial heterogeneity on biotic and abiotic processes. Fall.


FORY 7330 ECOLOGY AND SILVICULTURE OF EASTERN HARDWOOD FOREST (3). LEC. 2. LEC. 3. Pr., FORY 4230. Silvical characteristics of major hardwood species and community composition, dynamics, site relationships, and silviculture of Southern and Eastern deciduous forests, emphasizing oaks.

FORY 7440 FOREST FINANCE AND INVESTMENT (3). LEC. 3. Pr., departmental approval. Principles of corporate and real estate finance as applied to commercial timberland and the place of this asset class in individual and institutional portfolios.

FORY 7450 FOREST SECTOR ECONOMICS (4). LEC. 4. Pr., FORY 6400. Fundamentals of forest industry, timber supply and demand, forest products supply and demand, technological change, international trade and development, sophisticated forest sector modelling.

FORY 7460 ADVANCED FOREST ECONOMICS (3). LEC. 3. Evolution of the role of economics in forestry, policy and production analysis methods, non-market valuation, and regional analysis.

FORY 7470 GIS APPLICATIONS IN NATURAL RESOURCES (2). LEC. 1. LAB. 3. Pr., departmental approval. Basic understanding of GIS through discussions of the components of a GIS and how GIS are used in natural resource applications.


FORY 7510 RESEARCH METHODS (2). LEC. 1. LAB. 3. Overview of the scientific method and its application in forestry/natural resources research. Evaluation and preparation of project proposals with emphasis on research quality and written communication. Role of tree establishment, management and health.

FORY 7580 NATURAL RESOURCE POLICY ANALYSIS AND ADMINISTRATION (3). LEC. 3. The policy-making process, the history of natural resource and environmental policy, and applied techniques in policy analysis.

FORY 7850 URBAN FORESTRY SEMINAR (1). SEM. 1. Presentation and discussion of research, scientific papers and issues related to urban forest establishment, care and planning. Credit will not be given for both FORY 7850 and HORT 7850.

FORY 7910 PRACTICUM IN COLLEGE TEACHING (1). PRA. 1. SU. Techniques and practice of collegiate teaching at the level of Graduate Assistant. Students work under direct supervision and tutelage of the instructor.

FORY 7930 DIRECTED STUDY (1-3). IND. Pr., departmental approval. Course may be repeated for a maximum of 10 credit hours.

FORY 7950 SEMINAR (1). IND. Pr., departmental approval. Analysis of a problem in Forestry or wood utilization involving library research, laboratory or field work and a report on the findings. Course may be repeated for a maximum of 6 credit hours.

FORY 7980 MASTER OF FORESTRY PAPER (02 - 02). IND. Pr., departmental approval; student in the Master of Forestry Degree Program. In-depth study involving library research, data collection and/or data analysis.

FORY 7990 RESEARCH AND THESIS (1-15). MST. TD. Pr., departmental approval. Course may be repeated with change in topic.

FORY 8930 DIRECTED STUDY (1-3). IND. Pr., departmental approval. Course may be repeated for a maximum of 10 credit hours.

FORY 8970 SPECIAL PROBLEMS (2-6). IND. Pr., departmental approval. Course may be repeated for a maximum of 6 credit hours.

FORY 8990 RESEARCH AND DISSERTATION (1-15). DSR. TD. Pr., departmental approval. Course may be repeated with change in topic.

WILDLIFE SCIENCES (WILD)

WILD 2050 WILDLIFE CONSERVATION HISTORY AND LAW (3). LEC. 3. The history of wildlife conservation in North America, the conservation problems that have arisen since European settlement, and the laws and practices that have evolved to remedy them.

WILD 3280 PRINCIPLES OF WILDLIFE MANAGEMENT (3). LEC. 3. Pr., or corequisite BIOL 3060. Fundamentals of wildlife management theory, application and administration.


WILD 4920 WILDLIFE MANAGEMENT INTERNSHIP (4). LEC. 4. PR, Su. Pr., departmental approval. Practical job experience under joint supervision of the Internship advisor and appropriate state, federal or private agency. Training will prepare student for potential career employment.

WILD 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College and departmental approval. Topics of an undergraduate nature pertinent to wildlife sciences. Course may be repeated for a maximum of 3 credit hours.

WILD 4970 SPECIAL PROBLEMS IN WILDLIFE SCIENCE (1-5). RES. Pr., departmental approval. Course may be repeated for a maximum of 5 credit hours.

WILD 4997 HONORS THESIS (1-6). IND. Pr., membership in the Honors College and departmental approval. Directed research and writing of honors thesis. Course may be repeated for a maximum of 6 credit hours.

WILD 6270 WILDLIFE RESOURCE PHILOSOPHY AND POLICY (3). LEC. 3. Pr., WILD 3280, WILD 6280, or WILD 6290 or departmental approval. Examination of attitudes, philosophies and policies that govern management of the wildlife resource. Extensive reading and class participation required.

WILD 6280 WILDLIFE ECOLOGY AND MANAGEMENT I (3). LEC. 3. Pr., WILD 3280 or departmental approval. Intensive study of the ecology and management of selected waterfowl, galliforms, gruiforms, raptors, shorebirds, doves and pigeons, woodpeckers and neotropical migrants.

WILD 6281 WILDLIFE ECOLOGY AND MANAGEMENT I LABORATORY (1). LAB. 4. Pr., or corequisite WILD 6280. Outdoor and audiovisual identification of selected bird species, habitats, and techniques used to manipulate bird populations and habitats. Some weekend field trips required.

WILD 6290 WILDLIFE ECOLOGY AND MANAGEMENT II (3). LEC. 3. Pr., WILD 3280 or departmental approval. Intensive study of the ecology and management of selected avian species, habitats, and techniques used to manipulate bird populations and habitats. Some weekend field trips required.

WILD 6310 WILDLIFE MANAGEMENT TECHNIQUES (3). LEC. 1. LAB. 6. Pr., WILD 6280 or WILD 6290. Intensive study of field and laboratory techniques used to manage wildlife populations, including censusing, habitat mapping, prescribed burning, GIS and computer simulation.

WILD 7070 UPLAND WILDLIFE ECOLOGY (4). LEC. 3. LAB. 6. Pr., WILD 6280 or departmental approval. Application of wildlife ecological theories and methods with emphasis on upland species and habitats. Several overnight field trips may be made.
WILD 7080 FOREST WILDLIFE ECOLOGY AND MANAGEMENT (4). LEC. 4. Pr., WILD 6280. In-depth discussions into life history, biology, ecology and management of important wildlife species of forested ecosystems. Management strategies for each species emphasized.


WILD 7930 DIRECTED STUDY (1-3). LEC. Pr., Departmental approval. Directed studies in subject matter not covered by an existing course or to supplement knowledge gained from existing course offerings. Course may be repeated for a maximum of 9 credit hours.

WILD 7950 GRADUATE SEMINAR (1). SEM. 1. SU. Students develop ability and confidence in making oral presentations based upon research and provide constructive criticism of their peers' presentations.

WILD 7970 SPECIAL PROBLEMS IN WILDLIFE SCIENCE (1-5). RES. Pr., departmental approval. Provides graduate students seeking the master's degree opportunities to work with individual wildlife science professors to investigate timely research topics. Course may be repeated for a maximum of 5 credit hours.

WILD 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval. Course may be repeated with change in topic.

WILD 8970 SPECIAL PROBLEMS IN WILDLIFE SCIENCE (1-5). RES. Pr., departmental approval. Provides graduate students seeking the doctoral degree opportunities to work with individual wildlife science professors to investigate timely research topics. Course may be repeated for a maximum of 5 credit hours.

WILD 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Pr., departmental approval. Course may be repeated with change in topic.

Geology and Geography

Dr. Robert B. Cook - 844-4282

GEOGRAPHY (GEOG)

GEOG 1010/1013 GLOBAL GEOGRAPHY (3). LEC. 3. Social Science I Core. Spatial and locational context for analyzing change in the contemporary world, including elements of both physical and cultural environments.

GEOG 1017 HONORS GLOBAL GEOGRAPHY (3). LEC. 3. Spatial and locational context for analyzing change in the contemporary world, including elements of both physical and cultural environments.


GEOG 2020 PHYSICAL GEOGRAPHY (3). LEC. 3. Selected elements of the earth's physical system to include such items as landforms, basic weather elements, soils and vegetation.

GEOG 2100 WORLD GEOGRAPHY (3). LEC. 3. Land and people of the major regions of the world in the context of change and development.

GEOG 2800 GEOGRAPHIC METHODS AND TECHNIQUES (4). LEC. 3, LAB. 2. Pr., COMP 1000 or departmental approval. Key geographical concepts and production of basic geographical tools for portraying spatial data through laboratory exercises.

GEOG 3110 UNITED STATES AND CANADA (3). LEC. 3. Survey of the region incorporating physical and cultural elements, providing a synthesis of the economic and political processes of the U.S. and Canada.

GEOG 3120 ALABAMA AND THE SOUTHEAST (3). LEC. 3. Study of the physical and cultural environments of the state.

GEOG 3130 LATIN AMERICA (3). LEC. 3. Survey of physical and human landscape of the region including historical geography, natural resources, economic development and problems and prospects affecting major countries.

GEOG 3140 AFRICA (3). LEC. 3. Analysis of the relationships among diverse population groups and the physical environments of sub-Saharan Africa.

GEOG 3150 EUROPE (3). LEC. 3. Survey of physical and human landscape of the region including historical geography, natural resources, economic development, and problems and prospects affecting several of the major countries.

GEOG 3160 ASIA (3). LEC. 3. Survey of the physical and cultural landscape of Asia, including its development and spatial distribution of resources, with a focus on major countries.

GEOG 3210 CLIMATOLOGY (3). LEC. 3. Climate elements, controls and world patterns.

GEOG 3200 INTERNATIONAL TRAVEL AND TOURISM (3). LEC. 3. Environmental and cultural patterns that characterize places attractive to tourists. Provides realistic situations for developing travel plans and programs.

GEOG 3810 CARTOGRAPHY AND GRAPHICS (4). LEC. 3, LAB. 2. Pr., GEOG 2800 or departmental approval. Techniques of map production including relevant computer graphics applications and related laboratory exercises.

GEOG 3820 AERIAL PHOTOGRAPHY AND REMOTE SENSING (4). LEC. 3, LAB. 2. Pr., GEOG 2800 or departmental approval. Aerial photo and satellite digital image interpretation, remote sensing technology and photogrammetry and related laboratory exercises.

GEOG 3830 GEOGRAPHIC INFORMATION SYSTEMS (4). LEC. 3, LAB. 2. Pr., GEOG 2800 or departmental approval. Concepts of computerized geographic information systems (GIS) and related laboratory exercises.

GEOG 4010 URBAN GEOGRAPHY (3). LEC. 3. Pr., senior standing or departmental approval. Analysis of urban patterns and the processes creating them.

GEOG 4300 ADVANCED REGIONAL STUDIES IN GEOGRAPHY (3). LEC. 3. Pr., senior standing or departmental approval. Spatial patterns of socioeconomic development of Latin America and the Caribbean.

GEOG 4350 ECONOMIC GEOGRAPHY (3). LEC. 3. Pr., senior standing or departmental approval. Economic Geography in a global context. Spatial aspects of resource use, agricultural development, manufacturing production and services.

GEOG 4500 GEOGRAPHY OF ENVIRONMENTAL MANAGEMENT (3). LEC. 3. Pr., senior standing or departmental approval. Understanding and application of the theories and methods for the United States' version of environmental impact assessment.

GEOG 4600 GLOBAL RESOURCES AND THE ENVIRONMENT (3). LEC. 3. Pr., senior standing or departmental approval. Global environmental problems such as climate change, ozone and deforestation and international public agencies and private volunteer movements protecting our global commons.

GEOG 4800 GEOGRAPHIC THOUGHT (3). LEC. 3. Pr., senior standing or departmental approval. Develops effective thinking skills, evaluates written materials in geography, reviews geographical research and produces written reports and papers related to geographic issues.

GEOG 4920 INTERNSHIP (3). LEC. 3. Pr., senior standing. Opportunity to apply classroom experience to real job setting. Course may be repeated for a maximum of 6 credit hours.

GEOG 4960 INDEPENDENT STUDIES IN GEOGRAPHY (1-4). IND. Pr., senior standing or departmental approval. Conferences, reading, research and/or reports may fulfill course requirements. Course may be repeated for a maximum of 4 credit hours.

GEOG 4970 SEMINAR IN GEOGRAPHY (3). LEC. 3. Pr., senior standing or departmental approval. Development of modern geographic thinking with attention to applied research topics. Course may be repeated for a maximum of 6 credit hours.

GEOG 7300 ADVANCED REGIONAL STUDIES IN GEOGRAPHY (3). LEC. 3. Pr., senior standing or departmental approval. Spatial patterns of socioeconomic development of Latin America and the Caribbean.

GEOG 7500 GEOGRAPHY OF ENVIRONMENTAL MANAGEMENT (3). LEC. 3. Pr., senior standing or departmental approval. Understanding and application of the theories and methods for the United States’ version of environmental impact assessment.

GEOG 7970 SEMINAR IN GEOGRAPHY (3). LEC. 3. Pr., senior standing or departmental approval. Development of modern geographic thinking with attention to applied research topics. Course may be repeated for a maximum of 6 credit hours.

GEOL 1100 PHYSICAL GEOLOGY (4). LEC. 3. LAB. 2. Science Core. General physical geology. Survey of the important minerals and rocks. Origin and classification of geologic structures. Credit will not be given for both GEOL 1100 and GEOL 3150.

GEOL 1101 PHYSICAL GEOLOGY LABORATORY (0). LAB. 2. NG. Coreq., GEOL 1100. Examination of rocks and minerals and use of geologic and topographic maps; structural geology and correlation exercises.


GEOL 1111 HISTORICAL GEOLOGY LABORATORY (0). LAB. 2. NG. Coreq., GEOL 1110. Examination of rock, fossil, and related data sets bearing on the geological development of the earth with emphasis on North America.

GEOL 1200 MARINE TECHNICAL METHODS (2). LAB. 8. Pr., departmental approval. Introduction to procedures utilized aboard marine research vessels; physical, biological and geological measurements and sampling techniques. Summer.
GEOL 1220 COASTAL CLIMATOLOGY (2). LEC. 7 Pr., departmental approval. Controlling factors and features of world climates, with attention to coastal areas; application and interpretation of climate data. Summer.

GEOL 2010 MINERALOGY AND OPTICAL CRYSTALLOGRAPHY (5). LEC. 4, LAB. 2 Pr., CHEM 1040 or departmental approval. Introduction to crystal chemistry and crystallography. Theory and applications of light optics as applied to the study of minerals; emphasis on study of rock-forming minerals.

GEOL 2020 MARINE GEOLOGY (4). LEC. 2, LAB. 4 Pr., departmental approval. Geology of ocean basins; special emphasis on continental shelves, their sediments and the sedimentary process at work there. Summer.


GEOL 2100 ENVIRONMENTAL GEOLOGY (4). LEC. 3, LAB. 2 Pr., GEOL 1100. Emphasis on geology as an environmental science: applied geology, geological hazards and environmental regulations as applied to geologic environmental remediation. Not open to undergraduates majoring in Geology.


GEOL 3100 TERRESTRIAL VEGETATION THROUGH EARTH HISTORY (3). LEC. 2, LAB. 2 Pr., GEOL 2200, BIOL 1020. Plants are primary producers and are the foundation upon which the global ecosystem is based. This course focuses on the development, evolution, and application of the plant fossil record to problems in earth history.

GEOL 3150 ENGINEERING GEOLOGY (3). LEC. 2, LAB. 2 Fundamental geologic principles, materials, and processes that affect engineering projects and programs. Emphasis on pre-construction geological analysis to recognize potential hazards and problems. Credit will not be given for both GEOL 3150 and GEOL 1100.

GEOL 3200 PRINCIPLES OF PALEONTOLOGY (3). LEC. 2, LAB. 2 Pr., GEOL 1100. The nature of the fossil record, applications of that data to geological and biological question with emphasis on the concepts using examples from all biotic groups.

GEOL 3300 EVOLUTION AND EXTINCTION OF THE DINOSAURIA (3). LEC. 2, LAB. 2 Pr., GEOL 1100 or departmental approval. Survey of the dinosaurs, their evolution and extinction. Southeastern U.S. dinosaurs.


GEOL 3650 FIELD CAMP (6). LEC. 1, LAB. 10 Pr., GEOL 3400. Instruments and methods used in geological field mapping, interpretation of sedimentary, igneous and metamorphic rocks and deformational analysis. Summer.

GEOL 4010 SEDIMENTARY PETROLOGY (3). LEC. 2, LAB. 2 Pr., GEOL 2050 or departmental approval. Detailed description and classification of smects and sedimentary rocks with emphasis on interpretation of origins, transport histories, depositional environments and diagenetic histories.


GEOL 4260 INTRODUCTION TO GEOCHEMISTRY (3). LEC. 3 Pr., CHEM 1040, GEOL 2050. Principles governing the distribution of major, minor and trace elements within the Earth; differentiation of elements due to geologic processes and the hydrosphere.

GEOL 4300 GEODYNAMICS (3). LEC. 3 Pr., GEOL 2400, MATH 1620, PHYS 1510. Structure and dynamics of the earth deduced from seismology, gravity, heat flow and magnetism.

GEOL 4930 DIRECTED STUDY (1-3). IND. Pr., departmental approval. Directed studies in areas of geology not covered by an existing course or to supplement knowledge gained from an existing course. Course may be repeated for a maximum of 3 credit hours.

GEOL 4980 RESEARCH METHODS (1-3). IND. Pr., departmental approval. Active participation in original research under supervision of a senior investigator. Course may be repeated for a maximum of 3 credit hours.

GEOL 4997 HONORS THESIS (2-4). LEC. 3 Pr., membership in the Honors College. May incorporate library, field or laboratory research in any proportion. Written thesis and thesis defense required. Course may be repeated for a maximum of 4 credit hours.

GEOL 6060 INVERTEBRATE PALEONTOLOGY (4). LEC. 3, LAB. 2 Pr., GEOL 3200, BIOL 1030. In-depth coverage of the invertebrate fossil record, focusing on the systematic and evolutionary history of major groups. Laboratory/dissertation sessions and field trips included.

GEOL 6100 HYDROGEOLOGY (3). LEC. 2, LAB. 2 Pr., GEOL 1100, CHEM 1030, MATH 1610, GEOG 3830, PHYS 1510 or departmental Pr., approval. Fundamentals of groundwater flow in porous media, hydrodynamic dispersion, determination of aquifer properties and geological aspects of groundwater occurrences.

GEOL 6200 GROUNDWATER GEOCHEMISTRY (2). LEC. 2, Pr., CHEM 1040, GEOL 1100 or GEOL 3150. Chemical principles applied to the understanding of factors controlling groundwater composition with an emphasis on water-mineral reactions. Introduction to chemical equilibrium computer modeling programs.

GEOL 6240 COASTAL GEOMORPHOLOGY (2). LEC. 5, LAB. 4 Pr., departmental approval. Introduction to coastal sediment processes and applied coastal geomorphology; emphasis on waves, tides, sediments and their impact of an-thropogenic influences.

GEOL 6400 PRINCIPLES OF EARTH SCIENCE (3). LEC. 2, LAB. 2 Pr., science education majors or departmental approval. A special course for in-service and future teachers only. Internal and surficial geologic processes, meteorology and oceanography.

GEOL 6600 APPLIED GEOPHYSICS (4). LEC. 3, LAB. 2 Pr., GEOL 1100 or GEOL 3150; MATH 1620 or departmental approval; PHYS 1510 or departmental approval. Overview of geophysical methods with applications to resource, tectonic and environmental analyses. Seismic refraction and reflection, gravity, magnetics, electrical and electromagnetic methods will be included.

GEOL 7100 GEOCOMMUNICATION (3). LEC. 3 Pr., departmental approval. Instruction and practice in written and oral communication skills necessary for a successful career in the geosciences; emphasis or preparation of scientific articles, technical reports, abstracts, and thesis; preparation and delivery of oral presentations.

GEOL 7200 TECTONICS (3). LEC. 2, LAB. 2 Pr., GEOL 2050 and GEOL 4010 or departmental approval. Emphasis will be placed on plate tectonics and driving forces, evolution of collisional, transform and extensional systems, and dynamic indicators of past and current tectonic processes.

GEOL 7220 GEOGRAPHIC INFORMATION SYSTEMS AND MARINE RESEARCH (3). LEC. 10, LAB. 15 Pr., departmental approval. Introduction to geographical information system (GIS) techniques with a focus on application in the marine environment.

GEOL 7250 GROUNDWATER HYDROGEOLOGIC MODELING (3). LEC. 2, LAB. 2 Pr., GEOL 6100 or departmental approval. Overview of groundwater modeling techniques with environmental and geologic applications. Interaction of geologic and subsurface groundwater flow. Basin hydrology modeling. Practical experience in computer simulations of subsurface hydrogeologic processes.

GEOL 7260 AQUEOUS AND ENVIRONMENTAL GEOCHEMISTRY (3). LEC. 2, LAB. 2 Pr., CHEM 1040, GEOL 2050 Study of water-rock reactions that control the chemical composition of groundwater; aqueous geochemistry of trace elements; groundwater pollution, remediation and microbiology.

GEOL 7300 CYCLES THROUGH EARTH HISTORY (3). LEC. 2, LAB. 2 Pr., GEOL 4110, GEOL 2200, GEOL 4260. Discussion of the fundamental processes controlling cycles of (1) C, N, O, H, P and S, (2) climate, and (3) sea-level through geologic history; how interrelationships of these cycles have impacted the biotic and biocenotic character of Earth.

GEOL 7310 ISSUES IN PALEONTOLOGY (3). LEC. 3 Pr., GEOL 3200. Advanced applications of paleontological data sets to topics that may include taphonomy, biochemistry, evolution, asystematic functional morphology, paleoecology, paleoclimatology and biostratigraphy.

GEOL 7400 ADVANCED ECONOMIC GEOLOGY (3). LEC. 2, LAB. 2 Pr., GEOL 4210. The practical and theoretical aspects of economic geology as applied to exploration and development of natural resources.

GEOL 7410 GEOLOGY OF ORGANIC MATTER (3). LEC. 2, LAB. 2 Pr., GEOL 4010 and GEOL 4110 or departmental approval. The origins, classifications, taphonomy of organic matter, modern and ancient processes and environments of deposition of organic-rich strata, including hydrocarbon-source rocks and coals. Laboratory and field trips required.

GEOL 7450 MINERAL RESOURCES AND THE ENVIRONMENT (3). LEC. 2, LAB. 2 Pr., CHEM 1040, GEOL 2050. Overview of geology and geographic distribution of mineral resources; economic aspects affecting their extraction; environmental impacts and cost of mineral resource extraction.

GEOL 7550 ADVANCED GEOPHYSICAL METHODS (3). LEC. 2, LAB. 2 Pr., GEOL 6600 and departmental approval. Advanced treatment of geophysical methods, data interpretation and modeling. Applications to resource development and environmental assessments will be explored, with emphasis on seismic methods.
GEOL 7600 PETROLOGY (3). LEC. 2, LAB. 2. Pr., GEOL 2050, GEOL 4010 or departmental approval. The description, classification, formative processes, and petrologic interpretation of igneous, metamorphic and sedimentary rocks.

GEOL 7610 STRUCTURAL AND METAMORPHIC ANALYSIS (3). LEC. 2, LAB. 2. Pr., GEOL 2050, GEOL 3400 and GEOL 3650. Quantitative analysis of dynamic, kinematic and chemical responses of rocks and minerals to crustal movements and dynamic thermal metamorphism.

GEOL 7650 FACIES ANALYSIS AND SEQUENCE STRATIGRAPHY (3). LEC. 2, LAB. 2. Pr., GEOL 4010 and GEOL 4110 or departmental approval. Systematic analysis of modern and ancient depositional facies, and their interpretation in a sequence stratigraphic context. Laboratory and field trips required.

GEOL 7930 DIRECTED STUDIES OR READINGS (1-3). LEC. 3. Pr., departmental approval. Directed studies. May incorporate literature, field and/or laboratory research in any proportion. Subject matter and credit hours shall be determined by student and directing faculty. Course may be repeated for a maximum of 3 credit hours.

GEOL 7980 CAPSTONE PROJECT (1-3). LEC., SU. Pr., departmental approval. Literature, field and/or laboratory research directed towards completion of capstone project required for non-thesis option. Course may be repeated for a maximum of 3 credit hours.

GEOL 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval. Credit to be arranged. Course may be repeated with change in topic.

Graduate School (GRAD)

GRAD 7000 CLEARING REGISTRATION (0). LEC. May be used to register graduate students to graduate who have finished all graduation requirements by the last day of the previous semester, to remove incomplete grades, or to complete comprehensive examination for non-thesis students.

GRAD 7@@ THESIS COMPLETION (0). IND. Coreq., MIN. one (1) hour 7990. Restricted to thesis option graduate students for a maximum of three semesters. Students may not enroll for any additional didactic work but must be engaged full-time in the completion of thesis research or the thesis. No grade.

GRAD 8@@ DISSERTATION COMPLETION (0). IND. Coreq., Minimum 1 hour 8890. Maximum 6 semesters. Restricted to doctoral students for a maximum of six semesters. Students may not enroll in any additional didactic work but must be engaged full time in the completion of dissertation research or the dissertation. No grade.

Human Development and Family Studies (HDFS)

Dr. Marilyn R. Bradbard - 844-4151

HDFS 1850 CURRENT ISSUES IN HUMAN DEVELOPMENT AND FAMILY STUDIES (3). LEC. 3. Current issues facing families and children evaluated in the light of scientific research.

HDFS 2000 MARRIAGE AND FAMILY IN A GLOBAL CONTEXT (3). LEC. 3. Examination of marriage and family systems, including their interface with the broader sociocultural context.

HDFS 2010 LIFESPAN HUMAN DEVELOPMENT IN FAMILY CONTEXT (3). LEC. 3. Human development within the context of the family and across the family life cycle with a focus on significant life transitions.

HDFS 2020 FAMILY RESOURCE MANAGEMENT (3). LEC. 3. Management of family resources with emphasis on decision-making and problem-solving skills over the life cycle.

HDFS 2030 PROFESSIONAL DEVELOPMENT AND ETHICS (3). LEC. 3. Appraisal of career potential, formulation of a professional code of ethics, and exploration of career options.

HDFS 3010 CHILD DEVELOPMENT IN THE FAMILY (3). LEC. 3. Pr., HDFS 2010 or departmental approval. Social, emotional, physical and intellectual development in early and middle childhood with a special focus on family relationships.


HDFS 3080 DEVELOPMENT OF INTERPERSONAL SKILLS (3). LEC. 3. Pr., HDFS 2010. Examination of the competencies necessary for development of successful interpersonal relationships. Fall, Spring.

HDFS 3081 DEVELOPMENT OF INTERPERSONAL SKILLS LAB (1). LAB. 3. Pr., HDFS 3080. Development of effective interpersonal skills in individual family and professional relationships. Fall, Spring.

HDFS 3380 STUDY ABROAD OPPORTUNITIES IN HUMAN SCIENCES (1). LEC. 1. Exploration of study abroad opportunities for students interested in the International Minor in Human Sciences. Spring.

HDFS 3470 LEARNING EXPERIENCES FOR YOUNG CHILDREN (5). LEC. 3, LAB. 3. Pr., HDFS 3010. Child development knowledge applied to preschool curriculum planning with supervised participation at Auburn University Early Learning Center. Fall, Spring.

HDFS 3910 PRACTICUM (1-6). PRA., SU. Pr., departmental approval. Directed experience in a professional setting. A) Human Development; B) Family Studies; C) Marriage and Family Therapy. Course may be repeated for a maximum of 6 credit hours.


HDFS 4300 FAMILY AND SOCIAL POLICY (3). LEC. 3. Pr., HDFS 2020 and HDFS 3030 or HDFS 3060. Examination and critique of social policies from a family perspective. Fall.

HDFS 4350 STUDY AND TRAVEL IN HUMAN DEVELOPMENT AND FAMILY STUDIES (2-6). LEC., Pr., Human Sciences Core and departmental approval. Study or work in the United States or internationally. Course may be repeated for a maximum of 6 credit hours.


HDFS 4501 HOSPITALIZED CHILDREN AND THEIR FAMILIES LAB (1). LAB. 3, SU. Pr., HDFS 3100 and junior standing in HDFS. Coreq., HDFS 4500. Practical applications in hospital setting working with children and their families. Spring.


HDFS 4680 FAMILY IN CROSS-CULTURAL PERSPECTIVE (3). LEC. 3. Pr., HDFS 2000. Examination of family function and diversity in cultures and family systems around the world. Fall.


HDFS 4920 INTERNSHIP IN HUMAN DEVELOPMENT AND FAMILY STUDIES (12). INT. Pr., HDFS major. 2.25 unadjusted GPA in required HDFS courses, including Human Sciences core, departmental approval. Application must be submitted two semesters in advance. A computer and internet access is required.

HDFS 4950 ADVANCED SEMINAR (3). LEC. 3. Pr., junior standing in HDFS; departmental approval. Topical seminar in HDFS. A) Advanced Research (requires 3.0 GPA in HDFS); B) Child Development; C) Family Studies; D) Marriage and Family Therapy. Fall, Spring. Course may be repeated for a maximum of 9 credit hours.

HDFS 4960 DIRECTED READINGS IN HUMAN DEVELOPMENT AND FAMILY STUDIES (1-3). LEC. 3. Pr., departmental approval. Supervised readings in one or more topical areas. Course may be repeated for a maximum of 3 credit hours.

HDFS 4990 UNDERGRADUATE RESEARCH AND STUDY (1-5). IND. Pr., departmental approval. Directed research under faculty supervision. Course may be repeated for a maximum of 5 credit hours.

HDFS 4997 HONORS THESIS (2-6). IND. Pr., membership in the Honors College; junior standing in HDFS. Research in specialized topics. Course may be repeated for a maximum of 6 credit hours.

HDFS 7010 ADVANCED CHILD DEVELOPMENT (3). LEC. 3. Survey and critical examination of research on development from birth through adolescence. Fall.

HDFS 7020 MARITAL AND FAMILY DYNAMICS (3). LEC. 3. Pr., departmental approval. Theoretical and empirical contributions to the understanding of marital and family processes and dynamics. Fall.

HDFS 7030 ADVANCED FAMILY AND SOCIAL POLICY (3). LEC. 3. Analysis of the family as a producing, consuming and managing unit, with emphasis on social policies that affect family well-being. Spring.

HDFS 7040 CONCEPTUAL FRAMEWORKS IN HUMAN DEVELOPMENT AND FAMILY STUDIES (3). LEC. 3. Pr., departmental approval. Introduction
to and critical examination of major conceptual frameworks used in human development and family studies. Fall.


HDFS 7600 MARRIAGE AND FAMILY THERAPY THEORY I (3). LEC. 3. Pr., departmental approval. Overview of theoretical and historical foundations, therapy models and integrative frameworks for marriage and family therapy. Fall.


HDFS 7610 MARRIAGE AND FAMILY THERAPY THEORY II (3). LEC. 3. Pr., HDFS 7600 or departmental approval. Advanced study of classic models, recent developments, integration and effectiveness of marriage and family therapy. Spring.


HDFS 7650 MARRIAGE AND FAMILY THERAPY PROFESSIONAL ISSUES (3). LEC. 3. Pr., departmental approval. Professional, ethical, and legal issues associated with the practice of marriage and family therapy. Fall.

HDFS 7900 INDEPENDENT STUDY (1-3). IND. SU. Pr., departmental approval. A) Child Care and Programs for Young Children; B) Family Relations; C) Human Development; D) Marriage & Family Therapy; E) Parent Education; F) Social Policy. Course may be repeated for a maximum of 9 credit hours.

HDFS 7910 PRACTICUM (1-9). PRA. SU. Pr., departmental approval. A) Child Care and Programs for Young Children; B) Family Relations; C) Human Development; D) Marriage and Family Therapy; E) Parent Education; F) Social Policy; G) Teaching. Course may be repeated for a maximum of 9 credit hours.

HDFS 7920 MARRIAGE AND FAMILY THERAPY INTERNSHIP (3). INT. PR. HDFS 7631 and departmental approval. Clinical practice of marriage and family therapy. Course may be repeated for a maximum of 9 credit hours.

HDFS 7940 DIRECTED FIELD EXPERIENCE (1-9). FLD. SU. Pr., departmental approval. A) Child Care and Programs for Young Children; B) Family Relations; C) Human Development; D) Marriage and Family Therapy; E) Parent Education; F) Social Policy. Course may be repeated for a maximum of 9 credit hours.

HDFS 7960 SEMINAR IN HUMAN DEVELOPMENT AND FAMILY STUDIES (1-3). SEM. Pr., Departmental approval. A) Infancy/Childhood; B) Adolescence/Young Adulthood; C) Adulthood/Aging; D) Family as a Microsystem; E) Family and Mesosystem; F) Family in the Macrosystem; G) Child and Family Program Planning and Evaluation. Course may be repeated for a maximum of 16 credit hours.

HDFS 7990 RESEARCH AND THESIS (1-10). MST. TD. Course may be repeated with change in topic.

HDFS 8010 RELATIONSHIP DEVELOPMENT I: CHILDHOOD AND ADOLESCENCE (3). LEC. 3. Pr., HDFS 7010. Examination of the development, manifestations, and signification of peer relationships among children and youth. Fall.

HDFS 8020 RELATIONSHIP DEVELOPMENT II: ADULTHOOD (3). LEC. 3. Pr., departmental approval. Theoretical and empirical contributions to understanding interpersonal and family relationships focusing on processes and dynamics of relationships. Spring.

HDFS 8040 ADVANCED THEORIES OF HUMAN DEVELOPMENT AND FAMILY STUDIES (3). LEC. 3. Pr., HDFS 7040. Philosophical underpinnings of social and developmental theories and conceptual issues. Fall.

HDFS 8050 ADVANCED RESEARCH METHODS I (3). LEC. 3. Pr., HDFS 7050. In-depth examination of research methods, designs, and data analytic strategies commonly used in child and family research. Spring.

HDFS 8060 ADVANCED RESEARCH METHODS II (1-3). LEC. Pr., HDFS 7050. Students may enroll in up to 3 modules of specialized research methods at 1 credit each. Course may be repeated for a maximum of 3 credit hours.

HDFS 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

History (HIST)

HIST 1010 WORLD HISTORY I (3). LEC. 3. History Core. Survey of world history from early humanity to the late eighteenth century.


HIST 1020 WORLD HISTORY II (3). LEC. 3. History Core. Survey of world history since the Industrial Revolution.


HIST 1210 TECHNOLOGY AND CIVILIZATION I (3). LEC. 3. History Core. Survey of the role of technology in history from prehistoric times to the beginning of the Industrial Revolution.


HIST 1220 TECHNOLOGY AND CIVILIZATION II (3). LEC. 3. History Core. Survey of the role of technology from the Industrial Revolution to the present day.

HIST 1227 HONORS TECHNOLOGY AND CIVILIZATION II (3). LEC. 3. Pr., membership in the Honors College. History Core. Survey of the role of technology from the Industrial Revolution to the present day.

HIST 2010 SURVEY OF UNITED STATES HISTORY TO 1877 (3). LEC. 3. American history from the first humans in North America through the end of Reconstruction. Social, political and economic developments traced over centuries.

HIST 2020 SURVEY OF UNITED STATES HISTORY SINCE 1877 (3). LEC. 3. History from the end of Reconstruction through the present. Social, political and economic developments are examined.

HIST 2070 SURVEY OF EUROPEAN HISTORY FROM THE RENAISSANCE TO 1789 (3). LEC. 3. Survey of European history from the first outbreak of the bubonic plague to the eve of the French Revolution.

HIST 2080 SURVEY OF EUROPEAN HISTORY FROM 1789 TO THE PRESENT (3). LEC. European history from the French Revolution to the present.

HIST 2100 SURVEY OF LATIN AMERICAN HISTORY (3). LEC. 3. Latin American history from its Amerindian beginnings to the present. Both the Iberian and African backgrounds are explored.

HIST 2110 SURVEY OF ASIAN HISTORY (3). LEC. 3. Introduction to history, cultures and philosophies of peoples of Asia.

HIST 2120 SURVEY OF MODERN AFRICAN HISTORY (3). LEC. 3. Modern African history, from the end of the slave trade to the rise of nationalism and independence.


HIST 3000 HISTORY OF SOUTHEASTERN INDIANS (3). LEC. 3. History of the southeastern Indians from pre-contact to removal including native culture, culture change, trade, imperial rivalries and wars.


HIST 3020 HISTORY OF WOMEN IN THE UNITED STATES (3). LEC. 3. History of women in America from colonial period to the present; explores differences of region, race and class.

HIST 3030 AFRICAN AMERICAN HISTORY (3). LEC. 3. History of African Americans from African origins to the modern era, focusing on enslavement, emancipation and the struggle for equal rights.

HIST 3040 AMERICAN RELIGIOUS HISTORY (3). LEC. 3. Religious ideas and institutions from the colonial period to the present, including how religion has intersected with political and social history.

HIST 3050 HISTORY OF POLITICAL PARTIES IN THE UNITED STATES (3). LEC. 3. Examines political parties and party systems from the constitution to
the present, including party organization, campaign techniques and presiden-
tial leadership.

HIST 3060 ISSUES IN AFRICAN AMERICAN HISTORY (3). LEC. 3. Issues
and personalities in African American History. Course may be repeated for
a maximum of 6 credit hours.

HIST 3070 HISTORY OF UNITED STATES AIR POWER (3). LEC. 3.
Development of air and spacecraft as weapons of war including doctrines, technology,
major leaders and great events of air power.

HIST 3200 GRECO-ROMAN CIVILIZATION (3). LEC. 3. Classical civilizations
of the Greeks and Romans as well as the Egyptian and Persian civilizations
that influenced them.

HIST 3310 EUROPE IN THE MIDDLE AGES (3). LEC. 3. Survey of the thou-
sand years which has been called the birth of Europe.

HIST 3320 HISTORY OF IRELAND (3). LEC. 3. History of Ireland from its
beginnings to the present, including discussion of the present, troubled state of
Ireland.

HIST 3330 ISSUES IN THE HISTORY OF GERMANY AND CENTRAL EU-
ROPE (3). LEC. 3. Variable topics in the history of Germans, Slavs and other
Central Europeans from the Era of Enlightened Absolutism through the fall of
the Berlin Wall. Course may be repeated for a maximum of 6 credit hours.

HIST 3340 HISTORY OF MODERN FRANCE (3). LEC. 3. Political, social
and cultural history of France since the French Revolution.

HIST 3350 SURVEY OF RUSSIAN HISTORY (3). LEC. 3. Russian history from
the earliest development of a state in the area of Kiev down to the present
Russian Federation.

HIST 3360 CONTEMPORARY RUSSIA SINCE WORLD WAR II (3). LEC. 3.
Developments in contemporary Russia beginning with World War II and con-
tinuing to the present day.

HIST 3370 EUROPEAN IMAGINATION (3). LEC. 3. Examination of European
domination of the globe through an investigation of how and why Europeans
have imagined their civilization to be superior.

HIST 3500 HISTORY OF AVIATION (3). LEC. 3. History of aviation from the
beginnings of human flight to the present.

HIST 3510 HISTORY OF SPACE TRAVEL (3). LEC. 3. Historical origins of the
space age and U.S. space policy, including patterns that define the present
and constrain the future of humans and machines.

HIST 3520 SCIENTIFIC REVOLUTIONS (3). LEC. 3. History of science, fo-
cusing on the concept of “scientific revolutions” in their social and intellectual
context.

HIST 3530 SCIENCE FICTION AS INTELLECTUAL HISTORY (3). LEC. 3.
The interaction between science, technology, and other aspects of modern
culture as dramatized in classic and contemporary works of science fiction.

HIST 3540 ISSUES IN TECHNOLOGY AND CULTURE (3). LEC. 3. Issues
such as the automobile, environment, industrialization and popular culture,
relating to the role technology plays in society and culture. Course may be re-
peated for a maximum of 6 credit hours.

HIST 3600 ISSUES IN WOMEN’S AND GENDER HISTORY (3). LEC. 3. Top-
ics in the history of women and gender. Focus will vary according to the in-
tstructor. Course may be repeated for a maximum of 6 credit hours.

HIST 3610 PRIVATE LIVES AND PUBLIC PLACES (3). LEC. 3. Examines
shifting boundaries between public and private in history. Topics vary accord-
ing to instructor, but may include work, family, sexuality and the state. Course
may be repeated for a maximum of 6 credit hours.

HIST 3620 LANDSCAPE AND CULTURE (3). LEC. 3. Social and cultural his-
tory of architecture and built-space in Europe and/or the United States.

HIST 3630 HISTORY OF MEXICO (3). LEC. 3. History of Mexico in the 19th
and 20th centuries.

HIST 3640 WORLD MILITARY HISTORY (3). LEC. 3. Economic, social, politi-
cal and technological roots of the ways of war employed by different civiliza-
tions throughout the ages.

HIST 3650 20TH CENTURY WORLD WARS (3). LEC. 3. The causes, conduct
and consequences of World Wars I and II.

HIST 3660 WORLD NAVAL HISTORY (3). LEC. 3. Naval history from its ori-
gins in ancient times to the present, including the evolution of strategy and
tactics, foreign policy and technological change.

HIST 3670 CONTEMPORARY HISTORY (3). LEC. 3. Examination of issues and
events in the contemporary world to provide historical background on de-
velopments in selected areas/nations across the globe.

HIST 3800 HISTORIANS CRAFT (3). LEC. 3. Pr., History major and junior
standing. Historical research methods and an introduction to historiography.

HIST 3900 INDEPENDENT STUDY (1-3). IND. Pr., 3.0 overall GPA and de-
partmental approval. Individual reading or research projects in a specific area of
history. Course may be repeated for a maximum of 3 credit hours.

HIST 3920 HISTORICAL INTERNSHIP (3). LEC. 3. Pr., junior standing and de-
partmental approval. Supervised on-the-job experience at archives, historical
museums, historic preservation authorities, and historical editing projects, and
similar historical agencies.

HIST 3970 SPECIAL TOPICS (3). LEC. 3. Topics vary. Course may be re-
peated for a maximum of 6 credit hours.

HIST 4000 AMERICAN COLONIAL HISTORY (3). LEC. 3. Pr., junior standing or
departmental approval. Study of the development of the North American colo-
nies from European settlement to 1763.

HIST 4010 AMERICAN REVOLUTION AND EARLY NATION: 1763-1800 (3).
LEC. 3. Pr., junior standing or departmental approval. Revolutionary era and
the foundations of the United States including struggle with England, Declara-
tion of Independence, Revolutionary War, Confederation, Constitution, and
Federalist-Republican conflicts.

HIST 4020 EARLY AMERICAN REPUBLIC: 1800-1850 (3). LEC. 3. Pr., Jun-
ior standing or departmental approval. Development of the early nation includ-
ing Thomas Jefferson, War of 1812, Jacksonian democracy, Indian removal,
Old South and slavery, westward movement and political party conflict.

HIST 4030 SOUTH TO 1877 (3). LEC. 3. Pr., junior standing or departmental
approval. Development of the old South, from southeastern Indians and Euro-
pean contact through Reconstruction including slavery, white social classes,
women, and politics.

HIST 4040 CIVIL WAR ERA: 1850-1877 (3). LEC. 3. Pr., junior standing or
departmental approval. Sectional conflict, Civil War, and Reconstruction in-
cluding sectional differences, political crises, secession, Civil War campaigns,
emancipation, and presidential and congressional Reconstruction.

HIST 4050 THE SOUTH SINCE 1877 (3). LEC. 3. Pr., junior standing or de-
partmental approval. Examination of the South since 1877, with emphasis on
social, economic, cultural, political and ideological developments.

HIST 4060 MAKING OF MODERN AMERICA: 1877-1929 (3). LEC. 3. Pr.,
junior standing or departmental approval. Development of the American
economy, rise of big business, agrarian and labor protest, immigration, race
relations, role of women, and role of government.

HIST 4070 MODERN UNITED STATES HISTORY: 1929 TO THE PRESENT
(3). LEC. 3. Pr., junior standing or departmental approval. United States His-
tory since 1929 with particular emphasis on the economy, changing role of
government, America’s role in world affairs and social changes.

HIST 4080 20TH CENTURY UNITED STATES DIPLOMACY (3). LEC. 3. Pr.,
junior standing or departmental approval. Examination of United States diplo-
matic history since the Spanish-American War.

HIST 4300 EARLY MODERN EUROPE: 1348-1715 (3). LEC. 3. Pr., junior
standing or departmental approval. Major topics in European history for the
period 1348-1715 including religious and cultural change and the relationship
between state and society.

HIST 4310 ENLIGHTENMENT/REVOLUTIONARY EUROPE: 1715-1815 (3).
LEC. 3. Pr., standing or departmental approval. Culture, society and politics
of the 18th Century; origins and consequences of the French Revolution;
the Napoleonic period.

HIST 4320 19TH CENTURY EUROPE: 1815-1918 (3). LEC. 3. Pr., junior stand-
ding or departmental approval. Cultural, economic and social developments as
well as the politics and international relations of the major European states
between 1815-1918.

HIST 4330 20TH CENTURY EUROPE (3). LEC. 3. Pr., junior standing or de-
partmental approval. The history of Europe from the outbreak of World War I to
the end of the Cold War.

HIST 4340 EUROPEAN CULTURAL AND INTELLECTUAL HISTORY (3).
LEC. 3. Pr., junior standing or departmental approval. Development of European
culture and the interfacings of culture, ideas and social institutions from the
early Enlightenment to the present.

HIST 4350 REVOLUTIONARY RUSSIA: 1861-1939 (3). LEC. 3. Pr., junior
standing or departmental approval. Analysis of the Revolutions of 1917, begin-
ning with emancipation of serfs and ending with purges of the 1930’s.

HIST 4360 ENGLISH HISTORY TO 1688 (3). LEC. 3. Pr., junior standing or
departmental approval. Development of England from Roman times to the tri-
umph of parliament in the Glorious Revolution of 1688.

HIST 4370 GREAT BRITAIN Since 1688 (3). LEC. 3. Pr., junior standing or
departmental approval. Including industrial revolution, development of empire
and international role and social changes of 20th Century.

HIST 4380 THE GREAT TRANSFORMATION: THE INDUSTRIAL REVOLU-
TION (3). LEC. 3. Pr., junior standing or departmental approval. The Industrial
Revolution of 18th, 19th and 20th centuries with a major focus on England and
the United States with some treatment of Europe and Asia.

HIST 4580 THE HISTORY OF FLIGHT (3). LEC. 3. Pr., Junior standing. The
history of flight in political, economic, social, and cultural perspective. Spring.
HIST 4610 COLONIAL LATIN AMERICA (3). LEC. 3. Pr., junior standing or departmental approval. European expansion into the western hemisphere from its Iberian background through the 19th century, fall of the Spanish and Portuguese empires.

HIST 4620 MODERN LATIN AMERICA (3). LEC. 3. Pr., junior standing or departmental approval. History of Latin America in the 19th and 20th centuries using a thematic approach arranged chronologically.

HIST 4640 ISLAM, STATE AND SOCIETY IN MODERN WORLD HISTORY (3). LEC. 3. Pr., Junior level standing. Study of adaptation of Islamic social and political theory to modern society and the modern state.

HIST 4650 HISTORY OF MODERN SOUTH ASIA, 1750 TO PRESENT (3). LEC. 3. Pr., Junior level standing. The making of Indo-Islamic culture, British rule of India, and the creation of Muslim Pakistan and “secular” India. Attention to role of individuals and events in history of nation-building.


HIST 4680 AFRICA FROM 1800 TO THE PRESENT (3). LEC. 3. Pr., Junior level standing. Topics include state formation, ending of Atlantic slave trade and African slave trade and slavery, the rise and fall of colonial rule, and current problems facing independent countries.

HIST 4710 FUNDAMENTALS OF ARCHIVAL THEORY AND PRACTICE (3). LEC. 3. Pr., Junior Standing or departmental approval. Examines the fundamentals of archival theory and practice; the relationship between archives and records management; and the role of records and archives in society.

HIST 4930 SENIOR THESIS: HISTORICAL RESEARCH AND WRITING (3). LEC. 3. Pr., History major and HIST 3800. Writing of an original paper based on research in primary source materials.

HIST 4967 HONORS READINGS (3). LEC. 3. Pr., membership in the Honors College. The secondary literature on specialized topics in History.

HIST 4997 HONORS THESIS (3). LEC. 3. Pr., membership in the Honors College. Writing of an original paper based on research in primary materials.

HIST 7000 AMERICAN COLONIAL HISTORY (3). LEC. 3. The development of the North American colonies from European settlement to 1763.


HIST 7030 SOUTH TO 1877 (3). LEC. 3. Development of the Old South, from southeastern Indians and European contact through Reconstruction including slavery, white social classes, women and politics.

HIST 7040 CIVIL WAR ERA: 1850-1877 (3). LEC. 3. Sectional conflict, Civil War, and Reconstruction including sectional differences, political crises, secession, Civil War campaigns, emancipation, and presidential and congressional Reconstruction.

HIST 7050 THE SOUTH SINCE 1877 (3). LEC. 3. Examination of the South since 1877, with emphasis on social, economic, cultural, political and ideological developments.


HIST 7070 MODERN UNITED STATES HISTORY: 1929 TO THE PRESENT (3). LEC. 3. United States history since 1929 with particular emphasis on the economy, changing role of government, America’s role in world affairs, and social changes.

HIST 7080 20TH CENTURY UNITED STATES DIPLOMACY (3). LEC. 3. Examination of United States diplomatic history since the Spanish-American War.

HIST 7100 INTRODUCTORY SEMINAR IN AMERICAN HISTORIOGRAPHY (3). SEM. 3. Major historiographical trends in general American history and in particular sub-fields.


HIST 7130 SEMINAR IN EARLY AMERICAN REPUBLIC (3). SEM. 3. Issues in the Early Republic, including political transformations, sectional conflict, women and gender roles, industrialization, and reform movements.

HIST 7140 SEMINAR IN OLD SOUTH (3). SEM. 3. History of the Old South, including colonial settlement, slavery, political transformations, sectional conflict, women and gender roles and religion.

HIST 7150 SEMINAR IN CIVIL WAR ERA (3). SEM. 3. Examines sectional conflict, Civil War, and Reconstruction, including political, military and social development.

HIST 7160 SEMINAR IN NEW SOUTH (3). SEM. 3. Examines the South in United States history since 1877.

HIST 7170 SEMINAR IN UNITED STATES PROGRESSIVE ERA (3). SEM. 3. Examines in depth the history of the United States between 1877 – 1929.

HIST 7180 SEMINAR IN MODERN UNITED STATES HISTORY (3). LEC. 3. A broad introduction to the historiography relating to United States history since 1929.

HIST 7190 SEMINAR IN AFRICAN AMERICAN HISTORY (3). SEM. 3. Analysis of the major historiographical works on the social, political and economic history of African Americans.

HIST 7200 SEMINAR IN UNITED STATES WOMEN’S HISTORY (3). SEM. 3. Change and continuity in the lives of American women.

HIST 7210 SEMINAR IN AMERICAN RELIGIOUS HISTORY (3). SEM. 3. The role of religion in American history; recent writing on religion; and sociological and anthropological theories on religion.

HIST 7300 EARLY MODERN EUROPE: 1348-1715 (3). LEC. 3. Major topics in European history for the period 1348-1715 including religious and cultural change and the relationship between state and society.

HIST 7310 ENLIGHTENMENT/REVOLUTIONARY EUROPE: 1715-1815 (3). LEC. 3. Culture, society and politics of the 18th Century; origins and consequences of the French Revolution; the Napoleonic period.

HIST 7320 19TH CENTURY EUROPE: 1815-1918 (3). LEC. 3. Examines cultural, economic and social developments as well as the politics and international relations of the major European states between 1815-1918.

HIST 7330 20TH CENTURY EUROPE (3). LEC. 3. The history of Europe from the outbreak of World War I to the end of the Cold War.

HIST 7340 EUROPEAN CULTURAL AND INTELLECTUAL HISTORY (3). LEC. 3. Development of European culture and the interfacings of culture, ideas, and social institutions from the early Enlightenment to the present.

HIST 7350 REVOLUTIONARY RUSSIA: 1861-1939 (3). LEC. 3. Analysis of the Revolutions of 1917, beginning with emancipation of serfs and ending with purges of the 1930s.

HIST 7360 ENGLISH HISTORY TO 1688 (3). LEC. 3. Development of England from Roman times to the triumph of parliament in the glorious Revolution of 1688.

HIST 7370 GREAT BRITAIN SINCE 1688 (3). LEC. 3. Great Britain since 1688, including industrial revolution, development of empire and international role, and social changes of 20th Century.

HIST 7400 INTRODUCTORY SEMINAR IN EUROPEAN HISTORIOGRAPHY (3). SEM. 3. Major topics and historiographical debates in European history from the early modern period to the twentieth century.

HIST 7410 SEMINAR IN EARLY MODERN EUROPE (3). SEM. 3. Topics in the history of continental Europe, 1348-1715, including religious and cultural change and the relationship between state and society.

HIST 7420 SEMINAR IN POPULAR CULTURE IN EARLY MODERN EUROPE (3). SEM. 3. Major themes in the popular culture of early modern Europe, 1450-1800.

HIST 7430 SEMINAR IN RUSSIAN SOCIETY IN REVOLUTION (3). SEM. 3. Examination of the literature, concepts, and history of the transformation of Russian society between 1861 and 1939.

HIST 7440 SEMINAR IN MODERN EUROPEAN CULTURAL POLITICS (3). SEM. 3. Traditional and revisionist approaches to the study of the political uses of culture in nineteenth and twentieth century Europe.

HIST 7450 SEMINAR IN THE FRENCH REVOLUTION (3). SEM. 3. The historiography of the French Revolution’s origins and legacy.

HIST 7460 SEMINAR IN EARLY MODERN BRITAIN (3). SEM. 3. Main themes and events of British history between 1603 and the 1760s.

HIST 7470 SEMINAR IN EUROPEAN INTERNATIONAL HISTORY (3). SEM. 3. Relations among the European powers in the period 1870-1945.

HIST 7510 INTRODUCTORY SEMINAR IN HISTORIOGRAPHY OF TECHNOLOGY (3). SEM. 3. Problems and issues in the history of technology, as well as key literature on the subject.

HIST 7520 SEMINAR IN POLITICS AND TECHNOLOGY IN THE SPACE AGE (3). SEM. 3. The political and technological context of the “space age.”

HIST 7530 SEMINAR IN SOUTHERN INDUSTRIALIZATION (3). SEM. 3. Significant scholarly works and primary sources dealing with the history of industrialization and technology in the American South.

HIST 7540 SEMINAR IN AEROSPACE HISTORY (3). SEM. 3. Central problems, issues, and literature in aerospace history.

HIST 7550 SEMINAR IN SCIENCE AND SOCIETY (3). SEM. 3. Exploration of the interactions between science and politics in the 20th century.

HIST 7560 SEMINAR IN THE INDUSTRIAL REVOLUTION (3). SEM. 3. Examines the central questions and historiography relating to the industrial revolution.

HIST 7570 TECHNOLOGY IN SOCIAL AND CULTURAL HISTORY (3). LEC. 3. Explores the literature in the history of technology that approaches the field from a social and cultural perspective.

HIST 7580/7586 TOPICS IN THE HISTORY OF FLIGHT (3). LEC. 3. The history of flight in political, economic, social, and cultural perspective. Spring.

HIST 7610 COLONIAL LATIN AMERICA (3). LEC. 3. European expansion into the western hemisphere from its Iberian background through 19th century fall of the Spanish and Portuguese empires.

HIST 7620 MODERN LATIN AMERICA (3). LEC. 3. History of Latin America in 19th and 20th centuries using a thematic approach arranged chronologically.

HIST 7630 SEMINAR IN LATIN AMERICAN HISTORY (3). SEM. 3. Research tools, major issues, and sources in Latin American history.

HIST 7640 ISLAM, STATE AND SOCIETY IN MODERN WORLD HISTORY (3). LEC. 3. Study of adaptation of Islamic social and political theory to modern society and the modern state.

HIST 7650 HISTORY OF MODERN SOUTH ASIA, 1750 TO PRESENT (3). LEC. 3. The making of Indo-Islamic culture, British rule of India, and the creation of Muslim Pakistan and “secular” India. Attention to role of individuals and events in history of nation-building.


HIST 7680 AFRICA FROM 1800 TO PRESENT (3). LEC. 3. Topics include state formation, ending of Atlantic slave trade and African slave trade and slavery, the rise and fall of colonial rule, and current problems facing independent countries.

HIST 7690 SEMINAR IN MODERN WORLD HISTORY (3). LEC. 3. Examination of world historiography and theory, with topical readings on comparative themes such as imperialism and colonialism, catch-up industrialization, decolonization, the Atlantic world, gender systems, religious diasporas, trade, and exploration.

HIST 7700 SEMINAR IN HISTORICAL METHODS (3). SEM. 3. Methodology and theory of historical research; preparation of a significant original research paper.

HIST 7710 FUND ARCHIVAL THEORY & PRACTICE (3). LEC. 3. Examines the fundamentals of archival theory and practice; the relationship between archives and records management; and the role of records and archives in society.

HIST 7720 SEMINAR IN ARCHIVAL THEORY AND PRACTICE (3). SEM. 3. Pr., HIST 4710 or HIST 7710 or departmental approval. Development of archival theory in the major functional areas of archival practice: appraisal, acquisition, arrangement, description, preservation, reference and access, outreach and advocacy.

HIST 7730 SEMINAR IN THE HISTORY OF RECORDS AND ARCHIVES (3). SEM. 3. Pr., HIST 4710 or HIST 7710 or departmental approval. Origins, organization, and development of records, record keeping systems, and archival institutions in Europe and North America.

HIST 7800 RESEARCH SEMINAR IN UNITED STATES HISTORY TO 1865 (3). SEM. 3. Research and writing of an original paper based on primary sources that should be of publishable or near publishable quality. Course may be repeated for a maximum of 6 credit hours.

HIST 7810 RESEARCH SEMINAR IN UNITED STATES HISTORY SINCE 1865 (3). SEM. 3. Research and writing of an original paper based on primary sources that should be of publishable or near publishable quality. Course may be repeated for a maximum of 6 credit hours.

HIST 7820 RESEARCH SEMINAR IN EARLY MODERN EUROPEAN HISTORY (3). SEM. 3. Research and writing of an original paper based on primary sources that should be of publishable or near publishable quality. Course may be repeated for a maximum of 6 credit hours.

HIST 7830 RESEARCH SEMINAR IN MODERN EUROPEAN HISTORY (3). SEM. 3. Research and writing of an original paper based on primary sources that should be of publishable or near-publishable quality. Course may be repeated for a maximum of 6 credit hours.

HIST 7840 RESEARCH SEMINAR IN HISTORY OF TECHNOLOGY (3). SEM. 3. Research and writing of an original paper based on primary sources that should be of publishable or near-publishable quality. Course may be repeated for a maximum of 6 credit hours.

HIST 7850 RESEARCH SEMINAR IN LATIN AMERICAN HISTORY (3). SEM. 3. Research and writing of an original paper based on primary sources that should be of publishable or near-publishable quality. Course may be repeated for a maximum of 6 credit hours.

HIST 7920 ARCHIVAL INTERNSHIP (1-6). INT. Pr., HIST 7710 or departmental approval. Opportunity to apply the principles of archival practice within the context of a functioning archival repository under the supervision of professional archivists. Course may be repeated for a maximum of 6 credit hours.

HIST 7970 SPECIAL TOPICS IN HISTORY (3). LEC. 3. Topics vary.

HIST 8000 READING COURSE IN AMERICAN HISTORY TO 1877 (3). PRL. 3. Pr., departmental approval. Selected topics in American History to 1877. Course may be repeated for a maximum of 6 credit hours.

HIST 8010 READING COURSE IN AMERICAN HISTORY SINCE 1877 (3). PRL. 3. Pr., departmental approval. Selected topics in American History since 1877. Course may be repeated for a maximum of 6 credit hours.

HIST 8300 READING COURSE IN EUROPEAN HISTORY TO 1815 (3). PRL. 3. Pr., departmental approval. Selected topics in European History to 1815. Course may be repeated for a maximum of 6 credit hours.

HIST 8310 READING COURSE IN EUROPEAN HISTORY SINCE 1815 (3). PRL. 3. Pr., departmental approval. Selected topics in European History since 1815. Course may be repeated for a maximum of 6 credit hours.

HIST 8500 READING COURSE IN THE HISTORY OF TECHNOLOGY (3). PRL. 3. Pr., departmental approval. Selected topics in the History of Technology. Course may be repeated for a maximum of 6 credit hours.

HIST 8600 READING COURSE IN LATIN AMERICAN HISTORY (3). PRL. 3. Pr., departmental approval. Selected topics in Latin American History. Course may be repeated for a maximum of 6 credit hours.

HIST 8610 READING COURSE IN WORLD HISTORY (3). LEC. 3. Directed readings in modern world history, focusing on one or two geographic areas or themes.

HIST 8700 HISTORIOGRAPHY AND THEORY OF HISTORY (3). SEM. 3. Explores the nature of history by tracing changing conceptions of historical thought and practice from their origins to the present.

HIST 8710 INTRODUCTION TO THE TEACHING OF HISTORY (1). SEM. 1. SU. Introduction to some of the basic challenges involved in teaching History at the college level.

HIST 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Research and writing of the Ph.D. dissertation. Course may be repeated with change in topic.

Health and Human Performance (HLHP)

Dr. G. Dennis Wilson - 844-4483

HLHP 2250 MOTOR DEVELOPMENT DURING THE SCHOOL YEARS (2). LEC. 2. Practical strategies and applications for the enhancement of motor development for school-aged children.

HLHP 2251 LABORATORY IN MOTOR DEVELOPMENT DURING THE SCHOOL YEARS. (1). LAB. 2. SU. Coreq., HLHP 2250. Laboratory experiences to enhance motor development in school-aged children.

HLHP 2800 INTRODUCTION TO HEALTH AND HUMAN PERFORMANCE (3). LEC. 3. People, history and programs that have led to the current status of physical education, exercise science and health promotion.

HLHP 3010 INSTRUCTION AND TECHNOLOGY IN HEALTH AND HUMAN PERFORMANCE (2). LEC. 1. LAB. 2. Communication skills, instructional strategies and technological tools and practices related to conveying information in the health and human performance disciplines.

HLHP 3200 SKILLS AND CONCEPTS OF RHYTHMIC ACTIVITIES (3). LEC. 2, LAB. 2. Skillful performance in gymnastics and other rhythmic activities and an understanding of the basic movement concepts in those activities.

HLHP 3210 SKILLS AND CONCEPTS OF SPORT (3). LEC. 2, LAB. 2. Coreq., HLHP 3300. Skillful performance in games and sports and an understanding of the tactics in those activities.


HLHP 3260 PHYSICAL EDUCATION FOR INDIVIDUALS WITH DISABILITIES (3). LEC. 2, LAB. 2. Pr., HLHP 3020. Program needs of individuals with disabilities in physical education and physical activity settings.

HLHP 3280 ASSESSMENT IN PHYSICAL EDUCATION (3). LEC. 3. Pr., admission to Teacher Education. Development of appropriate measurement tools to assess student learning.

HLHP 3300 INSTRUCTIONAL STRATEGIES IN PHYSICAL EDUCATION (3). LEC. 2, LAB. 2. Pr., admission to Teacher Education, HLHP 3010. Coreq., HLHP 3210. Instructional and class management strategies appropriate to teach quality elementary and secondary physical education.

HLHP 3400 HEALTH PROMOTION IN THE WORKPLACE (3). LEC. 3. Planning, implementation, evaluation and marketing of health promotion programs.


HLHP 3680 PHYSIOLOGY OF EXERCISE (4). LEC. 3, LAB. 2. Pr., HLHP 3020. Energetics of exercise and physiological responses and adaptations of various organ systems (muscular, circulatory, respiratory, etc.) to acute and chronic exercise in different environments.

HLHP 3820 PRINCIPLES OF SPORT COACHING (3). LEC. 3. Pr., HLHP 3020. Basic principles of sport pedagogy and the conduct of sport training programs.

HLHP 4200 PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS (4). LEC. 2, LAB. 4. Pr., HLHP 3300. Understanding of the skill theme approach based on skill themes, movement concepts and levels of skill proficiency. Credit will not be given for both HLHP 4200 and HLHP 4360.


HLHP 4350 TEACHING FOR LIFETIME PHYSICAL ACTIVITY (3). LEC. 2, LAB. 2. Pr., HLHP 3020. Skills and knowledge to conduct comprehensive fitness education programs in schools.

HLHP 4360 HEALTH EDUCATION AND PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS. (3). LEC. 2, LAB. 2. Pr., admission to Teacher Education. Critical topics in health education and physical education for prospective elementary education teachers. Credit will not be given for both HLHP 4360 and HLHP 4200.

HLHP 4450 PHYSICAL ACTIVITY AND PUBLIC HEALTH (3). LEC. 3. Pr., HLHP 3020. Basic principles of epidemiology; health benefits of physical activity; strategies to promote physical activity at the individual and community levels.


HLHP 4760 INTRODUCTION TO EXERCISE SCIENCE RESEARCH (3). LEC. 3. Pr., HLHP 3620, HLHP 3650, HLHP 3680. Research literature, experimental design and research interpretation in exercise science.

HLHP 4780 EXERCISE SCIENCE RESEARCH (3). LEC. 3, SU. Pr., HLHP 4760. Development of a research proposal including the introduction, review of literature, methods, experimental design and statistics.

HLHP 4900 INDEPENDENT STUDY (1-6). IND., SU. Pr., junior standing, departmental approval. In-depth study of specific topics. Course may be repeated for a maximum of 6 credit hours.

HLHP 4910 PRACTICUM (1-6). IND., SU. Pr., Junior standing, departmental approval. Application of basic concepts to specific work environments. Course may be repeated for a maximum of 6 credit hours.

HLHP 4920 INTERNSHIP (1-12). IND., SU. Pr., senior standing, departmental approval. Supervised work experiences in schools, fitness or rehabilitation settings. Two hours of work experience per week for each hour course credit. Course may be repeated for a maximum of 12 credit hours.

HLHP 4970 SPECIAL TOPICS (1-3). IND. Advanced presentation of critical issues in physical education, health promotion or exercise science. Course may be repeated with change in topic.

HLHP 5200 RESEARCH PROJECT IN PHYSICAL EDUCATION (3). LEC. 3. Pr., HLHP 4200, HLHP 4300. Focus on action research in teaching and learning in physical education in schools.

HLHP 6250 INSTRUCTIONAL SUPERVISION FOR PHYSICAL EDUCATION (2). LEC. 2. Pr., HLHP 4200, HLHP 4300. Development of systematic observation systems for providing feedback to teachers and strategies for monitoring progress.

HLHP 6300 ADVOCACY IN PHYSICAL EDUCATION (2). LEC. 2. Pr., HLHP 4200, HLHP 4300. Strategies for development of advocacy programs in physical education.

HLHP 6400 EXERCISE PRESCRIPTION FOR NORMAL AND SPECIAL POPULATIONS (3). LEC. 3. Pr., HLHP 3680 or equivalent. Principles of exercise prescription for normal and special populations with emphasis on specific exercise strategies in elderly, obese, hypertensive and hyperlipidemic populations.

HLHP 6406 EXERCISE PRESCRIPTION FOR NORMAL AND SPECIAL CASES (3). LEC. 3. Pr., HLHP 3680 or departmental approval. Principles of exercise prescription for normal and special populations with emphasis on specific exercise strategies in elderly, obese, hypertensive and hyperlipidemic populations. Spring.


HLHP 6620 SPORT MANAGEMENT (3). LEC. 3. This course is designed to give students critical skills in understanding and analyzing a number of social issues as they related to sport.

HLHP 7010 RESEARCH METHODS IN PHYSICAL ACTIVITY (3). LEC. 3. Study of research methods and analysis of current research in physical education, health promotion and exercise science.

HLHP 7200 CURRICULUM AND TEACHING IN PHYSICAL EDUCATION (3). LEC. 3. Issues in developing and critiquing curricula in physical education.

HLHP 7250 DEVELOPMENT OF PROGRAMS AND ASSESSMENT OF STUDENTS IN PHYSICAL EDUCATION (3). LEC. 3. Development of tools for assessment of student learning and evaluation of physical education programs.

HLHP 7260 INDIVIDUALS WITH DISABILITIES IN PHYSICAL EDUCATION (3). LEC. 3. Developing inclusive physical activity programs for children and adolescents with disabilities in physical education.

HLHP 7280 NATURALISTIC INQUIRY IN PHYSICAL ACTIVITY SETTINGS (3). LEC. 3. Pr., HLHP 7010. Exploration of naturalistic inquiry in physical activity and educational settings.

HLHP 7300 CONTENT AND PEDAGOGY IN PHYSICAL EDUCATION (3). LEC. 3. Instructional strategies and content for elementary and secondary physical education.

HLHP 7350 ORGANIZATION AND ANALYSIS OF INSTRUCTION IN PHYSICAL EDUCATION (3). LEC. 3. Focus on the teaching-learning process in physical education.

HLHP 7380 INTEGRATING CLASSROOM CONCEPTS THROUGH MOVEMENT (3). LEC. 3. Relationship of developmental foundations of young children and programming of physical activities.


HLHP 7710 EXERCISE ELECTROCARDIOGRAPHY (3). LEC. 3. Pr., HLHP 3680 or departmental approval. Electrocardiography from an exercise scientist's perspective, recognition of normal and abnormal electrocardiographic patterns at rest and during exercise.

HLHP 7720 PRINCIPLES OF BIOMECHANICS IN HUMAN MOVEMENT (3). LEC. 3. Pr., HLHP 3650 or departmental approval. Biomechanical principles and laws with applications to human movement in sport, exercise and daily activities.

HLHP 7750 ADVANCED MOTOR LEARNING AND PERFORMANCE (3). LEC. 3. Pr., HLHP 3650 or departmental approval. Theories, experimental studies and current issues in the acquisition, performance and retention of motor skills.

HLHP 7760 BIOMECHANICS OF SPORT INJURY AND REHABILITATION (3). LEC. 3. Pr., HLHP 7620. Biomechanical properties of the human body as related to injuries and rehabilitation in sport and daily activities.

HLHP 7770 LABORATORY TECHNIQUES IN BIOMECHANICS (3). LEC. 2. LAB. 2. Pr., HLHP 7620. Study of equipment and standing practices utilized by a biomechanist in measuring and analyzing motion.

HLHP 7860 ADVANCED PHYSIOLOGY OF EXERCISE I (3). LEC. 3. Pr., HLHP 3680 or departmental approval. Physiological responses to exercise and control of metabolism, the cardiovascular system, and the respiratory system during acute exercise and training.

HLHP 7780 ADVANCED PHYSIOLOGY OF EXERCISE II (3). LEC. 3. Pr., HLHP 3680 or departmental approval. Temperature regulation and endocrine responses to exercise, physiological responses and adaptations to aerobic training, strength training, and environmental extremes; limiting factors and fatigue in exercise.


HLHP 7790 NEUROMOTOR CONTROL (3). LEC. 3. Pr., HLHP 3650 or departmental approval. Structure and function of the central and peripheral systems underlying human motor control.

HLHP 7790 ADVANCED MOTOR DEVELOPMENT (3). LEC. 3. Pr., HLHP 4610 or departmental approval. Examination of theoretical and empirical issues in motor development across the life span.

HLHP 7750 ADVANCED SPORT PSYCHOLOGY (3). LEC. 3. Pr., HLHP 4620 or departmental approval. Examination of psychological factors that influence athletic performance.

HLHP 7780 EXERCISE MOTIVATION AND ADHERENCE (3). LEC. 3. Pr., HLHP 4620 or equivalent. Theoretical foundations and recent research in exercise motivation and adherence.

HLHP 7800 MOTOR BEHAVIOR OF INDIVIDUALS WITH DISABILITIES (3). LEC. 3. Pr., HLHP 7650. Examination of motor behavior characteristics of individuals with disabilities.

HLHP 7800 INDEPENDENT STUDY (1-3). IND. Su. Pr., departmental approval. In-depth study of specific topics. Course may be repeated for a maximum of 3 credit hours.

HLHP 7910 PRACTICUM (1-3). PRA. Su. Pr., departmental approval. Application of basic concepts to specific work environments. Course may be repeated for a maximum of 3 credit hours.

HLHP 7920 INTERNSHIP (1-10). INT. Su. Pr., departmental approval. Supervised work experiences in schools, fitness or rehabilitation settings. Course may be repeated for a maximum of 10 credit hours.

HLHP 7940 DIRECTED FIELD EXPERIENCES (1-10). FLD. Su. Pr., departmental approval. Field studies away from campus. Course may be repeated for a maximum of 6 credit hours.

HLHP 7990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

PHED 1100 WELLNESS (2). LEC. 1, LAB. 2. Basic concepts and principles of wellness with laboratory experiences for the self-appraisal of health-related physical fitness.

PHED 1200 CARDIORESPIRATORY FITNESS (2). LEC. 1, LAB. 2. Basic concepts and physical activities associated with the development and maintenance of cardiorespiratory functioning. Activities may include, but are not limited to, running (jogging) swimming, cycling and aerobic dance. Course may be repeated with change in topic.

PHED 1300 FITNESS AND CONDITIONING (2). LEC. 1, LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness. Activities may include, but are not limited to, calisthenics and weight training. Course may be repeated with change in topic.

PHED 1400 TEAM SPORTS (2). LEC. 1, LAB. 2. Basic concepts and physical activities associated with a specific team sport. Team sports may include, but are not limited to, volleyball, basketball and softball. Course may be repeated with change in topic.

PHED 1500 INDIVIDUAL SPORTS (2). LEC. 1, LAB. 2. Basic concepts and physical activities associated with a specific individual sport. Sports may include, but are not limited to tennis, golf and racquetball. Course may be repeated with change in topic.

PHED 1600 PERFORMANCE ACTIVITIES (2). LEC. 1, LAB. 2. Basic concepts and physical activities associated with a specific performance activity. Activities may include, but are not limited to, dance and gymnastics. Course may be repeated with change in topic.

PHED 1700 AQUATIC SKILLS (2). LEC. 1, LAB. 2. Basic concepts and physical activities associated with specific aquatic skills. Activities may include, but are not limited to, swimming skills instruction, lifeguard training, and scuba diving. When appropriate, successful completion of the course will lead to Red Cross certification or certification by other agencies. Course may be repeated with change in topic.

PHED 1800 VARSITY SPORTS (1). LEC. 1, Su. Skills and training associated with participation in varsity sports. Course may be repeated with change in topic.

Horticulture (HORT)

Dr. Charles Gilliam - 844-4865

HORT 1010 INTRODUCTION TO HORTICULTURE (1). LEC. 1. Introduces scientific and practical aspects of pomology, olericulture, floriculture and land-
sacape horticulture. Also presents the broad scope of career opportunities in the field of horticultural science.

HORT 2010 FRUIT AND NUT PRODUCTION (4). LEC. 3, LAB. 3. Introductory course in cultural practices and economics associated with commercial fruit and nut production. Fall, Spring.

HORT 2020 HORTICULTURE CROP PRODUCTION (3). LEC. 2, LAB. 3, Pr., BIOL 1010 or BIOL 1030. Techniques of plant propagation and cultural methods for successful fruit and vegetable production. Fall.


HORT 2050 FOOD FOR THOUGHT (3). LEC. 3. Study of history of food plants, including their impact on world culture, variety of uses, economic botany, production systems, and impact on societies. Fall.

HORT 2210 LANDSCAPE GARDENING (4). LEC. 2. LAB. 4. Principles of landscape gardening applied to residential and small-scale commercial grounds. Involves plant identification and use, basic landscape design, and landscape installation and management concepts. Fall.

HORT 2240 PLANT PROPAGATION (3). LEC. 2. LAB. 3. Pr., or corequisite BIOL 1030 or departmental approval. Basic principles and practices involved in the propagation of horticulture plants.

HORT 2250 INTERIOR PLANTS AND FLORAL DESIGN (3). LEC. 2. LAB. 2. Basic principles, practices and design with foliage plants and flowers in the interior setting.


HORT 3210 SMALL TREES, SHRUBS AND VINES (4). LEC. 2. LAB. 6. Pr., BIOL 1020 and BIOL 1030. Identification, culture and landscape use of small trees, shrubs and vines.

HORT 3220 ARBORICULTURE (4). LEC. 2. LAB. 6. Pr., BIOL 1030 or departmental approval. Identification, culture and use of ornamental trees in landscape plantings.

HORT 3280 LANDSCAPE CONSTRUCTION (3). LEC. 3. LAB. 4. Principles and practices used in the interpretation and implementation of landscape construction and planting plans. Summer.

HORT 3920 HORTICULTURE INTERNSHIP (4). LEC. 4. Pr., sophomore standing. Practical on-the-job training for selected commercial horticultural companies. Course may be repeated for a maximum of 8 credit hours.

HORT 3950 CAREERS IN HORTICULTURE (1). LEC. 1. SU. Pr., sophomore standing. Current developments and career opportunities in horticulture.


HORT 4110 TREE FRUIT CULTURE (2). LEC. 2. Pr., HORT 3000 or departmental approval. Manipulation of growth and development of tree fruit crops by cultural methods. Summer.

HORT 4120 SMALL FRUIT AND PECAN CULTURE (3). LEC. 2. LAB. 2. Pr., BIOL 3100, BIOL 3101 or departmental approval. Principles and practices involved in the production and marketing of small fruits and pecans. Spring.

HORT 4130 SUSTAINABLE VEGETABLE CROP PRODUCTION (3). LEC. 2. LAB. 3. Pr., HORT 2030 and BIOL 3100, BIOL 3101 or departmental approval. Best management practices and quality of vegetable crops. Fall.

HORT 4140 POST-HARVEST BIOLOGY AND TECHNOLOGY (3). LEC. 2. LAB. 3. Pr., BIOL 3100, BIOL 3101, PLPA 3000 or departmental approval. Physiological changes occurring in fruits, vegetables and other horticultural products after harvest. Fall.

HORT 4150 RETAIL GARDEN CENTER MANAGEMENT (3). LEC. 3. LAB. 4. Pr., HORT 3210 or HORT 3220 or departmental approval. The following objectives will be covered: financing, location, design, stockling, selling, personnel management, advertising and maintaining plants. Summer.

HORT 4270 INTERMEDIATE LANDSCAPE DESIGN (3). LEC. 2. LAB. 6. Pr., HORT 3210 or HORT 3220 or HORT 4100. Human nature, art and technology and their influence on landscape design. Spring.


HORT 4930 DIRECTED STUDY (1-3). INT. Pr., departmental approval. Directed Studies related to research, teaching or outreach educational programs in Horticulture. Course may be repeated for a maximum of 6 credit hours.

HORT 4967 HONORS READINGS (1-3). LEC. Pr., Membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

HORT 4997 HONORS THESIS (1-3). LEC. Pr., Membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.


HORT 6220 GREENHOUSE MANAGEMENT SCIENCE (4). LEC. 3, LAB. 2. Pr., HORT 3000 or BIOL 3100, and BIOL 3101, CHEM 1030, and HORT 2240, and AGRN 2040. Management, culture and economics of commercial greenhouse production. Spring.

HORT 6230 NURSERY MANAGEMENT (3). LEC. 2, LAB. 3. Pr., HORT 2240 and BIOL 3100 or departmental approval. Factors affecting plant production. Environmental issues related to facilities design and pesticide and nutrient management. Fall.

HORT 7010 EXPERIMENTAL METHODS IN HORTICULTURE (4). LEC. 2. LAB. 4. Coreq., STAT 7000. Principles and methodologies of horticultural research, experimental design, preparation of project and grant proposals, and development of publication skills. Fall.

HORT 7040 ADVANCED GROWTH AND DEVELOPMENT OF HORTICULTURAL PLANTS (3). LEC. 3. Pr., HORT 3000 or BIOL 3100, BIOL 3101. Plant growth and development from seed germination, through maturity and senescence. Fall.

HORT 7050 NUTRITIONAL REQUIREMENTS OF HORTICULTURAL PLANTS (3). LEC. 3, LAB. 2, Pr., HORT 3000 or departmental approval. Nutritional requirements of horticulture crops and factors affecting these requirements. Summer.

HORT 7070 PLANT BIOTECHNOLOGY (4). LEC. 2. LAB. 4. Pr., BIOL 3000. Plant biotechnology, including plant tissue culture technologies and genetic transformation and applications to horticultural crop improvement. Spring.

HORT 7080 CURRENT CONCEPTS IN ENVIRONMENTAL PLANT STRESS (3). LEC. 4. Pr., HORT 3000 or departmental approval. Mechanisms related to adaptation of plants to environmental stresses. Spring.

HORT 7110 TREE FRUIT CULTURE (2). LEC. 2. Pr., HORT 3000 or departmental approval. Manipulation of growth and development of tree fruit crops by cultural methods. Summer.

HORT 7120 SMALL FRUIT AND PECAN CULTURE (3). LEC. 2. LAB. 2. Pr., BIOL 3100, BIOL 3101 or departmental approval. Principles and practices involved in the production and marketing of small fruits and pecans. Spring.

HORT 7130 SUSTAINABLE VEGETABLE CROP PRODUCTION (3). LEC. 2. LAB. 2. Pr., HORT 3000 or departmental approval. Advanced course in best management practices and quality of vegetable crops. Fall.

HORT 7140 POST-HARVEST BIOLOGY AND TECHNOLOGY (3). LEC. 2. LAB. 2. Pr., BIOL 3100, BIOL 3101, PLPA 3000. Physiological changes occurring in fruits, vegetables and other horticultural products after harvest. Fall.

HORT 7850 URBAN FORESTRY SEMINAR (1). LEC. 3. SU. Presentation and discussion of research, scientific papers and issues related to urban forestry establishment, care and planning. Credit will not be given for HORT 7850 and FORY 7850. Fall, Spring.

HORT 7950 SEMINAR (1). SEM., SU. Graduate students are required to attend seminar all semester. Fall, Spring. Course may be repeated with change in topic.

HORT 7960 ADVANCED TOPICS IN HORTICULTURE (1-3). LEC. Principles, methods and techniques involved in gaining an understanding of different horticultural disciplines. Course may be repeated for a maximum of 3 credit hours.

HORT 7970 SPECIAL PROBLEMS IN HORTICULTURE (1-3). IND. Conferences, problems and assigned readings in horticulture. Course may be repeated for a maximum of 3 credit hours.

HORT 7990 RESEARCH AND THESIS (1-10). MST, TD. Course may be repeated with change in topic.

HORT 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Course may be repeated with change in topic.

Integrated Textile and Apparel Science (ITAS)

ITAS 8950 INDUSTRY ISSUES SEMINAR (1). LEC. 1. SU. Pr., departmental approval. Research presentations and discussions on issues facing the global textile industrial complex. Course may be repeated for a maximum of 6 credit hours.

ITAS 8960 CURRENT ISSUES IN INTEGRATED TEXTILE AND APPAREL SCIENCE (2). LEC. 2. Pr., departmental approval. Directed readings on current issues in the global textile industrial complex. Spring. Course may be repeated for a maximum of 6 credit hours.

ITAS 8970 ADVANCED TOPICS IN INTEGRATED TEXTILE AND APPAREL QUALITY CONTROL (3). LEC. 3. Pr., TXTN 2700, TXTN 3500 or CAHS 4650 or CAHS 7650 or departmental approval. Quality related topics integrated for textile and apparel operations. Spring.

ITAS 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Pr., departmental approval. Course may be repeated with change in topic.

Industrial Design (INDD)
Prof. Clark Lundell - 844-2364


INDD 1310 SYNTHESIS OF DRAWING (10) Pr., INDD 1120 or departmental approval. Developing mechanical and production design drawings, with in-depth study of perspective systems. Product design communication with emphasis on drawing, development, presentation.

INDD 1320 PROTOTYPE FABRICATION (3). LEC. 2. LAB. 2. Pr., INDD 1120 or departmental approval. Coreq., INDD 1310. Fabrication of three-dimensional models utilizing various materials and machineries. Includes model making, creative modeling, study models, presentation models, mock-ups and prototypes.


INDD 2130 PRESENTATION RENDERING (3). LEC. 2. LAB. 2. Pr., INDD 1310, INDD 1320. Coreq., INDD 2110. Concept development using drawing and rendering skills with different media for ideas communication and presentation.


INDD 2220 ANTHROPOMETRY (3). LEC. 3. Pr., INDD 2110 or departmental approval. Coreq., INDD 2210. Body measurements, movements and human capacity in relation to design with introduction to ergonomics and human physiology as it relates to design.

INDD 2230 HISTORY OF INDUSTRIAL DESIGN (3). LEC. 3. Pr., INDD 2110. Survey of humankind's production of artifacts, from prehistory to present. Emphasis on ideas that mass produced artifacts mirror the meanings of historical events and everyday culture.


INDD 3210 PRODUCT DESIGN (5). LEC. 1. STU. 8. Pr., INDD 2210. Product design utilizing design methodology from proposal to working prototype, including design, research, development, model-making, manufacturing and documentation.

INDD 3220 MATERIALS AND TECHNOLOGY (3). LEC. 3. Pr., INDD 3120. Coreq., INDD 3210. Characteristics and utility of materials such as plastic, metal and ceramics in manufacture and the study of machine/tool processes used by industry.


INDD 4110 ADVANCED PRODUCT DESIGN (5). LEC. 2. STU. 8. Pr., INDD 3120, INDD 3210. Design or redesign of products and systems of advanced complexity.

INDD 4120 PROFESSIONAL PORTFOLIO (3). LEC. 3. Pr., INDD 3110, INDD 3210. Design and development of a portfolio and promotional material presenting the student's work to entry-level professional standards.

INDD 4120 INDUSTRIAL DESIGN THESIS (5). LEC. 2. STU. 8. Pr., INDD 4110. Product design projects involving all design phases; including planning, research, development, finalization, specification and documentation.

INDD 4220 PROFESSIONAL PRACTICE (3). LEC. 3. Pr., INDD 3110, INDD 3210. Business aspects of industrial design, including property, design contract, letters of agreement, business planning and design marketing.

INDD 4967 HONORS READING (1-3). LEC. Pr., Membership in the Honors College; departmental approval

INDD 4997 HONORS THESIS (1-3). LEC. Pr., Membership in the Honors College; departmental approval

INDD 6010 HISTORY OF INDUSTRIAL DESIGN II (3). LEC. 3. A survey of humankind’s production of artifacts, from prehistory to contemporary times, with an emphasis on the idea that mass produced artifacts mirror the meanings of historical events and everyday culture.

INDD 6030 CASE STUDIES IN DESIGN (3). LEC. 3. Design projects undertaken by industry studied by examination of artifacts and records, and by class discussions. Focus on the sociocultural relevancy of the artifacts.

INDD 6690 SPECIAL PROBLEMS (1-5). LEC. Pr., INDD 2110, INDD 2210. Development of individual projects. Research, design and reports on approved topics. Course may be repeated for a maximum of 15 credit hours.

INDD 7010 DESIGN ORIENTATION (3). LEC. 3. Introduction to the Industrial Design graduate program: degree options, study directions, research methods and career opportunities. Students are required to develop a research/project proposal. Emphasis on the relation of products and systems to those who use them.

INDD 7120 PORTFOLIO (3). LEC. 3. Preparation of professional portfolio for graduation and employment.

INDD 7610 PRINCIPLES OF INDUSTRIAL DESIGN (3). LEC. 3. Detailed study of the communication principles of form qualities with emphasis of these aesthetic principles to the technical and human factors of artifacts.

INDD 7620 DESIGN MANAGEMENT (3). LEC. 3. Detailed study of the industrial design project management and development with emphasis on the interdisciplinary management concepts of research, product planning, production and marketing.

INDD 7630 HUMAN FACTORS IN DESIGN (3). LEC. 3. Theoretical and empirical examination of human factors (Anthropometrics, Biotechnology, Engineering Psychology, Behavioral Cybermetics, Ergonomics) as applied to man-machine environmental systems.

INDD 7640 AESTHETICS IN DESIGN (3). LEC. 3. Aesthetics in the context of the designed environment encompassing: nonverbal communication; object language semiotics; gestalt and perception systems; information aesthetics and consumer product safety.

INDD 7650 DESIGN THEORIES (3). LEC. 3. Examination of design theories and philosophies related to technical artifacts in man-machine systems. Comparative studies of unifying theories in art, science, design, technology and the humanities.

INDD 7660 INDUSTRIAL DESIGN METHODOLOGY (3). LEC. 3. Industrial design methodologies and specific methods employed in research, analysis, synthesis, and evaluation in comprehensive design problems.

INDD 7670 SYSTEMS DESIGN (3). LEC. 3. Systems approach and interdisciplinary team work to design problems. Inquires into details of sub-systems, components and parts, with emphasis on the relation of the performance of technical systems to optional human factor effects.

INDD 7980 NON-THESIS DESIGN (3). STU. 3. Synthesizing studies in research, analysis and application based on interdisciplinary concept. Emphasis on the relation of products and systems to those who use them.

INDD 7990 DESIGN THESIS (1-5). RES. TD. Credit to be arranged. Course may be repeated with change in topic.

Industrial and Systems Engineering (NSY)
Dr. Alice Smith - 844-4340

INSY 3020 OCCUPATIONAL SAFETY AND ERGONOMICS (3). LEC. 3. Basic principles of occupational safety engineering and ergonomics in the evaluation and design of occupation work areas and processes that include human operators.
INSY 3021 METHODS ENGINEERING, WORK MEASUREMENT & ERONOMICS LAB (2). LAB. 3. Pr., STAT 3600. Coreq., INSY 3020. Develops the student’s ability to design work places and methods while providing an understanding of the work measurements process. Enables students to generate much of the basic methodology utilized in industrial engineering projects.

INSY 3400 STOCHASTIC OPERATIONS RESEARCH (3). LEC. 3. Pr., ENGR 1110, MATH 2660, STAT 3600. Modeling and analysis of decision-making and operations subject to randomness including decision analysis, stochastic dynamic programming, Markov chains, and queuing theory.

INSY 3410 DETERMINISTIC OPERATIONS RESEARCH (3). LEC. 2. LAB. 3. Pr., ENGR 1110, MATH 2660. Formulation, solution, interpretation, and implementation of mathematical models in operations research including linear programming, integer programming and network flows.


STAT 3610 PROBABILITY AND STATISTICS II (3). LEC. 3. Pr., STAT 3600 or departmental approval. Coreq., STAT 3610 or COMP Continuation of STAT 3600.

INSY 3700 OPERATIONS PLANNING AND CONTROL (3). LEC. 2. LAB. 3. Pr., INSY 3400, INSY 3420. Analytical methods for operations planning and control, including forecasting systems, production planning, inventory control systems, scheduling systems and project management.


INSY 4500 PROFESSIONAL PRACTICE (1). LEC. Pr., Senior Standing in Industrial and Systems Engineering Discussion and activities in current problems, the global context of, professional practice, professional opportunities and lifelong learning in Industrial and Systems Engineering.


INSY 4800 SENIOR DESIGN (3). LAB. 9. Pr., INSY 3021, INSY 4700. Capstone course in which undergraduate course work principles are brought to bear upon a design problem in a cooperating industry or institution.

INSY 4970 INDUSTRIAL AND SYSTEMS ENGINEERING SPECIAL TOPICS (1-5). LEC. Pr., departmental approval. Special topics in Industrial and Systems Engineering. Specific prerequisites will be determined and announced for each offering. Course may be repeated for a maximum of 5 credit hours.

INSY 4980 INDUSTRIAL AND SYSTEMS ENGINEERING PROBLEMS (1-5). LEC. 3. Pr., departmental approval. Individual student endeavor under faculty supervision involving special problems in Industrial and Systems Engineering. Interested student must submit written proposal to department head. Course may be repeated for a maximum of 5 credit hours.

INSY 5000/5006 MANUFACTURING AND PRODUCTION ECONOMIES (3). LEC. 3. Pr., INSY 3600. Continuation of INSY 3600. Emphasis on design economics and cost estimating techniques and applications to various manufacturing and service operations.

INSY 5600/5606 MANUFACTURING AND PRODUCTION ECONOMIES (3). LEC. 3. Pr., INSY 3600. Continuation of INSY 3600. Emphasis on design economics and cost estimating techniques and applications to various manufacturing and service operations.

INSY 6240/6246 SCHEDULING AND PROJECT MANAGEMENT (3). LEC. 3. Pr., INSY 3700. Sequencing and scheduling methods and models are presented, with special emphasis on scheduling and controlling projects.

INSY 6330/6336 OFF-LINE AND ON-LINE QUALITY CONTROL (3). LEC. 3. Pr., STAT 3610 and senior standing; departmental approval. Taguchi’s quality loss functions, Taguchi’s orthogonal arrays and their relationships to fractional factorial designs. Taguchi’s parameter and tolerance designs, on-line process control concepts and methods.

INSY 6380/6386 RELIABILITY ENGINEERING (3). LEC. 3. Pr., STAT 3610 and senior standing. Reliability, maintenance, replacement with emphasis on failure-rate estimation and life testing.

INSY 6470/6476 SEARCH METHODS FOR OPTIMIZATION (3). LEC. 3. Pr., MATH 2660, INSY 3410. Single and multivariate search techniques and strategies that are used in finding the optimum of discrete and continuous functions.

INSY 6500/6506 INFORMATION TECHNOLOGY FOR OPERATIONS (3). LEC. 3. Pr., COMP 3000 or departmental approval. Role and potential of using computer-integrated systems within manufacturing and service industries. Analysis of relevant data, synthesis of the flow of information in an operations environment, and development of databases to support the production process.

INSY 6600/6606 MANUFACTURING AND PRODUCTION ECONOMIES (3). LEC. 3. Pr., INSY 3600. Continuation of INSY 3600. Emphasis on design economics and cost estimating techniques and applications to various manufacturing and service operations.

INSY 6800/6806 LEAN PRODUCTION (3). LEC. 3. Pr., INSY 4700, INSY 6230, INSY 6240. Manufacturing system design based on a strategy of linked cells providing a continuous flow of materials. Evaluation strategies and analysis tools are studied.

INSY 6940 INDUSTRIAL AND SYSTEMS ENGINEERING PROBLEMS (1-5). IND. Pr., departmental approval. Individual student endeavor under faculty supervision involving special problems of an advanced undergraduate or graduate nature in Industrial and Systems Engineering. Interested student must submit written proposal to department head. Course may be repeated for a maximum of 5 credit hours.

INSY 7050/7056 INDUSTRIAL HYGIENE AND ENVIRONMENTAL HAZARDS (3). LEC. 3. Pr., INSY 3020. Introduction to the basic concepts of industrial hygiene with emphasis on the industrial hygiene/safety interface and on the evaluation and control of noise and vibration stress.

INSY 7060/7066 ERONOMICS LAB (3). LEC. 3. Pr., INSY 3020. Overview of the human body systems and evaluation of the physiological response of the human body to occupational activities with emphasis on task design.

INSY 7070/7076 ERONOMICS II (3). LEC. Pr., INSY 7060. Use of biomechanics in the evaluation and design of work activities. Emphasis is placed on biomechanical modeling, manual materials handling, tool design, and repetitive motion trauma.

INSY 7080/7086 HUMAN FACTORS ENGINEERING (3). LEC. 3. Pr., INSY 3020. Examination of human factors, ergonomics and safety research methodologies. Emphasis is on human information input, output and control process with the objective of optimizing integration of the human into simple and complex systems.


INSY 7100/7106 ADAPTIVE OPTIMIZATION (3). LEC. 3. Pr., COMP 3000 or departmental approval. Adaptive search methods inspired by nature for continuous and combinatorial optimization. Methods include simulated annealing, genetic algorithms, evolutionary strategies, tabu search and ant colony systems.

INSY 7200/7206 ENGINEERING APPLICATIONS OF FUZZY SYSTEMS AND NEURAL NETWORKS (3). LEC. 3. Pr., COMP 3000 or departmental approval. Introduction to fuzzy systems and neural networks with emphasis on their uses in engineering applications in clustering, modeling, optimization, control, forecasting and classification.


INSY 7240/7246 PRODUCTION AND INVENTORY CONTROL THEORY (3). LEC. 3. Pr., INSY 6240. Theoretical foundations for the analysis and design of production and inventory control systems with emphasis on quantitative methods and current areas of research.
STAT/INSY 7300/7306 ADVANCED ENGINEERING STATISTICS I (3). LEC. 3. Pr., STAT 3610. Advanced concepts of experimental design including blocked designs, analysis of variance regression approach, and fractional factorials in base-2 designs. Emphasis throughout is on developing and improving industrial products and processes. Credit will not be given for both INSY 7300 and STAT 7300.

STAT/INSY 7310 ADVANCED ENGINEERING STATISTICS II (3). LEC. 3. Pr., STAT/INSY 7310. Fractional factorial experimentation applied for the purpose of process and quality improvement and optimization, introduction to analysis of covariance, multiple regression analysis, and response surface analysis. Credit will not be given for both INSY 7310 and STAT 7310.

INSY 7420/7426 LINEAR PROGRAMMING AND NETWORK FLOWS (3). LEC. 3. Pr., INSY 4410 or departmental approval. Linear programming and network flows emphasizing algorithms and theory.

INSY 7430/7436 INTEGER AND NONLINEAR PROGRAMMING (3). LEC. 3. Pr., INSY 7420 or departmental approval. Integer and non linear programming, emphasizing algorithms and theory.

INSY 7440/7446 DYNAMIC PROGRAMMING (3). LEC. 3. Pr., INSY 3400 and COMP 3000, or departmental approval. Aspects of sequential decision making with emphasis on formulation and solution using the dynamic programming algorithm. Approximation methods for problems involving large state spaces. Solving integer programming problems under uncertainty.

INSY 7500/7506 ADVANCED SIMULATION (3). LEC. 3. Pr., INSY 3420 and COMP 3000 or departmental approval. Coverage of advanced simulation and simulation language design concepts. Includes advanced input/output analysis, modeling concepts, and language design/implementation concepts.


INSY 7950/7956 SEMINAR (3). LEC. 1. Su. Pr., ISE graduate standing. Presentation and discussion of ISE research by graduate students, faculty and guests. Must be taken at least one term and cannot be used in the plan of study to apply towards the minimum number of hours for a degree. Fall, Spring.

INSY 7970/7976 INDUSTRIAL AND SYSTEMS ENGINEERING SPECIAL TOPICS (1-5). LEC. Pr., departmental approval. Special topics of a graduate nature pertinent to Industrial and Systems Engineering. Specific prerequisites will be determined and announced for each offering. Course may be repeated for a maximum of 5 credit hours.

INSY 7980/7986 MASTER’S IN INDUSTRIAL AND SYSTEMS ENGINEERING PROJECT (1-5). IND., Su. Pr., departmental approval. Non-thesis master’s project. Course may be repeated for a maximum of 5 credit hours.

INSY 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval. Course may be repeated with change in topic.


INSY 8250 SCHEDULING THEORY (3). LEC. 3. Pr., INSY 6250, INSY 6470, INSY 7420. The theory for various scheduling methods and models is presented. Emphasis is on current research in the scheduling area.

INSY 8420/8426 TOPICS IN OPTIMIZATION (3). LEC. 3. Pr., INSY 6470, INSY 7420. Basic concepts and theory of optimization, including saddlepoint conditions for differentiable and non-differentiable programs, duality, approximation, decomposition and partitioning, illustrated by application to specific algorithms.

INSY 8970 INDUSTRIAL AND SYSTEMS ENGINEERING SPECIAL TOPICS (1-5). LEC. Pr., departmental approval. Special topics of an advanced graduate nature pertinent to industrial and systems engineering. Specific prerequisites will be determined and announced for each offering. Course may be repeated for a maximum of 5 credit hours.

INSY 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Pr., departmental approval. Course may be repeated with change in topic.

Mathematics (MATH)

Dr. Michel Smith - 844-4290

MATH 1000 COLLEGE ALGEBRA (3). LEC. 3. Pr., High school geometry and second-year high school algebra. Fundamental concepts of algebra, equations and inequalities, functions and graphs, polynomial and rational functions. Does not satisfy the core requirement in mathematics. Students who have previous credit in any higher-numbered math course may not receive credit.

MATH 1100 FINITE MATHEMATICS AND APPLICATIONS (3). LEC. 2. RCT. 2. Mathematics Core. Overview of finite mathematics and its applications. Graph theory, matrices, finite and conditional probability; descriptive and inferential statistics, voting methods, game theory. Students who have previous credit in any higher-numbered math course may not receive credit.

MATH 1120 PRE-CALCULUS ALGEBRA (3). LEC. 3. Pr., high school geometry and second-year high school algebra. Mathematics Core. Algebra of functions including polynomial, rational, exponential and logarithmic functions. Systems of equations and inequalities, quadratic inequalities, the bimomial theorem. Students who have previous credit in any higher-numbered math course may not receive credit.

MATH 1130 PRE-CALCULUS TRIGONOMETRY (3). LEC. 3. Pr., MATH 1120. Mathematics Core. Preparatory course for the calculus sequence. Basic analytic and geometric properties of the trigonometric functions. Complex numbers, de Moivre’s theorem, polar coordinates. Students who have previous credit in any higher-numbered math course may not receive credit.

MATH 1150 PRE-CALCULUS ALGEBRA AND TRIGONOMETRY (4). LEC, 3. RCT. 2. Pr., high school geometry and second year high school algebra. Students are further required either to have an appropriate score on the mathematics placement exam or to have passed MATH 1000 with a C or better. Mathematics Core. Algebraic functions, Exponential Logarithmic functions. Analytic and geometric properties of trigonometric functions. Students who have previous credit in any higher-numbered math course may not receive credit.

MATH 1151 MATHEXCEL PRE-CALCULUS WORKSHOP (2). LEC. 2. Pr., MATH 1000. Appropriate score on the mathematics placement exam or grade of C or better in MATH 1000. Coreq., MATH 1150. Workshop for MATH 1150. Two 2-hour sessions per week. Fall, Spring.

MATH 1610 CALCULUS I (4). LEC. 3. RCT. 2. Pr., MATH 1600. Mathematics Core. Limits, the derivative of algebraic, trigonometric, exponential, logarithmic functions. Applications of the derivative, antiderivatives, the definite integral and applications to problems, the fundamental theorem of calculus. Credit will not be given for both MATH 1610 and MATH 1680. Students may receive credit for only one of MATH 1610, MATH 1617, or MATH 1710.

MATH 1611 MATHEXCEL CALCULUS WORKSHOP I (2). LEC. 2. Pr., MATH 1610 or MATH 1617. Workshop for Math 1610. Two 2-hour sessions per week. Fall.

MATH 1617 HONORS CALCULUS I (4). LEC. 4. Pr., membership in the Honors College, MATH 1600. Mathematics Core. This course covers the same material as MATH 1610 but at a greater depth appropriate for honors students. Credit will not be given for both MATH 1617 and MATH 1680. Students may receive credit for only one of MATH 1610, MATH 1617, or MATH 1710.

MATH 1620 CALCULUS II (4). LEC. 4. Pr., MATH 1610. Techniques of integration, applications of the integral, parametric equations, polar coordinates. Vectors, lines and planes in space. Infinite sequences and series. Students may receive credit for only one of MATH 1620, MATH 1627, or MATH 1720.

MATH 1621 MATHEXCEL CALCULUS WORKSHOP II (2). LEC. 2. Pr., MATH 1610, Coreq., MATH 1620. Workshop for MATH 1620. Two 2-hour sessions per week. Spring.

MATH 1627 HONORS CALCULUS II (4). LEC. 4. Pr., membership in the Honors College, MATH 1617. The same material as MATH 1620, but in greater depth appropriate for honors students. Students may receive credit for only one of MATH 1620, MATH 1627 or MATH 1720.

MATH 1680 CALCULUS WITH BUSINESS APPLICATIONS I (4). LEC. 3. RCT. 2. Pr., high school geometry and second-year high school algebra. For students in the College of Business or by departmental approval. Mathematics Core. Calculus (derivatives, integrals, fundamental theorem) focused on business applications with introductory material on algebra (including exponential and logarithmic functions). Credit will not be given for both MATH 1680 and MATH 1610, or MATH 1617 or MATH 1710. Credit will not be given to majors in Engineering or Math or Physics.

MATH 1690 CALCULUS WITH BUSINESS APPLICATIONS II (3). LEC. 3. Pr., MATH 1680 or MATH 1610. For students in the College of Business, or by departmental approval. Probability, random variables, probability distributions. Further topics in calculus: integration, functions of several variables, applications to probability. Applications to business and related areas. Credit will not be given for MATH 1690 and MATH 1620, or MATH 1627 or MATH 1720. Credit will not be given to majors in Engineering or Math or Physics. Course may be repeated for a maximum of 6 credit hours.
MATH 1710 CALCULUS FOR ENGINEERING AND SCIENCE I (4). LEC. 4. Pr., MATH 1600. Mathematics Core. Vector algebra, real and vector valued functions, limits, derivatives and antiderivatives of real and vector valued functions and applications. The fundamental theorem of calculus. MATH 1710 and MATH 1720 include and reorder the material of MATH 1610 and MATH 1620, and MATH 1720 may be substituted for MATH 1620. However, MATH 1710 is not a sufficient prerequisite for MATH 1620, and students who pass MATH 1710 and wish to take MATH 1620, must take MATH 1610. Credit will be given for only one of MATH 1610, MATH 1617, or MATH 1710. Credit will not be given for both MATH 1610 and MATH 1710.

MATH 1720 CALCULUS FOR ENGINEERING AND SCIENCE II (4). LEC. 4. Pr., MATH 1710. Exponents and logarithms, separation of variables, L'Hôpital's rule. Techniques of integration, work and energy, line integrals, the gradient and directional derivatives, the curl. Credit will be given for only one of MATH 2620, MATH 2637, or MATH 2730.

MATH 2630 CALCULUS III (4). LEC. 4. Pr., MATH 1620. Multivariate calculus: vector-valued functions, partial derivatives, multiple integration, vector calculus. Credit will be given for only one of MATH 2630, MATH 2637, or MATH 2730.

MATH 2637 HONORS CALCULUS III (4). LEC. 4. Pr., membership in the Honors College, MATH 1627. The same material as MATH 2630, but in greater depth appropriate for honors students. Credit will be given for only one of MATH 2630, MATH 2637, or MATH 2730.

MATH 2650 LINEAR DIFFERENTIAL EQUATIONS (3). LEC. 3. Coreq., MATH 2630. First and second order linear differential equations including the solutions by infinite series, applications.


MATH 2730 CALCULUS FOR ENGINEERING AND SCIENCE III (4). LEC. 4. Pr., MATH 2720. Optimization and Lagrange multipliers. Linear, spherical, cylindrical, polar transformations. The Jacobian. Surface integrals and integrals over solids. Divergence, Stokes' Theorem, Gauss' Theorem. Credit will only be given for one of MATH 2730, MATH 2630, or MATH 2637.

MATH 2850 MATHEMATICS FOR ELEMENTARY EDUCATION I (3). LEC. 3. Pr., MATH 1130 or higher. Elementary Education majors or departmental approval. Mathematical insights for elementary school teachers. Sets, the structure of the number system (integers, fraction, decimals).

MATH 2860 MATHEMATICS FOR ELEMENTARY EDUCATION II (3). LEC. 3. Pr., MATH 2850. Elementary Education majors or departmental approval. Mathematical insights for elementary school teachers. Probability, informal geometry, measurement.

MATH 3010 HISTORY OF MATHEMATICS (3). LEC. 3. Pr., MATH 1620 or departmental approval. The evolution of modern mathematics from its motivational roots in the physical sciences; the lives and contributions of outstanding mathematicians; the parallel development of mathematics and western culture.

MATH 3100 INTRODUCTION TO ADVANCED MATHEMATICS (3). LEC. 3. Pr., MATH 2630. Teaching of the fundamental abilities necessary for the pursuance of mathematical studies. Logic and set theory, mathematical induction, basic number theory, basic analysis.

MATH 4970 SPECIAL PROBLEMS (1-4). IND. Pr., departmental approval, junior standing. An individual problems course. Each student will work under the direction of a staff member on a problem of mutual interest. Course may be repeated for a maximum of 4 credit hours.

MATH 4997 HONORS THESIS (1-6). IND. Pr., membership in the Honors College and senior standing. Course may be repeated for a maximum of 6 credit hours.

MATH 6000 MATHEMATICAL MODELING: CONTINUOUS (3). LEC. 3. Pr., MATH 2650, MATH 2660 and programming ability. Introduction to mathematical models and related techniques. Includes general principles involving continuous deterministic problems and a detailed, specific term-project.


MATH 6020/6036 COMPLEX VARIABLES WITH APPLICATIONS I (3). LEC. 3. Pr., MATH 2650. Complex functions and their elementary mapping properties; contour integration and residues; Laurent series; applications to real integrals. MATH 6030-6040 are appropriate for students of engineering or science.

MATH 6040 COMPLEX VARIABLES WITH APPLICATIONS II (3). LEC. 3. Pr., MATH 6030. Linear fractional transformations; conformal mappings; harmonic functions; applications to boundary value problems; analytic continuation; entire functions. MATH 6030-6040 are appropriate for students of engineering or science.


MATH 6060 ELEMENTARY PARTIAL DIFFERENTIAL EQUATIONS (3). LEC. 3. Pr., MATH 2650. First and second order linear partial differential equations with emphasis on the method of eigenfunction expansions.

MATH 6130 CALCULUS OF VARIATION (3). LEC. 3. Pr., MATH 2650. Fundamental concepts of extrema of functions and functionals; first and second variations; generalizations; sufficient conditions; constrained functionals; the general Lagrange problem; optimal control.


MATH 6180 INTRODUCTION TO APPROXIMATION THEORY (3). LEC. 3. Pr., MATH 2650. Approximation of functions by polynomials, spline functions or trigonometric function, expansions in series. MATH 6180 is appropriate for students of engineering and science.

MATH 6200 ANALYSIS I (3). LEC. 3. Pr., MATH 3100 or analogous course subject to departmental approval. The real number system, theorems concerning number sets, sequences, graphs of functions.

MATH 6210 ANALYSIS II (3). LEC. 3. Pr., MATH 6200. The real number system, theorems concerning number sets, sequences, graphs of functions; Riemann-Stieltjes integration, continuity, the derivative and functions of bounded variation; functions whose domains are in Euclidean spaces.


MATH 6260 SYSTEMS OF DIFFERENTIAL EQUATIONS AND APPLICATIONS (3). LEC. 3. Pr., MATH 2650, MATH 2660. Linear systems of differential equations, stability, phase portraits; nonlinear systems, linearization, qualitative properties of orbits, Poincare-Bendixson Theorem; numerical methods; applications.

MATH 6310 INTRODUCTION TO ABSTRACT ALGEBRA I (3). LEC. 3. Pr., MATH 3100 or departmental approval. Groups, Groups of Permutations, isomorphisms and homomorphisms; Cyclic Groups, Quotient Groups, The Fundamental Homomorphism Theorem.


MATH 6330 COMPUTATIONAL ALGEBRA (3). LEC. 3. Pr., MATH 6210. Introduction to computation in multivariate polynomial rings and finite fields. Topics include Berlekamp's Algorithm, Groebner bases, Buchberger's Algorithm, kinematic/robotics problems, symbolic manipulation software.


MATH 6380 INTERMEDIATE EUCLIDEAN GEOMETRY I (3). LEC. 3. Pr., MATH 2630. Fundamental concepts and theorems of Euclidean geometry, introduction to higher dimensions. Regular polygons and polyhedra, symmetry groups, convexity, geometric extremum problems. Geometric transformations and their invariants.

MATH 6390 INTERMEDIATE EUCLIDEAN GEOMETRY II (3). LEC. 3. Pr., MATH 6380. Planar graphs and Euler's theorem. The symmetry group of a set, homotheties and similitudes, path, arcs and length of curves, advanced theorems on the circle.


MATH 6500 INTRODUCTION TO TOPOLOGY (3). LEC. 3. Pr., MATH 3100 or departmental approval. Metric spaces, topological spaces, continuity, compactness, connectedness, product and quotient spaces and local properties.


MATH 6640/6646 INTRODUCTION TO NUMERICAL ANALYSIS II (3). LEC. 3. Pr., MATH 2660, programming ability. Numerical solutions of systems of
Mathematics (MATH)

linear equations, numerical computation of eigenvalues and eigenvectors, error analysis. Written programs using the algorithms.

MATH 6650 THEORY OF NONLINEAR OPTIMIZATION (3). LEC. 3. Pr., MATH 2650 and 2660. Kuhn-Tucker conditions, quadratic programming, search methods and gradient methods, Lagrangean and penalty function methods.


MATH 6690 INTRODUCTION TO CHAOTIC AND RANDOM PHENOMENA (3). LEC. 3. Pr., MATH 1620. Coreq., basic programming. Stochastic properties of random phenomena in computational complexity, data analysis, chaotic nonlinear systems. Computer simulation and experimenting within Mathematica, supported by Internet resources. Credit will not be given for both MATH 6690 and STAT 6690.

MATH 6790 ACTUARIAL SEMINAR I (3). LEC. 3. Pr., MATH 2630, MATH 6670 (or equivalent). Intensive seminar in calculus, probability, and risk theory primarily intended as preparation for the Society of Actuaries Course 1 examination.


MATH 6820 ACTUARIAL SEMINAR II (3). LEC. 3. Pr., ECON 2030, FIN 3630, MATH 6800. Intensive seminar in the mathematical aspects of economics, finance, and the theory of interest primarily intended as preparation for the Society of Actuaries Course 2 examination.


MATH 6850 NUMERICAL ANALYSIS FOR SECONDARY TEACHERS (3). LEC. 3. Pr., MATH 2630 and computer familiarity. The numerical solutions of selected problems arising in calculus and algebra along with programming techniques.

MATH 6860 FOUNDATIONS OF NON-EUCLIDEAN GEOMETRY FOR SECONDARY SCHOOL TEACHERS (3). LEC. 3. Pr., MATH 2630. B.L. geometry, hyperbolic geometry, absolute geometry, parallel postulates.

MATH 6970 SPECIAL TOPICS (1-3). IND. Pr., departmental approval. Topics may vary as needed. Course may be repeated for a maximum of 3 credit hours.


MATH 7050/7056 APPROXIMATION THEORY II (3). LEC. 3. Pr., MATH 7040. Least square approximation and rational approximation, and advanced topics of current interest.

MATH 7070 INTERPOLATION I (3). LEC. 3. Pr., departmental approval. Techniques of approximation by interpolation, rates of convergence and methods of estimating error. Simultaneous approximation of functions and their derivatives; spline function interpolation; curve and surface fitting.


MATH 7100 SPECIAL FUNCTIONS (3). LEC. 3. Pr., departmental approval. Special functions from classical complex analysis which play an important role in the mathematics of physics, chemistry and engineering.

MATH 7110 DISCRETE GEOMETRY AND CONVEXITY I (3). LEC. 3. Pr., MATH 6380 and MATH 6390 or departmental approval. Geometric objects and configurations with discrete symmetry groups. Regular polygons and polyhedra. Regular arrangements. Plane tilings and patterns.


MATH 7150 AXIOMATIC SET THEORY I (3). LEC. 3. Pr., departmental approval. Introduction to modern set theory. The axioms of ZFC, ordinals and cardinals, closed unbounded sets, the constructible universe L, Martin’s Axiom.

MATH 7160 AXIOMATIC SET THEORY II (3). LEC. 3. Pr., MATH 7150. Introduction to forcing, independence results, iterated forcing, consistency of Martin’s Axiom.

MATH 7200 REAL ANALYSIS I (3). LEC. 3. Pr., departmental approval. Sigma algebras, measures, measurable functions, integrability, properties of Lebesgue’s measure, density, Lusin’s theorem, Egoroff’s theorem, product measures, Fubini’s theorem. Limit theorems involving pointwise convergence and integration.


MATH 7280 ADVANCED THEORY OF ORDINARY DIFFERENTIAL EQUATIONS I (3). LEC. 3. Pr., departmental approval. Existence and continuation theorems for ordinary differential equations, continuity and differentiability with respect to initial conditions, linear systems, differential inequalities, Sturm theory.


MATH 7310 ALGEBRA I (3). LEC. 3. Pr., MATH 6320 or departmental approval. Groups, Lagrange’s Theorem, normal subgroups, factor groups, Isomorphism and Correspondence Theorems. Symmetric groups, alternating groups, free groups, torsion groups. Introduction to rings, correspondence theorems.

MATH 7320 ALGEBRA II (3). LEC. 3. Pr., MATH 7310. Rings, modules over spaces, and semi-simple modules. Commutative rings; prime and primary ideals, PID’s, factorizations in integral domains, field extensions, the Galois Correspondence Theorem.

MATH 7330 LINEAR REPRESENTATIONS OF FINITE GROUPS (3). LEC. 3. Pr., MATH 7320. Maschke’s Theorem, characters, orthogonality relations, induced modules, Frobenius reciprocity, Clifford’s Theorem, Mackey’s Subgroup Theorem, Burnside’s theorem on solvability.

MATH 7340 RING THEORY (3). LEC. 3. Pr., MATH 7320. Topics on: commutative rings (Cohen-Seidenberg theorems, Krull Intersection Theorem, Dedekind domains), or noncommutative rings (projective modules over Artinian algebras, representation type, Noether-Skolem Theorem, division algebras).

MATH 7350 ABELIAN GROUPS (3). LEC. 3. Pr., MATH 7320. Torsion groups: Decompositions, Ulm’s theorem, uniqueness theorem for Abelian groups, Tor-sion-free groups: Completely decomposable groups, Butler groups, p-local groups, Warfield groups, splitting criteria. Homological topics.

MATH 7370 MATRICES I (3). LEC. 3. Pr., MATH 6370 or departmental approval. Jordan form, functions of a matrix, spectral theorem, singular values, norms, quadratic forms, field of values, enetria; topics of current interest.

MATH 7380 MATRICES II (3). LEC. 3. Pr., MATH 7370. Matrix stability and inertia, inequalities for matrix eigenvalues and singular values, The Kronecker
and Hadamard matrix products, the exponential and logarithm matrix map; topics of current interest.


**MATH 7440 PARTIAL DIFFERENTIAL EQUATIONS I** (3). LEC. 3. Pr., departmental approval. Second order linear elliptic and hyperbolic equations stressing non-linear and numerical problems, characteristics, domains of dependence, energy integrals, finite difference schemes, Sobolev spaces, maximum principle.

**MATH 7450 PARTIAL DIFFERENTIAL EQUATIONS II** (3). LEC. 3. Pr., MATH 7440. Parabolic and hyperbolic equations, stressing numerical problems, characteristics, domains of dependence, energy integrals, reaction-diffusion problems, Navier-Stokes equations, fixed-point and Galerkin methods.

**MATH 7500 TOPOLOGY I** (3). LEC. 3. Pr., MATH 6210 or 6500 or departmental approval. Separation and countability axioms, covering properties, completeness, connectedness, metric spaces and metrizability, product and quotient spaces, function spaces.

**MATH 7510 TOPOLOGY II** (3). LEC. 3. Pr., MATH 7500. Homotopy, elementary properties of retracts, fundamental groups, covering spaces, computations of fundamental groups.

**MATH 7520 DIMENSION THEORY** (3). LEC. 3. Pr., MATH 7500 or MATH 6500 or departmental approval. Topological study of dimension in separable metric spaces. Topological invariance of dimension of Euclidean spaces. Dimension and measure.

**MATH 7530 CONTINUUM THEORY I** (3). LEC. 3. Pr., MATH 7510 or departmental approval. Topics such as inverse limits, decompositions, hyperspaces, special mappings, topological structures from the pathological (indecomposable continua), to the straightforward (Peano continua).

**MATH 7540 CONTINUUM THEORY II** (3). LEC. 3. Pr., MATH 7530. Topics in continuum theory such as confluent mappings, epsilon mappings, chains, the-boundary theorems, relationship to inverse limits, advanced topics.

**MATH 7550 SET THEORETIC TOPOLOGY I** (3). LEC. 3. Pr., MATH 7510 or departmental approval. Compactifications, covering properties, metrization theorems and generalized metrizable spaces, topological groups.

**MATH 7560 SET THEORETIC TOPOLOGY II** (3). LEC. 3. Pr., MATH 7550. Topological Groups, Cardinal invariants, use of set-theoretic axioms such as Martin’s Axiom, independence results, advanced topics.

**MATH 7570 EUCLIDEAN TOPOLOGY I** (3). LEC. 3. Pr., MATH 7510. An introduction to concepts basic in algebraic and geometric topology through the study of simple objects such as polyhedra, manifolds, retracts, and the Brower fixed point theorem.

**MATH 7580 EUCLIDEAN TOPOLOGY II** (3). LEC. 3. Pr., MATH 7570. Further study of basic geometric topology. Retracts, absolute neighborhood retracts, maps into spheres, invariance of domain.

**MATH 7600/7606 ADVANCED NUMERICAL MATRIX ANALYSIS** (3). LEC. 3. Pr., MATH 6640 or departmental approval. Topics selected from: discretization matrices, sparse matrices, QR-algorithm, symmetric eigenvalue problems, singular value decomposition, pseudo-inverses, simplex method, matrix algorithms for vector computers.

**MATH 7610/7616 NUMERICAL SOLUTION OF PARTIAL DIFFERENTIAL EQUATIONS** (3). LEC. 3. Pr., MATH 6640 or departmental approval. The numerical solution of partial differential equations using finite difference and finite element methods.

**MATH 7620 OPTIMIZATION THEORY** (3). LEC. 3. Pr., MATH 6640 and an ability to program in a high-level language. Unconstrained problems: basic descent, conjugate gradient and quasi-Newton methods. Constrained problems: gradient projection, penalty, cutting plane and Lagrange methods. Credit will not be given for both MATH 7620 and INSY 8420.

**MATH 7650 HARMONIC ANALYSIS I** (3). LEC. 3. Pr., MATH 7210 or departmental approval. Fourier series, Fourier transforms, maximal functions, singular integral theory, introduction to function spaces.

**MATH 7660 HARMONIC ANALYSIS II** (3). LEC. 3. Pr., MATH 7650. Function spaces and interpolation, Calderon’s reproducing formulas, wavelets, frames, connections to function spaces applications.

**MATH 7680/7686 ADVANCED TOPICS IN NUMERICAL ANALYSIS** (3). LEC. 3. Pr., departmental approval. Topics include: sparse systems of equations, parallel and vector algorithms, nonlinear and singular partial differential equations, calculation of eigenvalues and eigenvectors, pseudo-random numbers, filtering techniques.
gence of random processes, measures and sets, stochastic integrals and qua-
dratic variation.

MATH 8640 ADVANCED STOCHASTIC PROCESSES II (3). LEC. 3. Pr., MATH 8630. Continuous martingales and Brownian motion, stochastic differential equa-
tions and martingale problems, local time, excursions, one-dimensional SDE’s and diffusions.

MATH 8960 DIRECTED READINGS (1-10). IND. Pr., departmental approval. Topics may vary as needed. Course may be repeated for a maximum of 15 credit hours.

MATH 8970 SPECIAL TOPICS (1-10). IND. Pr., departmental approval. Topics may vary as needed. May be repeated with change in topic. Course may be repeated for a maximum of 15 credit hours.

MATH 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

Mechanical Engineering (MECH)

Dr. David F. Dyer - 844-4820

MATERIALS ENGINEERING (MATL)

MATL 2100 INTRODUCTION TO MATERIALS SCIENCE (3). LEC. 3. The science of solid materials and the relationship between this science and material properties.

MATL 3100 ENGINEERING MATERIALS - METALS (3). LEC. 3. Pr., MATL 2100. The relationship among processing, microstructure, properties and en-
gineering applications of metallic materials.

MATL 3101 METALLOGRAPHY LABORATORY (1). LAB. 3. Coreq., MATL 3100. The use of microstructural characterization to understand the relation-
ship between microstructure and properties of metallic materials.

MATL 3200 ENGINEERING MATERIALS - POLYMERS (3). LEC. 3. Pr., CHEM 1040. The synthesis, processing, structure and properties of polymers and poly-
mers, and composites.

MATL 3201 POLYMER AND COMPOSITES LABORATORY (1). LAB. 3. Coreq., MATL 3200. A hands-on lab course on the synthesis, processing, structure and properties of polymers and polymer matrix composites.

MATL 3300 ENGINEERING MATERIALS - CERAMICS (3). LEC. 3. Pr., MATL 2100. The engineering of ceramic materials. Structural property relationships of crystalline and glassy ceramics will be included.

MATL 4500 MATERIALS PROPERTIES AND SELECTION (4). LEC. 3. LAB. 3. Pr., ENGR 2070, MATL 3100, MATL 3200. Methods for microstructure con-
trol. Design of processing sequences, statistical and economical analysis.

MATL 4900 SENIOR DESIGN PROJECT (3). LEC. 1. LAB. 6. Pr., MATL 4500. Students select, design, schedule, fabricate and perform an engineering de-
sign project related to Materials Engineering.

MATL 4960 DIRECTED READINGS (1-6). IND., SU. Pr., departmental approval. Areas of interest within Materials Engineering. Course may be repeated for a maximum of 6 credit hours.

MATL 4997 HONORS THESIS (1-6). IND. Pr., membership in the Honors Col-
lege; departmental approval. Individual student directed research and writing of honors thesis. Course may be repeated for a maximum of 6 credit hours.

MATL 6010 ENGINEERING PHYSICS FOR TEACHERS (3). LEC. 3. Pr., PHYS 1500, CHEM 2070; for prospective and practicing secondary and/ or middle school teachers with emphasis on science and educational methods. Materials Engineering and technological systems of the future and the rela-
tionship of technology development with physical concepts. (Cannot be used as a technical elective or graduate credit in science, mathematics or engineer-
ning.)

MATL 6100/6106 THERMODYNAMICS OF MATERIALS SYSTEMS (3). LEC. 3. Pr., CHEM 1040 and ENGR 2200 or departmental approval. Application of thermodynamics to describe phase stability, crystal imperfections, solubility, oxidation, surface and interface energy and transformations.

MATL 6200/6206 CRYSTALLOGRAPHY (2). LEC. 2. Pr., PHYS 1610 or de-
partmental approval. Principles of crystallography, reciprocal lattice X-ray dif-
fraction techniques.


MATL 6300/6306 PHASE TRANSFORMATIONS IN MATERIAL PROCESS-
ING (3). LEC. 3. Pr., MATH 2650 and ENGR 2200 or departmental approval. Principles that govern phase transformations in materials systems and control of nucleation and growth, microstructure and morphology.

MATL 6400/6406 PHYSICS OF SOLIDS (3). LEC. 3. Pr., PHYS 1610 or de-
partmental approval. The physics of solid-state materials, including the elec-
tronic, optical and magnetic properties of materials.

MATL 6500/6506 NUMERICAL SIMULATION OF MATERIALS PROCESS-
ING (3). LEC. 3. Pr., MATL 6100 or departmental approval. Coreq., MATL 6300.

Fundamental principles and applications of computer-aided simulation of trans-
port phenomena in materials processing systems.


MATL 7050/7056 DEFORMATION AND FAILURE OF ENGINEERING MATE-
RIALS (3). LEC. 3. Pr., ENGR 2070 or departmental approval. Coreq., MATL 6200. Theoretical presentation of the fundamental principles of deformation and failure in materials systems.

MATL 7110/7116 PHYSICAL METALLURGY AND APPLICATIONS IN METAL FABRICATION (3). LEC. 3. Pr., MATL 6300 or departmental approval. The physical metallurgy underlying processing-structure-property relationships in metals and alloys, with examples from joining processes.

MATL 7120/7126 ADVANCED CERAMIC MATERIALS (3). LEC. 3. Pr., MATL 6200 or departmental approval. Processing, structure-property relationships and applications of advanced ceramics. Structural and functional applications of ceramics.

MATL 7130/7136 ADVANCED POLYMER SCIENCE AND TECHNOLOGY (3). LEC. 3. Pr., MATL 6100 or departmental approval. Recent developments in both functional and structural polymers including approaches to synthesis, pro-
cessing techniques, high-strength materials, electronic polymers, optic poly-
mers, and medical polymers.

MATL 7140/7146 ADVANCED COMPOSITE MATERIALS (3). LEC. 3. Pr., MATL 7050 or departmental approval. Processing, mechanics structure and properties of composite materials. Emphasis will be placed on an understand-
ing of processing-structure-property relationships in polymer-, ceramic-, and metal-matrix composites.

MATL 7210/7216 PLASTIC DEFORMATION AND STRENGTHENING OF ME-
TALLIC MATERIALS (3). LEC. 3. Pr., MATL 7050 or departmental approval. Mechanisms of plastic deformation and strengthening in metals and alloys. The role of dislocations in plastic deformation.

MATL 7220/7226 RADIATION EFFECTS ON MATERIALS (3). LEC. 3. Pr., MATL 6400 or departmental approval. Theoretical and experimental treatment of the radiation effects and damage in materials as related to the nuclear in-
dustry.

MATL 7230/7236 HIGH TEMPERATURE MATERIALS PERFORMANCE (3). LEC. 3. Pr., MATL 6300 or departmental approval. Theoretical and experimen-
tal treatment of the behavior of metals at high temperature.

MATL 7310/7316 SOLIDIFICATION PROCESSING (3). LEC. 3. Pr., MATL 6300 or departmental approval. Theoretical science and engineering principles that apply to semiconductor crystal growth, ingot solidification, metal casting, welding and rapid solidification processes.

MATL 7320/7326 THIN FILM SCIENCE AND TECHNOLOGY (3). LEC. 3. Pr., MATL 6300 or departmental approval. Structure, properties, characterization, processing and application of thin films.

MATL 7410/7416 CHEMICAL SENSORS (3). LEC. 3. Pr., MATL 6100 or de-
partmental approval. Fundamentals and application of chemical sensors. In-
cludes electrolyte, semiconductor and acoustic wave-based sensors.

MATL 7420/7426 SMART MATERIALS AND STRUCTURES (3). LEC. 3. Pr., MATL 7050 or departmental approval. An introduction to the principles and applications of various sensor, actuator and functionality smart material sys-
tems and structures.

MATL 7510/7516 ELECTRON MICROSCOOPY (3). LEC. 3. Pr., MATL 6200 or departmental approval. Theory, instrumentation, techniques and applications of scanning and transmission electron microscopy.

MATL 7511 ELECTRON MICROSCOPY LABORATORY (1). LAB. 3. Coreq., MATL 7510. Laboratory on the use of electron microscopy for materials char-
acterization. Fall, Spring.

MATL 7950 MATERIALS ENGINEERING SEMINAR (1). SEM. 1. SU. Required during the semester of residency. (Cannot be used toward minimum re-
quirements for graduate degree in Materials Engineering. Content changes each semester and consists of off-campus speakers and presentations by gradu-
ate students and faculty.

MATL 7960/7966 DIRECTED READINGS IN MATERIALS ENGINEERING (1-
6). IND., SU. Pr., departmental approval. May be taken more than one semes-
ter. Up to 6 hours may count toward the minimum degree requirements. Course may be repeated with change in topic.

MATL 7970/7976 SPECIAL TOPICS IN MATERIALS ENGINEERING (1-3). LEC. Pr., departmental approval. Special courses taught by faculty from Aub-
urn University or by faculty from The University of Alabama System via inter-
active television. Course may be repeated with change in topic.

MATL 7980 MASTER MATERIALS ENGINEERING PROJECT (1-6). LEC., SU. Special design project report directed by major faculty. Topics to be deter-
mined by the student’s graduate committee. Course may be repeated for a maximum of 6 credit hours.
MAT 7990 RESEARCH AND THESIS (1-15). MST, TD. Course may be repeated with change in topic.

MAT 8990 RESEARCH AND DISSERTATION (1-15). DSR, TD. Course may be repeated with change in topic.

MECHANICAL ENGINEERING (MECH)


MECH 3000 MECHANICAL ENGINEERING PROGRESS ASSESSMENT II (0). TST, SU. Progress Assessment Examination in: Statistics, linear algebra, mechanical design, thermo-fluid design, social impact, contemporary issues.


MECH 3030 FLUID MECHANICS (3). LEC. 3. Pr., MECH 2110, ENGR 2010, MATH 2650. Coreq., MECH 3130. Fluid properties; fluid statics; mass conservation; momentum balance; external and internal flows; Euler and Bernoulli equations; dimensional analysis; viscous flows; boundary layers; compressible flow.


MECH 3140 SYSTEM DYNAMICS AND CONTROLS (3). LEC. 3. Pr., MECH 2120, MATH 2650. System dynamics and automatic control theory.

MECH 3220 COMPUTER-AIDED ENGINEERING (3). LEC. 2. LAB. 3. Pr., ENGR 1110, COMP 1200, MATH 2650. The computer as a tool in mechanical engineering.

MECH 3600 MACHINE DESIGN (3). LEC. 3. Pr., MECH 2210, MECH 3130. MECH 3220. Design of systems containing a variety of mechanical elements.

MECH 4240 COMPREHENSIVE DESIGN I (2). LEC. 1. LAB. 3. Pr., MECH 2000, MECH 3000, MECH 3230. Coreq., MECH 3040, MECH 3050, MECH 3140, INSY 3600. Capstone engineering design course based on a design project similar to those encountered by the engineer in industry involving thermal and mechanical design.

MECH 4250 COMPREHENSIVE DESIGN II (2). LEC. 1. LAB. 3. Pr., MECH 3040, MECH 3050, MECH 3140, MECH 4240, INSY 3600. Continuation of MECH 4240. Detailed design, fabrication, communication, and presentation of a prototype machine for an industrial sponsor.


MECH 4310 HEATING, VENTILATING, AIR CONDITIONING AND REFRIGERATION (3). LEC. 3. Pr., MECH 3040. Theory and practice of modern heating, ventilation, air conditioning and refrigeration systems; concepts, equipment, and systems design.

MECH 4320 APPLIED CFD AND HEAT TRANSFER (3). LEC. 3. Pr., MECH 3040. Introduction to computational fluid dynamics and heat transfer techniques used to analyze thermal performance of devices and systems. Commercial software will be used.

MECH 4410 ENGINES (3). LEC. 3. Pr., ENGR 2200; OR ENGR 2010 and AERO 3110 or CHEN 2610 or MECH 3030 or CIVL 3110. Theoretical, design and application issues in internal combustion engine-driven powertrains, including combustion, engines, turbomachinery and drivetrains.

MECH 4420 VEHICLE DYNAMICS (3). LEC. 3. Pr., ENGR 2100 or ENGR 2350 or MECH 2120; AND AERO 3110 or CHEN 2610 or CIVL 3110 or MECH 3030. Ground vehicle resistance, propulsion, maneuvering, and control tires, suspensions, braking, aerodynamics, case studies.

MECH 4430 VEHICLE DESIGN (3). LEC. 3. Pr., Departmental approval. Any two of: MECH 4410, MECH 4420, MECH 4430. Team-based design of a ground vehicle, both whole-vehicle and subsystem; design evaluation and modification; oral and written communication.

MECH 4440 AUTOMOTIVE DESIGN EXPERIENCE I (2). LEC. 3. Pr., Departmental approval. Any two of: MECH 4410, MECH 4420, MECH 4430. Team-based design of a ground vehicle, both whole-vehicle and subsystem; design evaluation and modification; oral and written communication.

MECH 4450 AUTOMOTIVE DESIGN EXPERIENCE II (2). LEC. 1. LAB. 3. Pr., MECH 4440; department approval. Team-based fabrication, testing, modification and operation of a ground vehicle; oral and written communication; project management.

MECH 4490 NAVAL ARCHITECTURE (3). LEC. 3. Pr., MECH 3030 or AERO 3110 or CHEN 2610 or ENGR 2200 (broadly, any course in engineering fluid mechanics) Basic engineering of oceangoing vessels. Hydrostatics and stability; ship structures; resistance and propulsion; maneuvering and seakeeping. Exercises using professional software.

MECH 4510 INDUSTRIAL AND ENVIRONMENTAL NOISE CONTROL (3). LEC. 3. Pr., MECH 2120, MECH 3220. Sources of industrial and community noise, criteria for control, noise measuring instrumentation, issues involved in the design of machinery for minimum noise, noise ordinances and regulations.


MECH 4930 DIRECTED STUDIES IN MECHANICAL ENGINEERING (1-3). INT. Pr., department approval. Individual or small group study of a specialized area of Mechanical Engineering under faculty direction. Course may be repeated for a maximum of 3 credit hours.

MECH 4970 SPECIAL TOPICS IN MECHANICAL ENGINEERING (1-3). LEC. Pr., department approval. Regular course addressing a specialized area of Mechanical Engineering not covered by a regularly offered course. Topics may vary. Course may be repeated for a maximum of 3 credit hours.

MECH 4997 HONORS THESIS (1-6). IND. Pr., membership in the Honors College; MECH major; departmental approval. Individual student directed research and writing of an honors thesis. Course may be repeated for a maximum of 6 credit hours.

MECH 6010/6016 COMPRESSIBLE FLUID FLOW (3). LEC. 3. Pr., MECH 3030. Properties of ideal gases; General one-dimensional wave motion; Isentropic flow with area change; Normal shock waves; Flow with friction (Fanno Flow) and heat transfer (Rayleigh Flow); Method of characteristics.

MECH 6110/6116 INTERMEDIATE HEAT TRANSFER (3). LEC. 3. Pr., MECH 3040. Introduction to the analysis and design of heat transfer by conduction, convection, and radiation. Suitable for those that require general coverage of advanced theory but whose primary research interest may lie elsewhere.


MECH 6420/6426 DYNAMICS OF MULTIBODY SYSTEMS (3). LEC. 3. Pr., MECH 3140. Concepts in dynamics of multibody systems such as kinematics analysis, Newon Euler, Lagrange and Kane equations of motion, collisions, and vibrations of flexible links.


MECH 6510/6516 ENGINEERING ACOUSTICS (3). LEC. 3. Pr., MATH 2650. The fundamentals of acoustics. Vibration of strings, bars, plates. Acoustic plane waves, architectural acoustics and noise control will be emphasized.

MECH 6610/6616 MECHANICAL VIBRATION (3). LEC. 3. Pr., MECH 2120, MATH 3140. Modeling of dynamic systems, free and forced vibration of single degree of freedom systems, response to arbitrary excitation, analysis of two and multiple degrees of freedom systems.


MECH 6710/6716 KINEMATICS AND DYNAMICS OF ROBOTS (3). LEC. 3. Pr., MECH 3140. Basic concepts in robotics such as kinematics analysis, coordinate transformation, Lagrange and Newton Euler equations of motion.


MECH 6810/6816 MECHATRONICS (3). LEC. 3. Pr., MECH 2120, ELEC 3810. Introduction to the integration of mechanisms, sensors, controllers and actuators for machines and design of automatic machinery.

MECH 6820/6826 INTRODUCTION TO OPTIMAL SYSTEMS (3). LEC. 3. Pr., senior standing. Introduction to the mathematical fundamentals of optimization. Application to multiple solution engineering problems in thermo-fluid and mechanical systems.

MECH 6930/6936 INTERMEDIATE DIRECTED STUDIES IN MECHANICAL ENGINEERING (1-3). LEC. Pr. departmental approval. Individual or small group study of an advanced specialized area of Mechanical Engineering under faculty direction. Course may be repeated for a maximum of 3 credit hours.

MECH 6970/6976 INTERMEDIATE SPECIAL TOPICS IN MECHANICAL ENGINEERING (1-3). LEC. Pr. departmental approval. Regular course addressing an advanced specialized area of Mechanical Engineering not covered by a regularly offered course. Topics may vary. Course may be repeated for a maximum of 3 credit hours.


MECH 7120/7126 ADVANCED FLUID MECHANICS II (3). LEC. 3. Pr., MECH 7110. Schwarz-Christoffel Transformation; Hodograph Method; Three-Dimensional Potential Flows; Interface Waves; Low Reynolds Number Solutions; Oseen Approximation; Stability of Laminar Flows.

MECH 7130/7136 BOUNDARY LAYER THEORY (3). LEC. 3. Pr., MECH 7110. Mass Conservation; Momentum Equation; Energy Equation; Dimensional Analysis; Fully-Developed Laminar Flows; Similarity Solutions; Boundary Layer Approximation; Stability of Laminar Flows.


MECH 7150/7156 FLUID MECHANICS OF PROCESSING (3). LEC. 3. Pr., MECH 7130. Properties of Fluids; Governing Equations; Mass Dimensional analysis; Particle-Laden Flows; Applications to specific processing problems such as metal flows, polymers, surface deposition.

MECH 7210/7216 DIFFUSIVE TRANSPORT (3). LEC. 3. Pr., MECH 3040. Formulations and analytical solutions of steady, periodic, and unsteady heat and mass diffusion problems in one, two, and three dimensions.

MECH 7220/7226 CONVECTION HEAT TRANSFER (3). LEC. 3. Pr., MECH 3040. Advanced topics in free and forced convection transport within the laminar, transitional and turbulent regimes; confined and external flows.

MECH 7230/7236 THERMAL RADIATION (3). LEC. 3. Pr., MECH 3040. Fundamentals of thermal radiation heat transfer including: absorption, emission and reflection from solids; absorption, emission and scattering by gases; combined mode and conjugate heat transfer; exact and appropriate solution methodologies.

MECH 7240/7246 NUMERICAL METHODS IN HEAT TRANSFER (3). LEC. 3. Pr., MATH 2660, MECH 3040. Advanced topics in finite element and finite difference methods; solution techniques, stability and convergence.


MECH 7300/7306 FRACTURE MECHANICS (3). LEC. 3. Pr., MECH 3230 or Instructor Consent. Stress and strain analysis of cracked bodies, energy release rate, Griffith problem, modes of fracture crack tip fields, stress intensity factors, small scale crack tip yielding, the J-integral, ERR equations, experimental and numerical methods for fracture parameter estimation.


MECH 7370/7376 ANALYSIS OF PLATES AND SHELLS (3). LEC. 3. Pr., MECH 3130. Theories for the bending and stretching of plate and shell structures. Transverse loading, buckling, vibration, and thermal stress problems. Introduction to energy methods, numerical techniques, and large deflection theories.


MECH 7410/7416 OPTICAL METHODS IN MECHANICS (3). LEC. 3. Pr., MECH 3130. Measurement of stresses, strains, and deformations using optical methods; optical interference; Fourier optics; optical spatial filtering, white light methods; coherent optical methods.

MECH 7430/7436 OPTICAL PROPERTIES OF ADVANCED MATERIALS (3). LEC. 3. Pr., MECH 6430, PHYS 7200. Linear and nonlinear optical properties, correlation with material-structure, electro-optic effects, lasers, frequency conversion, fiber-optics, technological applications.


MECH 7630 MECHANICAL IMPACT (3). LEC. 3. Pr., departmental approval. Investigation of the fundamental concepts used to solve collision problems with friction.


MECH 7650/7656 RANDOM VIBRATION (3). LEC. 3. Pr., MECH 6610. Properties of random processes, review of linear systems with single and multiple degrees of freedom. Vibration of single and multiple degrees of freedom sys-
tems subjected to random excitations, design of structures subjected to random excitation, Parameter estimation.

MECH 7710/7716 CONTROL SYSTEMS ANALYSIS AND DESIGN (3). LEC. 3. Pr., MECH 3140. Topics from control theory are introduced in the context of control systems analysis and design, including state variable feedback, modal control, optimal control and adaptive control for both continuous and discrete systems.

MECH 7930 ADVANCED DIRECTED STUDIES IN MECHANICAL ENGINEERING (1-3). IND. Pr., departmental approval. Individual or small group study of an advanced specialized area of Mechanical Engineering under faculty direction. Course may be repeated for a maximum of 3 credit hours.

MECH 7950 GRADUATE SEMINAR (1). SEM. 1, SU. Topics may vary. Will not fulfill degree requirements. Course may be repeated with change in topic.

MECH 7970/7976 ADVANCED SPECIAL TOPICS IN MECHANICAL ENGINEERING (1-3). LEC. Pr., departmental approval. Regular course addressing an advanced specialized area of Mechanical Engineering not covered by regularly offered course. Topics may vary. Course may be repeated for a maximum of 3 credit hours.

MECH 7990 RESEARCH AND THESIS (1-12). MST, TD. Individual Master’s thesis research. May be repeated for credit. Course may be repeated with change in topic.

MECH 8990 RESEARCH AND DISSERTATION (1-12). DSR, TD. Course may be repeated with change in topic.

**Military Science (MILS)**

Lt. Col. John L. Salvetti - 844-5565

MILS 1010 INTRODUCTION TO ARMY ROTC I (1). LEC. 1, Coreq., MILS 1011. Introduction to the Reserve Officer Training Corps and the US Army.

MILS 1011 INTRODUCTION TO ARMY ROTC I LAB (1). LAB. 3, Coreq., MILS 1010. Introduction to the Reserve Officer Training Corps and the US Army.

MILS 1020 INTRODUCTION TO ARMY ROTC II (1). LEC. 1, Coreq., MILS 1021. Introduction to the Reserve Officer Training Corps and the US Army.

MILS 1021 INTRODUCTION TO ARMY ROTC II LAB (1). LAB. 3, Coreq., MILS 1020. Introduction to the Reserve Officer Training Corps and the US Army.

MILS 2010 SELF/TEAM DEVELOPMENT (1). LEC. 1, Coreq., MILS 2011. Learn and apply ethics-based leadership skills that develop individual attributes and contribute to effective team building.

MILS 2011 SELF/TEAM DEVELOPMENT LABORATORY (1). LAB. 2, Coreq., MILS 2010. Learn and apply ethics-based leadership skills that develop individual attributes and contribute to effective team building.

MILS 2020 INDIVIDUAL/TEAM MILITARY TACTICS I (1). LEC. 1, Coreq., MILS 2021. Introduction to individual and team aspects of military training in small unit operations.

MILS 2021 INDIVIDUAL/TEAM MILITARY TACTICS LAB I (1). LAB. 2, Coreq., MILS 2020. Introduction to individual and team aspects of military training in small unit operations.

MILS 2220 SURVIVAL SKILLS (1). LEC. 1, Pr., freshmen and sophomores only. Series of classes designed to develop basic knowledge and skills to improve one’s chances of survival in any situation. Major topics include: first aid, fire and shelter building, land navigation, and food procurement. Fall, Spring.

MILS 3010 LEADING SMALL ORGANIZATIONS I (2). LEC. 2, Pr., admittance into the Advanced Course of Army ROTC. Coreq., MILS 3011. Introduction to squad level planning and operations.

MILS 3011 LEADING SMALL ORGANIZATIONS I LAB (1). LAB. 4, Pr., admittance into Advanced Course Army ROTC. Coreq., MILS 3010. Practical application of the foundational skills of small unit leadership.

MILS 3020 LEADING SMALL ORGANIZATIONS II (2). LEC. 2, Pr., MILS 3010, MILS 3011, Coreq., MILS 3021. Introduction to platoon-level planning and operations and the U.S. Army Training Management System.

MILS 3021 LEADING SMALL ORGANIZATIONS II LAB (1). LAB. 4, Pr., MILS 3010, MILS 3011. Coreq., MILS 3020. Series of practical opportunities to lead small groups, receive performance assessments and coaching, and lead again in situations of increasing complexity.


MILS 4011 LEADERSHIP CHALLENGES AND GOAL-SETTING LAB (1). LAB. 4, Pr., MILS 4020, MILS 4021. Coreq., MILS 4010. Plan, conduct and evaluate training and activities of the ROTC cadet organization.

MILS 4020 TRANSITION TO LIEUTENANT I (2). LEC. 2, Pr., MILS 4010, MILS 4011. Coreq., MILS 4021. Identify and resolve ethical dilemmas. Refine counseling and motivating techniques.

MILS 4021 TRANSITION TO LIEUTENANT II LAB (1). LAB. 4, Pr., MILS 4010, MILS 4011. Coreq., MILS 4020. Practical application of the principles taught in MILS 4020.

MILS 4040 THE ARMY PROFESSION (0). LEC. 1, SU, Pr., completion of Army ROTC Advanced Course or Early Commissioning Program. U.S. Army current trends and affairs. Army policies and programs.

**Marketing (MKTG)**

Dr. Rajan Natarajan - 844-4035

MKTG 3310 PRINCIPLES OF MARKETING (3). LEC. 3, Pr., 2.2 GPA, junior standing. ECON 2020. Study of functions, institutions, and basic problems in marketing of goods and services in a global economy. Course may be repeated for a maximum of 6 credit hours.

MKTG 3410 CONSUMER BEHAVIOR (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Analysis of the buying process as it is affected by environmental and institutional forces.

MKTG 3710 INTRODUCTION TO LOGISTICS (3). LEC. 3, Pr., 2.2 GPA, junior standing. Coreq., MKTG 3310. Logistics activities and their interrelationships in the management of the materials supply and distribution process.

MKTG 3720 PRINCIPLES OF TRANSPORTATION (3). LEC. 3, Pr., 2.2 GPA, ECON 2020. The study of transportation systems and their role in domestic and international trade.

MKTG 4320 PROMOTION STRATEGY (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Examination of promotional marketing objectives, strategies and tactics.

MKTG 4330 RETAIL MANAGEMENT (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Principles of retail operation: facility location, layout, purchasing, pricing and merchandise control.

MKTG 4340 PURCHASING (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310; STAT 2610. Objectives, control and direction of industrial purchasing. Credit will not be given for both MKTG 4340 and MGMT 4200.

MKTG 4350 SERVICES MARKETING (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Examination of marketing in service industries and implementation of service marketing strategies. Credit will not be given for both MKTG 4350 and MKTG 7350.

MKTG 4360 MARKETING RESEARCH (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310; STAT 2610. Research methods in marketing and their application to marketing problems.

MKTG 4370 SALES MANAGEMENT (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Principles and practices of organization and administration of sales organizations.

MKTG 4380 MARKETING CHANNEL SYSTEMS (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Designing channels: objectives, constraints, alternatives and motivating, evaluating, and controlling channel members.

MKTG 4390 PERSONAL SELLING (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Selling strategy as an interdisciplinary business activity.

MKTG 4400 INTERNATIONAL MARKETING (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310; STAT 2610, Strategy, policy and the variables affecting international marketing decisions.

MKTG 4500 MARKETING ON THE INTERNET (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310, College of Business Information Pr., Technology requirement. Use of electronic media and the Internet for marketing strategy. Credit will not be given for both MKTG 4500 and MKTG 7500.

MKTG 4600 GREEN MARKETING (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310. Examination of the environmental and institutional forces.

MKTG 4770 SUPPLY CHAIN MANAGEMENT (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3310 and MKTG 3710. Problems and analysis in the design and management of the retail, industrial and service supply chain.

MKTG 4780 TRANSPORTATION MANAGEMENT IN THE SUPPLY CHAIN (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3720. Strategies for managers involved in the transportation industry covering the perspectives of both shippers and carriers.

MKTG 4800 INTERNATIONAL SUPPLY CHAIN MANAGEMENT (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3710. Marketing viewed from an environmental protection perspective and resulting green market strategies.

MKTG 4880 LOGISTICS DECISION MAKING (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3710. College of Business Information Pr., Technology requirement. Managerially-applied course utilizing data analysis packages and logistics software applications for logistics decision-making.

MKTG 4890 INTERMEDIATE DISTRIBUTION (3). LEC. 3, Pr., 2.2 GPA, grade of C or better in MKTG 3710. The management of intermediate distribution and intermodal marketing operations.
MKTG 7720/7726 NEW PRODUCTS DEVELOPMENT AND MANAGEMENT (3). LEC. 3. Pr., MKTG 3310 or departmental approval. Marketing in the process of developing innovative products and services.

MKTG 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval. Course may be repeated with change in topic.

Management (MNGT)

Dr. Sharon Oswald - 844-4071

MNGT 3040 BUSINESS TELECOMMUNICATIONS MANAGEMENT (3). LEC. 3. Pr., MKTG 3140; junior standing. 2.2 GPA. Voice communications and technology and data communications (LAN, WAN, internet broadband), networks, protocols, standards, legislation and project development and management.

MNGT 3070 BUSINESS COMPUTER APPLICATIONS (3). LEC. 3. Pr., junior standing. 2.2 GPA. College of Business Information Technology Pr., requirement. Advanced applications using object oriented, visual languages for faster development. Explores microcomputer-based languages.

MNGT 3080 ADVANCED PROGRAMMING AND COMPUTER APPLICATIONS (3). LEC. 3. Pr., MKTG 3070, junior standing. 2.2 GPA. Visual and object-oriented business programming languages are introduced and explored.

MNGT 3090 ANALYSIS AND DESIGN OF BUSINESS INFORMATION SYSTEMS (3). LEC. 3. Pr., MKTG 3830 with a grade of "C" or better. General systems techniques, development methodologies, database considerations, project planning and control, system integration.

MNGT 3100 PRINCIPLES OF MANAGEMENT (3). LEC. 3. Pr., 2.2 GPA. Management functions and the applications of management principles in organization.

MNGT 3110 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS (2). LEC. 2. Pr., 2.2 GPA. The fundamental principles of the structure and management of information systems.

MNGT 3150 INTRODUCTION TO OPERATIONS MANAGEMENT (2). LEC. 2. Pr., 2.2 GPA. The fundamental principles of the structure and management of business operations.

MNGT 3250 INTRODUCTION TO ENTERPRISE OPERATIONAL SYSTEMS (3). LEC. 3. Pr., MKTG 3150, STAT 2610 and 2.2 GPA. Concepts, fundamentals and framework of business enterprise software.


MNGT 3460 ORGANIZATIONAL BEHAVIOR (3). LEC. 3. Pr., MKTG 3100, junior standing, 2.2 GPA. Study, analysis and application of theories and techniques for understanding, predicting and managing human behavior in the organizational context.

MNGT 3830 DATABASE MANAGEMENT SYSTEMS (3). LEC. 3. Pr., MKTG 3070, with a grade of "C" or better. Business applications software in a database environment, complex data and file structures, systems design considerations, project planning and control, system integration.

MNGT 4100 MANAGEMENT IN GLOBAL BUSINESS ENVIRONMENT (3). LEC. 3. Pr., MKTG 3100, 2.2 GPA. Issues unique to managing operations in the global business environment.

MNGT 4140 ESSENTIALS OF ENTREPRENEURSHIP (3). LEC. 3. Pr., 2.2 GPA, MKTG 3100, MKTG 3310, FINC 3610, ECON 2030. The application of basic business principles to the entrepreneurial environment.

MNGT 4150 ENTREPRENEURSHIP AND NEW VENTURE CREATION (3). LEC. 3. Pr., MKTG 4140, junior standing, 2.2 GPA. Analysis of industrial, competitive, market and financial aspects of starting a business.

MNGT 4250 COMPETITIVE MANUFACTURING OPERATIONS (3). LEC. 3. Pr., 2.2 GPA. Coreq., MKTG 3250. Provides a working model of manufacturing operations and explores how information is revolutionizing the field.

MNGT 4350 COMPETITIVE SERVICE OPERATIONS (3). LEC. 3. Pr., 2.2 GPA. Coreq., MKTG 3250. Provides a working model of service operations and explores how information technology is revolutionizing the field.

MNGT 4370 INFORMATION TECHNOLOGY PROJECT MANAGEMENT (3). LEC. 3. Pr., 2.2 GPA, junior standing. Tools and techniques of information technology project management including leading project management software.

MNGT 4400 ORGANIZATIONAL DEVELOPMENT AND CHANGE (3). LEC. 3. Pr., MKTG 3100, MKTG 3460, MKTG 3420, 2.2 GPA. The complexities involved in implementing change in organizations.
MNGT 3420, 2.0 GPA, and junior standing. Importance, nature, and applica-
MNGT 4550 HUMAN RESOURCE INFORMATION SYSTEMS
3. Pr., STAT 2610, MNGT 3420, 2.2 GPA. A review of contemporary issues
MNGT 4540 HUMAN RESOURCES SELECTION AND PLACEMENT
(3). LEC. 3. Pr., STAT 2610, MNGT 3420, 2.2 GPA. Human resource problems
studied through a project involving data collection, analysis and a research
report.
MNGT 4540 HUMAN RESOURCES SELECTION AND PLACEMENT (3), LEC.
3. Pr., STAT 2610, MNGT 3420, 2.2 GPA. A review of contemporary issues
involved in administering a program for selecting employees.
MNGT 4550 HUMAN RESOURCE INFORMATION SYSTEMS (3), LEC. 3.
Pr., MNGT 3420, 2.0 GPA, and junior standing. Importance, nature, and applica-
tion of a modern human resource information system such as SAP Human
Resource Module. Spring.
MNGT 4610 INTERNATIONAL FIELD ANALYSIS PROJECT COURSE (3).
LEC. 3. Pr., 2.2 GPA, junior standing. Field analysis tour projects with local or
multinational organizations in a foreign county. Course will be taught in con-
junction with COB International Studies Programs.
MNGT 4740 QUALITY MANAGEMENT SYSTEMS (3), LEC. 3. Pr., STAT 2610,
MNGT 3140, 2.2 GPA. Fundamentals of quality assurance; techniques for per-
forming quality control and improvement functions; use of control charts in
statistical process control; quality management systems.
MNGT 4800 STRATEGIC MANAGEMENT (3), LEC. 3. Pr., College of Busi-
business information technology requirements, 2.2 GPA. Objectives, strategy, and
policies pertaining to the organization. Problem-solving and the relationship
between the functional areas of an organization.
MNGT 4850 COMPETITIVE STRATEGIES THROUGH INFORMATION TECH-
NOLOGIES (3). LEC. 3. Pr., MNGT 3070, MNGT 3040, 2.2 GPA. Emphasizes
how competitive strategies for companies is formulated and implemented us-
ing a combination of information technologies.
MNGT 4880 MANAGEMENT INFORMATION SYSTEMS PROJECTS (3), LEC.
3. Pr., junior standing, 2.2 GPA, and corequisite MNGT 4830. Synthesizes theory
and principles of management information systems (MIS) using real-life, hands-
on-projects.
MNGT 4890 STRATEGIC ENVIRONMENTAL MANAGEMENT (3), LEC. 3.
Pr., MNGT 3100, 2.2 GPA. Course will examine the continuous relationship be-
 tween the natural environment, strategy, and competitive advantage from both
a domestic and international perspective.
MNGT 4900 SPECIAL PROBLEMS (1-3). IND., SU. Pr., departmental approval,
junior standing, 2.2 GPA. Independent study on current topics in management.
Course may be repeated for a maximum of 6 credit hours.
MNGT 4920 INTERNSHIP (1-6). INT., SU. Pr., MNGT 3100, 2.2 GPA, and ap-
proval by departmental intern program committee. Course may be repeated
for a maximum of 6 credit hours.
MNGT 4950 SEMINAR IN MANAGEMENT (1-10). SEM. Pr., departmental ap-
proval, junior standing, 2.2 GPA. Course may be repeated for a maximum of 10
credit hours.
MNGT 4960 READINGS IN MANAGEMENT (1-3). IND. Pr., departmental ap-
proval, senior standing, 2.2 GPA. Independent study investigating current lit-
erature in management. Course may be repeated for a maximum of 6 credit
hours.
MNGT 4967 HONORS READINGS (1-3). LEC. 3. Pr., Membership in the Hon-
ors College; Jr or Sr standing. Directed readings on a topic of special interest.
Course may be repeated for a maximum of 3 credit hours.
MNGT 4997 HONORS THESIS (3). LEC. 3. Pr., Members in the Honors col-
lege; Jr or Sr Standing. Directed honors thesis research. Course may be re-
peated for a maximum of 3 credit hours.
MNGT 6040/6046 ADVANCED BUSINESS DATA COMMUNICATIONS (3).
LEC. 3. Pr., MNGT 7140 or MNGT 3040, 2.2 GPA. Experienced-based class
building on domain knowledge of prerequisites; gives personal and team ex-
perience in data communications technology and networks.
MNGT 6300/6306 THE BUSINESS OF SPORTS (3), LEC. 3. Pr., STAT 2610,
MNGT 3100, ECON 2020. Business aspects of sports teams including sources
of revenue, labor market, revenue sharing, salary cap and free agency.
MNGT 6650/6655 ADVANCED OBJECT-ORIENTED AND INTERNET PRO-
GRAMMING (3). LEC. 3. Pr., MNGT 3070, 2.2 GPA. Fundamentals of develop-
ing object-oriented, component-based and Internet business applications.
MNGT 6680/6685 ADVANCED DATABASE ADMINISTRATION AND DEVEL-
OPMENT (3). LEC. 3. Pr., MNGT 4830 or MNGT 7830 and 2.2 GPA. Key tasks
and functions required of a database administrator in a business environment.
MNGT 7020/7026 BUSINESS TELECOMMUNICATIONS AND NETWORKS
(3). LEC. 3. Provides an understanding of voice and data communications, e.g.,
networks (LAN, internet), protocols, standards, legislation and project de-
velopment, so that managers might utilize telecommunications effectively.
MNGT 7080/7086 ADVANCED HUMAN RESOURCE MANAGEMENT (3).
LEC. 3. Advanced study of the role of personnel and human resource management.
Topics include employee selection, performance appraisal, compensation, train-
ing and development.
MNGT 7140/7146 MANAGING END USER COMPUTING (3). LEC. 3. Studies
MIS from user’s perspective, and compares it with the roles of the professional
department. Course covers support of desktop applications, data usage, and
communications.
MNGT 7150/7156 ORGANIZATIONAL BEHAVIOR AND CHANGE (3).
LEC. 3. Pr., MNGT 7030 or equivalent, departmental approval. Advanced study of
organizational behavior in individual and group interactions within the environ-
ment of business organizations.
MNGT 7160/7166 STRATEGIC MANAGEMENT OF INNOVATION AND TECH-
NOLOGY (3). LEC. 3. Development of competitive advantages in high-tech-
ology businesses. Examines product/service innovation and technology de-
velopment and commercialization strategies, and related issues and processes.
MNGT 7250/7256 COMPETITIVE MANUFACTURING ENTERPRISES (3).
LEC. 3. Pr., BUSI 7220. Provides MBA students with a working model of manu-
factoring operations and lets them explore how information technology can be
used to re-engineer the manufacturing process.
MNGT 7350/7356 COMPETITIVE SERVICE ENTERPRISES (3). LEC. 3.
Pr., BUSI 7220. Provides MBA students with a working model of service operations and
lets them explore how information technology can be used to re-engineer the service
process.
MNGT 7360/7366 INTEGRATING THEORY AND PRACTICE FOR TECHNOL-
OMY MANAGERS (3). LEC. 3. A study of the technical and nontechnical
forces that influence the decision-making process in companies by the use of innova-
tive instructional material.
MNGT 7370/7376 PROJECT MANAGEMENT (3). LEC. 3. In-depth study of
the planning, scheduling and control processes in industrial projects.
MNGT 7380/7386 INTEGRATING INFORMATION TECHNOLOGIES TO PRO-
VIDE COMPETITIVE ADVANTAGE (3). LEC. 3. How to integrate effectively
information technologies in formulating and implementing competitive strate-
gies for companies.
MNGT 7420/7426 SEMINAR IN ORGANIZATION CHANGE (3). SEM. 3.
Pr., MNGT 7150. The diagnostic and evaluation issues in organizational change.
MNGT 7440/7446 COLLECTIVE BARGAINING AND ARBITRATION (3).
LEC. 3. Evolution and development of union-management relationships and the pro-
cess of collective bargaining and arbitration. Case problem analysis and cur-
rent labor relations issues.
MNGT 7460/7466 HUMAN RESOURCE LEGISLATION (3). LEC. 3. Pr., MNGT
3420. Legislation that impacts the management of human resources within the
organization.
MNGT 7470/7476 EMPLOYEE COMPENSATION (3). LEC. 3. Pr., MNGT 3420.
Study of the theory, procedures, techniques, and practices used to administer
modern organization compensation systems.
MNGT 7480/7486 LABOR RELATIONS LAW (3). LEC. 3. Pr., MNGT 4430.
Study of legal principles under the Labor Management Relations Act and rel-
ated labor laws. Case problems and current legal issues are analyzed.
MNGT 7510/7516 HUMAN RESOURCE PLANNING, DEVELOPMENT AND
APPRAISAL (3). LEC. 3. Pr., MNGT 3420. Theory, practice, and design of
managerial systems and these functions.
MNGT 7520/7526 HUMAN RESOURCE AND ORGANIZATIONAL RESEARCH
(3). LEC. 3. Pr., STAT 2610 and MNGT 3420. Study of human resource prob-
lems through a primary research project involving data collection, analysis and
written research report.
MNGT 7540/7546 HUMAN RESOURCES SELECTION AND PLACEMENT
(3). LEC. 3. Pr., STAT 2610 and MNGT 3420. A review of contemporary issues
involved in administering a program for selecting employees.
MNGT 7550 HUMAN RESOURCE INFORMATION SYSTEMS (3). LEC. 3. Pr., MNGT 3420. Importance, nature, and application of a modern human resource information system such as SAP Human Resource Module. Spring.

MNGT 7660/7666 INFORMATION SYSTEMS ANALYSIS AND DESIGN (3). LEC. 3. Pr., BUSI 7220. General systems theory, information systems logical and physical analysis, structured and object-oriented methodologies and prototyping, system documentation, general design and use of CASE tools. Fall.

MNGT 7670/7675 ELECTRONIC COMMERCE (3). LEC. 3. The tools, skills, technologies, and business and social implications of the emergence of electronic commerce in cyberspace.

MNGT 7720/7725 OPERATIONS AND TECHNOLOGY STRATEGY (3). LEC. 3. Coreq., BUSI 7220. Development of upper management decision skills for developing and implementing manufacturing and technology strategies through case analyses and a field project.

MNGT 7730/7736 MANAGEMENT OF INNOVATION (3). LEC. 3. Pr., BUSI 7220. The process of product and service innovation on two levels: managing product design and general strategies for managing multiple innovation streams.

MNGT 7740/7746 QUALITY MANAGEMENT SYSTEMS AND STANDARDS (3). LEC. 3. Concepts and methods in quality assurance, quality control; techniques for quality control and improvement; control charts in statistical process control; quality management systems.

MNGT 7760/7766 QUANTITATIVE METHODS IN OPERATIONS MANAGEMENT (3). LEC. 3. Pr., BUSI 7120. Quantitative methods, techniques, practices, and tools used in the field of operations management in manufacturing and service industries.

MNGT 7810/7816 STRUCTURED DECISION MAKING (3). LEC. 3. Pr., BUSI 7120. Introduction to business-decision structuring and aiding, including multiple criteria and group-decision making methodology.

MNGT 7830/7836 ADVANCED DATABASE MANAGEMENT SYSTEMS PROJECTS (3). LEC. 3. Pr., BUSI 7220. Database management systems using database methodologies to support business applications, including requirements for distributed databases.

MNGT 7870/7876 EXPERT SYSTEMS IN BUSINESS (3). LEC. 3. Pr., BUSI 7220. Study of expert systems and other knowledge-based systems in the organization, including relevant concepts, methodologies, architectures, strategies and issues.

MNGT 7880/7886 ADVANCED MANAGEMENT INFORMATION SYSTEMS (3). LEC. 3. Pr., BUSI 7220. In-depth inquiry and analysis of advanced information technologies in organizations.

MNGT 7890/7896 INFORMATION RESOURCE MANAGEMENT (3). LEC. 3. Pr., BUSI 7220. Management of information systems resources, unique management problems in a computer information systems environment. Strategic and competitive analysis of information technology.

MNGT 7900/7906 SPECIAL PROBLEMS (1-3). IND. SU. Pr., departmental approval. Independent study on current topics in management. Course may be repeated for a maximum of 3 credit hours.

MNGT 7960 READINGS IN MANAGEMENT (3). IND. Pr., departmental approval. General management theories, practices, and functions in industry and business. Individual work with a designated faculty member.

MNGT 7970 SEMINAR IN MANAGEMENT (3). LEC. 3. Pr., departmental approval. Current topics in management.

MNGT 7980 MMIS PROJECT (1-6). IND., SU. Pr., departmental approval. Independent exploration of an approved topic/problem that allows the student to demonstrate the application of knowledge and capabilities gained during the program. Approval of the project and assessment of its deliverables by the student’s advisory committee is required. Course may be repeated for a maximum of 12 credit hours.

MNGT 7990 RESEARCH AND THESIS (1-10). MST. TD. Pr., departmental approval. Research on thesis or research project. Course may be repeated with change in topic.

MNGT 8010 MIS RESEARCH SEMINAR (3). SEM. 3. Pr., departmental approval. Prepares doctoral students to conceptualize, conduct and present MIS research.

MNGT 8020 TELECOMMUNICATIONS MANAGEMENT SEMINAR (3). SEM. 3. Pr., MNGT 7020, MNGT 7380 and departmental approval. A seminar to prepare the students to work, teach, and research in the telecommunications management area.

MNGT 8030 RESEARCH METHODS IN MANAGEMENT (3). LEC. 3. Pr., MNGT 7040 or equivalent graduate course in major, departmental approval. Research methodologies used in conducting research with emphasis on empirical organizational behavior research methods.

MNGT 8300 THEORETICAL PERSPECTIVE ON ORGANIZATIONAL CHANGE (3). LEC. 3. Theoretical concepts from an organizational change perspective including organizational structure, effectiveness, culture, configurations, conflict, politics and resistance to change.

MNGT 8310 SEMINAR IN ADVANCED ORGANIZATIONAL BEHAVIOR (3). LEC. 3. Pr., departmental approval. Advanced study of theories and research in organizational behavior. Overarching organizational behavior paradigms and theoretical perspectives and research findings at the individual and group levels of analysis.

MNGT 8400 ADVANCED QUANTITATIVE METHODS FOR MANAGEMENT I (3). LEC. 3. Pr., STAT 7000. Includes multiple linear regression, logistic regression and ANOVA as applied to Human Resources Management, Operations Management and MIS.

MNGT 8410 ADVANCED QUANTITATIVE METHODS FOR MANAGEMENT II (3). LEC. 3. Pr., STAT/MNGT 8410 and departmental approval. Includes Factor Analysis and Structural Equations Models as applied to Human Resources Management, Operations Management and MIS. Credit will not be given for both MNGT 8410 and STAT 8410.

MNGT 8500 ADVANCED RESEARCH SEMINAR IN TECHNOLOGICAL INNOVATIONS (3). SEM. 3. Theoretical foundations and research directions in the management of technology and technological innovation, with the primary focus on information technology.

MNGT 8660 RESEARCH IN INFORMATION TECHNOLOGY STRATEGY (3). LEC. 3. Pr., departmental approval. Theoretical foundations and research directions in the alignment of information technology strategy to business objectives and goals.

MNGT 8740 COMPENSATION THEORY (3). LEC. 3. Pr., MNGT 8030. An examination of compensation theory, design technology, and research methodologies used in developing and analyzing compensation systems.

MNGT 8800 APPRAISAL AND DEVELOPMENT OF HUMAN RESOURCES (3). LEC. 3. Pr., MNGT 3420 or departmental approval. Coreq., MNGT 7010 and MNGT 7610. Examination of empirical issues pertaining to the performance appraisal and human resource development functions of organizations.

MNGT 8850 ADVANCED HUMAN RESOURCE SELECTION (3). LEC. 3. Pr., graduate statistics course; MNGT 7080 or departmental approval. Study of the technical considerations involved in the implementation of employee selection programs.

MNGT 8970 DOCTORAL SEMINAR IN MANAGEMENT (3). SEM. 3. Pr., departmental approval. Special issues and problems in management. The topics will reflect the critical issues and problems facing management. Course may be repeated with change in topic.

MNGT 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Pr., departmental approval. Course may be repeated with change in topic.

Music (MUSI)

Mr. Thomas Smith - 844-4164

APPLIED MUSIC (MUAP)

MUAP 1010 PERFORMANCE (0). PRL. Pr., departmental approval. Coreq., Music Education Major or Music Minor. Remedial performance instruction to be taken on a limited basis by Music Education Majors and Music Minors. May be repeated only upon departmental approval and unusual circumstances. One half-hour private lesson per week.

MUAP 1110 PERFORMANCE (1). PRL. 1. Pr., Successful audition and departmental approval. Coreq., Music Education major. Instruction in major performance medium for the freshman Music Education major. One half-hour private lesson per week.

MUAP 1210 PERFORMANCE (1). PRL. 1. Pr., MUAP 1110, departmental approval and successful audition. Coreq., Music Education major. Instruction in major performance medium for the freshman Music Education major. One half-hour private lesson per week.

MUAP 1310 PERFORMANCE (1). PRL. 1. Pr., Successful audition and departmental approval. Coreq., Music minor or Music Education major. Instruction in major performance medium for the Music minor or secondary performance medium for the Music Education major. One half-hour private lesson per week.

MUAP 1410 PERFORMANCE (1). PRL. 1. Pr., MUAP 1310, Successful audition and departmental approval. Coreq., Music minor or Music Education major. Instruction in major performance medium for the Music minor or secondary performance medium for the Music Education major. One half-hour private lesson per week.

MUAP 2110 PERFORMANCE (1). PRL. 1. Pr., MUAP 1210 and departmental approval. Coreq., Music Education major. Instruction on major performance medium for the sophomore Music Education major. One half-hour private lesson per week.

MUAP 2210 PERFORMANCE (1). PRL. 1. Pr., MUAP 2110 and departmental approval. Coreq., Music Education major. Instruction on major performance
medium for the sophomore Music Education major. One half-hour private les-
sion per week.

MUAP 2310 PERFORMANCE (1). PRL. 1. Pr., MUAP 1410 and departmental
approval. Coreq., Music Education major or Music minor. Instruction in major
performance medium for the Music Minor or secondary performance medium
for the Music Education Major. One half-hour private lesson per week.

MUAP 2410 PERFORMANCE (1). PRL. 1. Pr., MUAP 2310 and departmental
approval. Coreq., Music Education major or Music minor. Instruction in major
performance medium for the Music minor or secondary performance medium
for the Music Education major. One half-hour private lesson per week.

MUAP 3120 PERFORMANCE (1). PRL. 1. Pr., MUAP 2210 and departmental
approval. Coreq., Music Education major. Instruction in major performance me-
dium for the junior Music Education Major. One hour private lesson per week.

MUAP 3220 PERFORMANCE (1). PRL. 1. Pr., MUAP 3120 and departmental
approval. Coreq., Music Education major. Instruction in major performance me-
dium for the junior Music Education Major. One hour private lesson per week.

MUAP 4120 PERFORMANCE (1). PRL. 1. Pr., MUAP 3220 and departmental
approval. Coreq., Music Education major. Instruction in major performance me-
dium for the senior Music Education Major. One hour private lesson per week.

MUAP 4220 PERFORMANCE (1). PRL. 1. Pr., MUAP 4120 and departmental
approval. Coreq., Music Education major. Instruction in major performance me-
dium for the senior Music Education Major. One hour private lesson per week.

MUAP 7120 PERFORMANCE (2). PRL. Pr., departmental approval. Coreq.,
graduate Music Education major. Private instruction in selected performance medium
for the graduate Music Education major. One hour private lesson per week.

MUAP 7220 PERFORMANCE (2). PRL. Pr., MUAP 7120 and departmental
approval. Coreq., graduate Music Education major. Private instruction in se-
lected performance medium for the graduate Music Education major. One hour
private lesson per week.

MUAP 7320 PERFORMANCE (2). PRL. Pr., MUAP 7220 and departmental
approval. Coreq., graduate Music Education major. Private instruction in se-
lected performance medium for the graduate. One hour private lesson per week.

MUAP 7420 PERFORMANCE (2). PRL. Pr., graduate Music Education major.
Private instruction in selected performance medium for the graduate Music Edu-
cation Major. One hour private lesson per week.

MUSIC (MUSI)

MUSI 1000 PERFORMANCE ATTENDANCE (0). LEC., SU. Coreq., enroll-
ment in MUAP. Required during each Semester of MUAP (Performance) en-
rollment. Monitored attendance at studio and departmental convocations, as
well as approved concerts, lectures, and special presentations within the Mu-
sic Department and community.

MUSI 1010 GUITAR AND STRING SKILLS (1). LEC. 1. Coreq., Music Educa-
tion Major (CNM). Class instruction and practice in the rudiments of music
performance of fretted and unfretted string instruments such as guitar, violin,
viola, cello and string bass.

MUSI 1020 PIANO SKILLS (1). LEC. 1. Coreq., Music Education Major (CTM)
Class instruction and practice in the rudiments of music performance as ap-
p lied to the piano.

MUSI 1030 VOCAL SKILLS (1). LEC. 1. Coreq., Music Education Major. Class
instruction and practice in the rudiments of music as applied to vocal perfor-

MUSI 1040 BRASS INSTRUMENTS SKILLS (1). LEC. 1. Pr., MUSI 1040 is
not a prerequisite for MUSI 1050. Coreq., Music Education major. Class in-
struction and practice in the rudiments of music as applied to trumpet, trom-
bone, horn and other standard brass instruments.

MUSI 1050 BRASS INSTRUMENTS SKILLS (1). LEC. 1. Pr., MUSI 1040 is
not a prerequisite for MUSI 1050. Coreq., Music Education major. Class in-
struction and practice in the rudiments of music as applied to trombone, tuba,
and other low-brass instruments.

MUSI 1060 WOODWIND INSTRUMENTS SKILLS (1). LEC. 1. Pr., MUSI 1060
is not a prerequisite for MUSI 1070. Coreq., Music Education major. Class in-
struction and practice in the rudiments of music as applied to double-reed instru-
ments and saxophones.

MUSI 1070 WOODWIND INSTRUMENTS SKILLS (1). LEC. 1. Pr., MUSI 1060
is not a prerequisite for MUSI 1070. Coreq., Music Education Major. Class
instruction and practice in the rudiments of music as applied to flute and clarin-
et.

MUSI 1080 PERCUSSION SKILLS (1). LEC. 1. Coreq., Music Education ma-
jor. Class instruction and practice in the rudiments of music as applied to vari-
ious percussion instruments.

MUSI 1090 THEATRE VOCAL SKILLS (1). LEC. 1. Coreq., Theatre Major
(THEA or THLA). Class instruction and practice in the rudiments of music and
vocal production for the Theatre Major.

MUSI 1100 MARCHING BAND (1). LEC. 1. Pr., successful audition. Provides
music for athletic contests and halftime shows at football games, various pa-
rades, pep rallies and other campus and off-campus events. Course may be
repeated with change in topic.

MUSI 1110 CONCERT BAND (1). LEC. 1. A large performance group which
rehearses and performs the literature of the concert band. Open to all Auburn
University students with band performance experience. Course may be re-
peated with change in topic.

MUSI 1120 SYMPHONIC BAND (1). LEC. 1. Pr., successful audition. A large
performance group which rehearses and performs the literature of the concert
band. Open to any Auburn University student by audition only. Course may be
repeated with change in topic.

MUSI 1130 JAZZ BAND (1). LEC. 1. Pr., successful audition. A performance
group which rehearses and performs the jazz band literature. Open to any
Auburn University student by audition only. Course may be repeated with change
in topic.

MUSI 1140 CAMPUS BAND (1). LEC. 1. A concert band which gives playing
experience to all university with past band experience. No audition required.
Course may be repeated with change in topic.

MUSI 1150 ORCHESTRA (1). LEC. 1. Pr., successful audition. The Auburn
Orchestra performs once each semester and is open to all university students
based on the instrumental needs of the group and successful audition. Course
may be repeated with change in topic.

MUSI 1160 UNIVERSITY SINGERS (1). LEC. 1. Pr., successful audition. A
select choral ensemble for study and performance of madrigals, pop music,
show tunes, and choral music of the jazz idiom. Course may be repeated with change
in topic.

MUSI 1170 GOSPEL CHOIR (1). LEC. 1. Pr., departmental approval. Per-
f ormance of choral works in the African-American gospel tradition. Course may be
repeated with change in topic.

MUSI 1180 WOMEN'S CHORUS (1). LEC. 1. Pr., departmental approval.
Course not be repeated with change in topic.

MUSI 1190 MEN'S CHORUS (1). LEC. 1. Pr., departmental approval. Course
may be repeated with change in topic.

MUSI 1200 OPERA WORKSHOP (1). LEC. 1. Open to all Auburn University
students interested in opera including performance, stage craft, make-up, con-
ducting and coaching. The group prepares for a public performance. Course
may be repeated with change in topic.

MUSI 1210 CONCERT CHOIR (1). LEC. 1. Pr., Successful audition. Concert
choir is a mixed chorus for study and performance of serious choral literature.
Course may be repeated with change in topic.

MUSI 1220 MUSIC ENSEMBLE (1). LEC. 1. Pr., departmental approval. Study
and performance of musical compositions for small instrumental groups. Course
may be repeated with change in topic.

MUSI 1230 VOCAL CHAMBER ENSEMBLE (1). LEC. 1. Pr., departmental
approval. Study and performance of musical compositions of small vocal groups.
Course may be repeated with change in topic.

MUSI 1310 MUSIC THEORY I (2). LEC. 2. A systematic study of music compo-
sition procedures, form and style during the Period of Common Practice.

MUSI 1320 MUSIC SKILLS I (1). LEC. 1. Development of aural, keyboard and
sight singing skills with an understanding of basic harmonic practices.

MUSI 1410 MUSIC THEORY II (2). LEC. 2. Pr., MUSI 1310. A systematic study of
music composition procedures, form, and style during the Period of Com-
mon Practice.

MUSI 1420 MUSIC SKILLS II (1). LEC. 1. Pr., MUSI 1320. Development of
aural, keyboard, and sight-singing skills with an understanding of basic har-
monic practices.

MUSI 2040 FUNCTIONAL PIANO I (1). LEC. 1. Pr., departmental approval.
MUAP 2040 is not prerequisite for 2050. Coreq., Music Education major. Devel-
opment of functional piano skills for use in classroom, rehearsal or studio.

MUSI 2050 FUNCTIONAL PIANO II (1). LEC. 1. Pr., departmental approval.
MUAP 2040 is not prerequisite for 2050. Coreq., Music Education major. Devel-
opment of functional piano skills for use in classroom, rehearsal or studio.

MUSI 2310 MUSIC THEORY III (2). LEC. 2. Pr., MUSI 1410. A systematic
study of music composition procedures, form, and style from the advent of
chromaticism through the music of the 20th Century.

MUSI 2320 MUSIC SKILLS III (1). LEC. 1. Pr., MUSI 1420. Development of
advanced aural, keyboard, and sight-singing skills with the understanding of
advanced harmonic practices.
MUSI 2410 MUSIC THEORY IV (2). LEC. 2. Pr., MUSI 2310. A systematic study of music composition procedures, form, and style from the advent of chromaticism through the music of the 20th Century.

MUSI 2420 MUSIC SKILLS IV (1). LEC. 1. Pr., MUSI 2320. Development of advanced aural, keyboard, and sight-singing skills with the understanding of advanced harmonic practices.

MUSI 2730 APPRECIATION OF MUSIC (3). LEC. 3. Fine Arts Core. An orientation in the art of listening. Outstanding composers and musical composition. No previous music training required.

MUSI 2737 HONORS APPRECIATION OF MUSIC (3). LEC. 3. Pr., membership in the Honors College. Fine Arts Core. The art and folk musics of western and non-western cultures. No previous music training required.

MUSI 3000 INTRODUCTION TO ELECTRONIC MUSIC (2). LEC. 2. Pr., departmental approval. A study of the basic production and recording techniques of electronic music.

MUSI 3510 MUSIC HISTORY I (3). LEC. 3. Pr., MUSI 1410. MUSI 3510 is not prerequisite for MUSI 3520. A study of the development of music from the earliest times through early 19th Century styles through recorded examples and readings.

MUSI 3520 MUSIC HISTORY II (3). LEC. 3. Pr., MUSI 1410. MUSI 3510 is not prerequisite for MUSI 3520. A study of music from the early 19th Century to the present day through lectures, recorded examples and readings.

MUSI 3610 CHORAL CONDUCTING I (2). LEC. 2. Pr., MUSI 1410. Basic conducting technique and introduction to score reading and interpretation.

MUSI 3620 CHORAL CONDUCTING II (2). LEC. 2. Pr., MUSI 3610. Advanced conducting technique with practical experience in preparing choral groups for performance.

MUSI 3630 INSTRUMENTAL CONDUCTING I (2). LEC. 2. Pr., MUSI 1410. Basic conducting technique and introduction to score reading and interpretation.

MUSI 3640 INSTRUMENTAL CONDUCTING II (2). LEC. 2. Pr., MUSI 3630. Advanced conducting technique with practical experience in preparing instrumental groups for performance.

MUSI 4000 SENIOR RECITAL (0). PRL., SU. Pr., MUAP 3220. Coreq., senior standing. Demonstration of a professional level of achievement in the student's major performance medium by the successful presentation of a senior recital during or before the seventh semester of study.

MUSI 4010 VOCAL PEDAGOGY (2). LEC. 2. For prospective voice teachers. An intensive study of the materials and methods of voice training.

MUSI 4020 INSTRUMENTAL PEDAGOGY (2). LEC. 2. For prospective instrumental teachers. An intensive study of the materials and methods of teaching various brass, woodwind and percussion instruments.

MUSI 4040 MUSIC INSTRUMENTS REPAIR (1). LEC. 1. Pr., senior standing. Coreq., Music Education Major. Selection, care and repair of woodwind, brass and percussion instruments with emphasis on adjustments which should be made by the instrumental director.

MUSI 4090 MARCHING BAND TECHNIQUES (2). LEC. 2. Fundamental methods and procedures of the marching band including study of computer-aided band charting systems.

MUSI 4100 ORCHESTRAL TECHNIQUES (2). LEC. 2. Fundamental methods and procedures of rehearsing the orchestra in areas of articulation, tone production, blend, balance, intonation, and musical expression.

MUSI 4110 CHORAL TECHNIQUES (2). LEC. 2. Coreq., junior standing. Methods and procedures of rehearsing choral groups in areas of diction, tone production, balance, blend, intonation, and musical expression.

MUSI 4400 INSTRUMENTAL ARRANGING (2). LEC. 2. Pr., MUSI 2410. Project course in arranging various instrumental combinations from quartet to symphonic band.

MUSI 4500 CHORAL ARRANGING (2). LEC. 2. Pr., MUSI 2410. Project course in arranging for various vocal combinations.

MUSI 4600 ORCHESTRATION (2). LEC. 2. Pr., MUSI 2410. Project course in arranging for various orchestral combinations.

MUSI 6500 THEORY REVIEW I (1). LEC. 1. Pr., departmental approval. Coreq., junior standing. A study of and practical application of harmonic practices from before the Period of Common Practice to the present day with emphasis on various theoretical approaches and analytical techniques. Credit will not be given to graduate students.

MUSI 6510 THEORY REVIEW II (1). LEC. 1. Pr., departmental approval. Coreq., junior standing. Continuation of MUSI 6500. Credit will not be given to graduate students.

MUSI 6520 CHORAL LITERATURE (2). LEC. 2. Pr., departmental approval. Coreq., junior standing. A chronological study of choral music from the Middle Ages to the present.

MUSI 6530/6536 WIND BAND LITERATURE (2). LEC. 2. Pr., departmental approval. Coreq., junior standing. History of the development of the wind band and its literature from ca. 1500 to the present.

MUSI 6550 KEYBOARD LITERATURE (2). LEC. 2. Pr., departmental approval. Coreq., junior standing. A study of keyboard repertoire from the Baroque to the present.

MUSI 6560 INSTRUMENTAL LITERATURE (2). LEC. 2. Pr., departmental approval. Coreq., junior standing. A study of the literature of the major performance instrument from its beginning to the present.

MUSI 7000/7006 ADVANCED CHORAL CONDUCTING I (2). LEC. 2. Coreq., registration in approved choral ensemble. Laboratory for the development of skills relating to conducting performances of traditional and modern choral works. Participation in an approved choral ensemble is required.

MUSI 7010 ADVANCED CHORAL CONDUCTING II (2). LEC. 2. Pr., MUSI 7000. Coreq., registration in approved choral ensemble. Laboratory for the development of skills relating to conducting performances of traditional and modern choral works.

MUSI 7040/7046 ADVANCED INSTRUMENTAL CONDUCTING I (2). LEC. 2. Coreq., Registration in approved instrumental ensemble. Laboratory for the development of skills relating to conducting performances of traditional and modern instrumental works for large ensembles.

MUSI 7050 ADVANCED INSTRUMENTAL CONDUCTING II (2). LEC. 2. Pr., MUSI 7040. Coreq., registration in approved instrumental ensemble. Laboratory for the development of skills relating to conducting performances of traditional and modern instrumental works for large ensembles.

MUSI 7060 BRASS INSTRUMENTS TECHNIQUES (1). LEC. 1. Coreq., registration in approved instrumental ensemble. Designed to work out specific problems with graduate students in furthering their knowledge of and skill on brass instruments.

MUSI 7070 WOODWIND INSTRUMENTS TECHNIQUES (1). LEC. 1. Coreq., registration in approved instrumental ensemble. Designed to work out specific problems with graduate students in furthering their knowledge of and skill on woodwind instruments.

MUSI 7080 PERCUSSION INSTRUMENTS TECHNIQUES (1). LEC. 1. Coreq., registration in approved instrumental ensemble. Designed to work out specific problems with graduate students in furthering their knowledge of and skill on various percussion instruments.


MUSI 7160 SEMINAR IN MUSIC HISTORY (2). SEM. 2. An in-depth study of different aspects of the history of music through historic research, analysis of music, and performance practice.

MUSI 7170 SEMINAR IN RENAISSANCE MUSIC (2). SEM. 2. Study of selected music of the Renaissance through history, analysis and performance practice.

MUSI 7180 SEMINAR IN BAROQUE MUSIC (2). SEM. 2. Study of selected Baroque music through history, analysis, and performance practice.

MUSI 7190 SEMINAR IN CLASSICAL MUSIC (2). SEM. 2. Study of selected Classical music through history, analysis, and performance practice.

MUSI 7200 SEMINAR IN ROMANTIC MUSIC (2). SEM. 2. Study of selected Romantic music through history, analysis, and performance practice.


MUSI 7220 SEMINAR IN AMERICAN MUSIC (2). SEM. 2. Study of selected American music through history, analysis, and performance practice.
MUSI 7250 TECHNIQUES OF PRIVATE INSTRUMENTAL INSTRUCTION I (2). LEC. 2. Analysis of various instrumental teaching methods and a supervised private teaching experience.

MUSI 7270 TECHNIQUES OF PRIVATE INSTRUMENTAL INSTRUCTION II (2). LEC. 2. Pr., MUSI 7260. Analysis of various instrumental teaching methods and a supervised private teaching experience.

MUSI 7280 TECHNIQUES OF PRIVATE VOCAL INSTRUCTION I (2). LEC. 2. Analysis of various vocal teaching methods and a supervised private teaching experience.

MUSI 7290 TECHNIQUES OF PRIVATE VOCAL INSTRUCTION II (2). LEC. 2. Pr., MUSI 7280. Analysis of various vocal teaching methods and a supervised private teaching experience.

MUSI 7300 INTRODUCTION TO GRADUATE RESEARCH IN MUSIC (2). RES. 2. Extensive examination of research materials (books, music and recordings). Includes the preparation of an outline for a research paper.

MUSI 7900/7906 INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Independent study directed toward desired objectives related to student’s specific areas of interest and specialization. Includes evaluation at regular intervals. Course may be repeated with change in topic. Course may be repeated with change in topic.

MUSI 7980 QUALIFYING RECITAL (3). LEC. 3. Pr., MUAP 7810. Public recital of graduate level repertoire. Recital may include a lecture component.

Naval Science (NAVS)

Capt. John T. McMurtry - 844-4364

NAVS 1010 INTRODUCTION TO NAVAL SCIENCE (3). LEC. 3. Coreq., NAVS 1011. Basic areas of Naval Science including uniforms and insignia, military courtesy, discipline, components and supporting elements of the Navy.

NAVS 1011 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 1010. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.


NAVS 1021 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 1020. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.


NAVS 2011 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 2010. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.


NAVS 2021 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 2020. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.


NAVS 3011 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 3010. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.


NAVS 3021 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 3020. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.

NAVS 3030 EVOLUTION OF WARFARE (3). LEC. 3. Coreq., NAVS 3031. Forms of warfare practices to identify historical continuity and change in the evolution of warfare. Explores the impact of historical precedent, economic factors and technological change on politico-military thought and action.

NAVS 3031 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 3030. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.

NAVS 4010 NAVAL WEAPONS (3). LEC. 3. Coreq., NAVS 4011. Weapons systems through a study of fundamental principles of sensor, tracking, computational, and weapons delivery subsystems.

NAVS 4011 NAVAL SCIENCE LABORATORY (0). LAB. 3., SU. Coreq., NAVS 4010. Required for commission in Navy/ Marine Corps. Includes naval drill, physical fitness and general military leadership instruction.

Nutrition and Food Science (NUFS)

Dr. Robert Keith - 844-4261

NUFS 1010 INTRODUCTION TO HOSPITALITY MANAGEMENT (1). LEC. 1. Overview of the hotel, restaurant, club, and travel industries and their interaction.


NUFS 2050 SCIENCE OF FOOD (4). LEC. 3. LAB. 3., SU. Coreq., NUFS 2000, BIOL 1000 or BIOL 1020. Basic chemical and biological principles of food and food preparation methods, concepts of food quality, nutrition, sanitation, processing and food laws.

NUFS 2070 INTRODUCTION TO DIETETICS AND NUTRITION (1). LEC. 1. Pr., NUFS 2000 or departmental approval. Overview of professional roles and responsibilities in dietetics and nutrition with emphasis on professional development and conduct. Spring.

NUFS 2300 HOSPITALITY LAW (3). LEC. 3. Pr., NUFS 1010. Legal systems and laws relevant to the management of restaurants, hotels, private clubs and other hospitality operations. Spring.

NUFS 3040 FOOD SYSTEMS OPERATIONS (2). LEC. 2. Pr., NUFS 2050, junior standing. Principles for managing resources required in planning, purchasing, preparing and serving high quality food in food service operations.

NUFS 3041 FOOD SYSTEMS OPERATIONS LABORATORY (1). LAB. 4. Pr., TB test. Coreq., NUFS 3040. Laboratory experience in food service operations. Food safety certification will be available.


NUFS 3380 STUDY ABROAD OPPORTUNITIES IN HUMAN SCIENCES (1). LEC. 1. Exploration of study abroad opportunities for students interested in the International Minor in Human Sciences.

NUFS 3400 HOSPITALITY MARKETING (2). LEC. 2. Pr., NUFS 1010. Coreq., MKTG 3310. Service marketing concepts and issues as applied to the global hospitality industry. Spring.

NUFS 3600 SERVICE MANAGEMENT (2). LEC. 2. Pr., NUFS 1010, junior standing. Examination of the characteristics and needs of the premium service segment of the hospitality industry. Fall.

NUFS 3620 COMMUNITY NUTRITION (1). LEC. 1. Pr., NUFS 2000. Study of populations at nutrition risk, population-specific public health nutrition problems, and health care system programs. Fall.


NUFS 4090 PROFESSIONAL ISSUES IN DIETETICS AND NUTRITION (1). LEC. 1. Pr., NUFS 2070, senior standing. Professional issues and trends affecting dietetics and nutrition practice; planning for professional advancement; includes externship. Fall.

NUFS 4290 PROFESSIONAL DEVELOPMENT IN FOOD SCIENCE (1). LEC. 1. Pr., junior standing; NUFS major. Preparing for careers; enhancing computer and communication skills; planning for professional advancement. Spring.

NUFS 4380 STUDY/TRAVEL IN NUTRITION AND FOOD SCIENCE (1-6). LEC. Pr., departmental approval. Concentrated study in nutrition, food science, or hotel and restaurant management in the US or international locations. Course may be repeated for a maximum of 6 credit hours.

NUFS 4400 FOOD PROCESSING (4). LEC, 3, LAB, 3. Pr., NUFS 2050, BIOL 3200. Food processing procedures including heat and cold processes, concentration, irradiation, dehydration and fermentation.


NUFS 4500 HOTEL MANAGEMENT (3). LEC, 3. Pr., NUFS 1010, MNGT 3100. Management of hotels, with emphasis on housekeeping, engineering, reservations, and reception departments. Spring.

NUFS 4530 CONTINUOUS QUALITY IMPROVEMENT IN HOSPITALITY (2). LEC, 2. Pr., NUFS 3600. Examination and analysis of the principles of continuous quality improvement and total quality management for the hospitality industry. Credit will not be given for NUFS 4530 and NUFS 7530/7536. Spring.

NUFS 4540 CONFERENCE COORDINATION (2). LEC. 2. Pr., NUFS 1010 and junior standing. Analysis of systems for management of the conference coordination segment of the conference coordination segment of the hospitality industry. Credit will not be given for NUFS 7440/7456 and NUFS 4540. Spring.

NUFS 4550 RESORT AND CLUB MANAGEMENT (2). LEC, 2. Pr., NUFS 3600. Examination of unique features, opportunities and problems associated with resort and club management. Credit will not be given for NUFS 4550 and NUFS 7550/7556.

NUFS 4560 GLOBAL HOSPITALITY (2). LEC. 2. Pr., NUFS 3600. Controversy issues confronting the global hospitality industry. Management and marketing operations emphasized. Credit will not be given for NUFS 4560 and NUFS 7560/7566.


NUFS 4900 INDEPENDENT STUDY (1-8). IND. Pr., departmental approval, junior standing. Independent reading or research in a content area of special interest; supervised by a faculty member. Course may be repeated for a maximum of 8 credit hours.

NUFS 4910 FOOD SCIENCE PRACTICUM (3). PRA. Pr., junior standing in the major, departmental approval. Practical experience in food industry, governmental laboratories, or other food science sites.

NUFS 4920 INTERNSHIP IN HOSPITALITY (10). INT. Pr., 2.00 GPA; 400 hours work experience in hospitality; junior standing; departmental approval. Application of principles and theories of hospitality in a professional hospitality setting.

NUFS 4930 UNDERGRADUATE RESEARCH AND STUDY (1-9). IND., SU. Pr., departmental approval. Directed research under faculty supervision. Course may be repeated for a maximum of 9 credit hours.

NUFS 4940 PROFESSIONAL DEVELOPMENT IN HOSPITALITY (2). IND. Coreq., NUFS 4920 or departmental approval. Computer-assisted capstone course to equip students with skills and experience for successful career entry. Internet and computer access required.

NUFS 4997 HONORS THESIS (1-3). IND., SU. Pr., membership in the Honors College; departmental approval. Research in specialized topics. Course may be repeated for a maximum of 3 credit hours.

NUFS 6020 MEDICAL NUTRITION I (3). LEC, 3. Pr., NUFS 3721, NUFS 4820, NUFS 4830 or departmental approval. Application of nutrition principles to the pathophysiological and biochemical changes associated with endocrine, cardiovascular and gastrointestinal tract diseases. Fall.

NUFS 6030 MEDICAL NUTRITION II (3). LEC, 3. Pr., NUFS 6020 or departmental approval. Application of nutrition principles to the pathophysiological and biochemical changes associated with sepsis, burns, and trauma as well as renal, respiratory and immune system diseases. Spring.

NUFS 6430 FOOD CHEMISTRY (4). LEC, 3, LAB, 3. Pr., BCHE 3180 or departmental approval. Chemistry of food components; chemical and physical changes of food during processing and storage. Fall.

NUFS 6450 FOOD ANALYSIS AND QUALITY CONTROL (4). LEC, 3. LAB. 3. Pr., NUFS 6430 or departmental approval. Principles and application of chemical and instrumental food analyses; quality control procedures. Fall.

NUFS 6560 NUTRITION AND FOOD SERVICE MANAGEMENT (4). LEC. 4. Pr., NUFS 3041, ACCT 2910 or departmental approval. Organization, management and marketing of food and nutrition service systems in health care facilities. Spring.

NUFS 6580 NUTRITION AND FOOD SCIENCE: A GLOBAL PERSPECTIVE (3). LEC, 2. Pr., NUFS 3600 or departmental approval. Factors affecting nutritional status of world populations; community, national, international programs for health enhancement.

NUFS 6590/6596 RECREATIONAL FOOD SERVICE MANAGEMENT (2). LEC. 2. Pr., NUFS 3600 or departmental approval. Methods and systems of managing foodservice operations in recreational facilities. Credit is not allowed for both NUFS 6590 and NUFS 6596.


NUFS 6640 FOOD PRODUCT DEVELOPMENT (4). LEC. 2. LAB. 6. Pr., NUFS 6430 or departmental approval. Food product development from concept to market. Spring.

NUFS 6770/6776 FOOD PLANT SANITATION (4). LEC, 3. LAB. 3. Pr., BIOL 3200 or departmental approval. Sanitary regulations and procedures for hazard control and quality assurance in food industry. Credit is not allowed for both NUFS 6770 and NUFS 6776.

NUFS 6820 NUTRITION IN THE LIFE CYCLE (3). LEC, 3. Pr., NUFS 4830 or departmental approval. Metabolic and clinical aspects of nutrition during key periods of the life cycle emphasizing pregnancy, infancy and late adulthood. Fall.

NUFS 6910 PRACTICUM IN NUTRITION AND FOOD SCIENCE (1-12). PRA., SU. Pr., departmental approval. Application of principles and theories of nutrition or food science in a professional setting. No more than the three hours may count toward a graduate degree. Course may be repeated for a maximum of 12 credit hours.

NUFS 7050/7056 METHODS OF RESEARCH (2). LEC. 2. Pr., departmental approval. Research methods and designs applicable to disciplines represented in nutrition and food science. Credit is not allowed for both NUFS 7050 and NUFS 7056 Spring.

NUFS 7200 CARBOHYDRATE CHEMISTRY AND FUNCTIONALITY IN FOODS (3). LEC. 3. Pr., NUFS 6430 or departmental approval. Chemistry and functionality of sugars, starches and hydrocolloids as applied to food systems.

NUFS 7210 FOOD PROTEINS AND FATS (3). LEC. 3. Pr., NUFS 6430 or departmental approval. Advanced theories and practices of food science in the areas of protein and fat.

NUFS 7280 LABORATORY METHODS IN FOOD SCIENCE AND NUTRITION (3). LEC. 2. LAB. 3. Pr., departmental approval. Modern laboratory techniques and instruments used in human nutrition and food science research.

NUFS 7500 MINERALS (2). LEC. 2. Pr., departmental approval. Sources, digestion, absorption, transport, function and metabolism of major and trace minerals in the human body. Fall.

NUFS 7510 VITAMINS (2). LEC. 2. Pr., departmental approval. Advanced study of metabolism, requirements, interactions and deficiencies of the fat and water soluble vitamins as related to health. Fall.


NUFS 7530/7536 CONTINUOUS QUALITY IMPROVEMENT HOSPITALITY (2). LEC. 2. Pr., NUFS 3600 or departmental approval. The principles of continuous quality improvement and total quality management for the hospitality industry. Credit will not be given for NUFS 7530/7536 and NUFS 4550. Spring.

NUFS 7540/7546 CONFERENCE COORDINATION (2). LEC. 2. Pr., departmental approval. Systems for the management of the conference coordination segment of the hospitality industry. Credit will not be given for NUFS 7540/7546 and NUFS 4540. Spring.

NUFS 7550/7556 RESORT AND CLUB MANAGEMENT (2). LEC. 2. Pr., NUFS 3600 or departmental approval. Unique features, opportunities, and problems associated with resort and club management. Credit will not be given for NUFS 7550/7556 and NUFS 4550. Spring.

NUFS 7560/7566 GLOBAL HOSPITALITY (2). LEC. 2. Pr., NUFS 3600 or departmental approval. Contemporary issues confronting the global hospitality industry. Credit will not be given for NUFS 7560/7566 and NUFS 4560. Spring.

NUFS 7850 RESEARCH SEMINAR FOR MASTER’S PROGRAM (1). SEM. 1. Pr., departmental approval. Current topics in nutrition and food science presented by M.S. graduate students.
NURS 3700/7906 ADVANCED INDEPENDENT STUDY (1-6). IND. Pr., departmental approval. Advanced reading or research approved and supervised by a faculty member. Course may be repeated for a maximum of 6 credit hours.

NURS 7920/7926 PROFESSIONAL INTERNSHIP IN HOSPITALITY (1-3). INT. SU. Pr., departmental approval. Application and analysis of principles and theories of hospitality in a professional hospitality setting. No more than three hours may count toward a graduate degree. Course may be repeated for a maximum of 3 credit hours.

NURS 7960/7966 DIRECTED READINGS (1-5). IND. Pr., departmental approval. Critical analysis of classic and current research. May be repeated for a total of 10 hours. Course may be repeated for a maximum of 10 credit hours.

NURS 7980 NON-THESIS RESEARCH (1-3). RES. SU. Pr., departmental approval, graduate standing. In-depth work in a particular project related to hotel and restaurant management. Course may be repeated for a maximum of 6 credit hours.

NURS 7990 RESEARCH AND THESIS (1-10). MSTR. TD. Pr., departmental approval. Research in an area of specialization. Course may be repeated with change in topic.

NURS 8850 RESEARCH SEMINAR FOR DOCTORAL PROGRAM (1-2). SEM. Pr., departmental approval. Required for doctoral students in nutrition and food science. Advanced topics in nutrition and food science presented by doctoral students. Course may be repeated for a maximum of 2 credit hours.

NURS 8910 SUPERVISED TEACHING (1). IND. 1., NG. Pr., departmental approval. Practical experience teaching in the classroom. Course may be repeated for a maximum of 5 credit hours.

NURS 8970/8976 ADVANCED TOPICS IN NUTRITION AND FOOD SCIENCE (1-6). LEC. Pr., Departmental approval. A) Nutrition, B) Food Science, C) Hotel and Restaurant Management. Course may be repeated for a maximum of 6 credit hours.

NURS 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Pr., departmental approval. Research in an area of specialization. Course may be repeated with change in topic.

**Nursing (NURS)**

Dr. Barbara Witt - 844-5665

NURS 1010 ORIENTATION TO NURSING (1). LEC. 1., SU. Introduction to the discipline of nursing as a career.


NURS 3420 NURSING RESEARCH AND DATA MANAGEMENT (2). LEC. 2. Pr., STAT 2010, STAT 2510, STAT 2610, STAT 3010 or departmental approval and admission to the Nursing Professional program. Explores the research process as the systematic means for contributing to nursing knowledge.

NURS 3510 FUNCTIONAL NURSING SKILLS (1). LEC. 1., Pr., admission to the School of Nursing. Coreq., NURS 3511, NURS 3710, NURS 3610, BIOL 4400. Core clinical skills used in nursing practice.

NURS 3511 FUNCTIONAL NURSING SKILLS LAB (1). LEC. 3., SU. Pr., admission to the School of Nursing. Coreq., NURS 3510, 3710, 3610, BIOL 4400. Clinical application of core clinical skills used in nursing practice.

NURS 3530 NURSING CARE OF SPECIAL POPULATIONS I (3). LEC. 3. Pr., NURS 3720, NURS 3420, NURS 3320, Coreq., NURS 3531, NURS 3630. Concepts and theories underlying the nursing care of the childhood family and children with special needs.

NURS 3531 NURSING CARE OF SPECIAL POPULATIONS I LAB (2). LAB. 6. SU. Pr., NURS 3720, NURS 3420, NURS 3320. Coreq., NURS 3530. Clinical application of concepts and theories underlying the nursing care of the childhood family and children with special needs.

NURS 3610 COMPREHENSIVE HEALTH ASSESSMENT (3). LEC. 3. Pr., admission to the School of Nursing. Coreq., NURS 3611, NURS 3710, NURS 3510, BIOL 4400. Concepts and theories underlying the health assessment of individuals across the life and in families and communities.

NURS 3611 COMPREHENSIVE HEALTH ASSESSMENT LAB (2). LAB. 6. SU. Pr., admission to the School of Nursing. Coreq., AND and TRAD: NURS 3610, NURS 3710, NURS 3510, BIOL 4400. Clinical application of concepts and theories underlying the health assessment of individuals across the lifespan, and in families and communities.

NURS 3630 NURSING CARE OF SPECIAL POPULATIONS II (3). LEC. 3. Pr., NURS 3720, 3420, 3320, Coreq., NURS 3631, NURS 3530. Theories and concepts related to nursing management of clients with chronic psychosocial and/or physiological impairments.

NURS 3631 NURSING CARE OF SPECIAL POPULATIONS II LAB (2). LAB. 6. SU. Pr., NURS 3720, NURS 3420, NURS 3320. Coreq., NURS 3630, NURS 3530. Clinical application of theories and concepts related to nursing management of clients with chronic psychosocial and/or physiological impairment.

NURS 3710 PROFESSIONAL NURSING CONCEPTS I (2). LEC. 2., Pr., admission to the School of Nursing. Coreq., NURS 3711, NURS 3610, NURS 3510, BIOL 4400. Evolution of principles basic to nursing practice in community and institutional environments. Emphasis on health promotion, nursing process, health care systems and critical thinking.

NURS 3711 PROFESSIONAL NURSING CONCEPTS I LAB (1). LAB. 3. Pr., Admission to the School of Nursing. Coreq., NURS 3510, NURS 3511, NURS 3610, NURS 3611, NURS 3710. An introductory course in computer applications is designed to foster attainment of knowledge, skills, and attitudes for beginning a successful career as a nurse in a computerized environment. Emphasis is given to the nursing application of information technology.


NURS 3810 ADVANCED HEALTH ASSESSMENT (2). LEC. Pr., admission to the School of Nursing. Coreq., NURS 3811, NURS 3831. Concepts and theories underlying health assessment of individuals, families, and communities across the lifespan. Summer.

NURS 3811 ADVANCED HEALTH ASSESSMENT CLINICAL (1). LEC. 2., SU. Pr., admission to School of Nursing. Coreq., NURS 3810. Clinical application of concepts and theories underlying health assessment of individuals, families, and communities across the lifespan. Summer.

NURS 3830 NURSING RESEARCH AND DATA MANAGEMENT (2). LEC. Pr., admission to School of Nursing, successful completion of introductory statistics. Explore the research process as the systematic means for contributing to research. Summer.

NURS 3831 COMPUTER IN NURSING (1). LEC. 2., Pr., Admission to School of Nursing. An introductory course in computer applications designed to foster the attainment of knowledge skills and attitudes for beginning a successful career as a nurse in a computerized healthcare environment. Emphasis is given to the nursing application of information technology.


NURS 3930 DIRECTED STUDIES IN NURSING (1-6). IND. Pr., admission to professional curriculum. Directed individual study plan designed for students out of sequence in the professional nursing curriculum. Topics and activities will relate to the point in the curriculum in which the student was unsuccessful or out of sequence in the professional nursing curriculum. May not substitute for professional elective.

NURS 4110 CHILDREN WITH CHRONIC ILLNESSES (3). LEC. 3. Pr., senior-level student in Nursing or health-related field. Theories and concepts of care of children with special needs and/or chronic health problems.

NURS 4120 CAMP NURSING (3). LAB. 6. SU. Pr., senior-level nursing student. Clinical experience in the care of children with chronic conditions in a camp setting.

NURS 4130 NURSING: THE ART OF CARING (3). LEC. 3. Pr., senior-level Nursing student. Philosophical, social, and ethical principles inherent in the practice of professional nursing. Emphasis is on caring as a philosophy to guide clinical practice.
NURS 4140 CONTEMPORARY HEALTH ISSUES OF WOMEN. (3). LEC. 3. Pr., senior-level Nursing student. Explores the health care delivery system as it pertains to women.

NURS 4150 HUMAN SEXUALITY IN HEALTH AND ILLNESS (3). LEC. 3. Pr., senior-level Nursing student or related medical field. Human sexuality in relation to the health-illness continuum. Sexuality across the lifespan.

NURS 4160 SPIRITUAL PERSPECTIVES IN NURSING (3). LEC. 3. Pr., senior-level Nursing student. Use of the nursing process to help clients with various spiritual orientations meet spiritual needs.


NURS 4180 TRAUMA NURSING (3). LEC. 3. Pr., senior-level Nursing student. A broad overview of the specialty of trauma nursing and the multiple factors that affect patient care in an emergency or trauma situation.

NURS 4190 AIDS: A SOCIAL EPIDEMIC (3). LEC. 3. Pr., senior-level Nursing student. The psychosocial, physical, emotional, ethical, legal, behavioral, and changing health care needs of clients, families, aggregates and populations as a result of AIDS.

NURS 4210 APPLIED CLINICAL NUTRITION FOR NURSES (3). LEC. 3. Pr., senior-level Nursing student; NUF S 2000. Independent function of the nurse as a provider of nutritional care for the individual.

NURS 4220 INTEGRATIVE HEALING THERAPIES (3). LEC. 3. Pr., senior-level Nursing student. Theoretical and empirical bases for the use of selected interventions in clinical nursing practice.


NURS 4810 HOLISTIC PATHOPHYSIOLOGY (3). LEC. Pr., admission to the School of Nursing. Coreq., NURS 3831. Holistic approach to human pathophysiology and psychoneuroimmunology. Fall.

NURS 4811 TRANSITION INTO PROFESSIONAL NURSING LAB (1). LAB. 2, SU. Pr., admission to the EARN Program. Coreq., NURS 4810. Provides registered nurse students with opportunities to apply concepts and theoretical formulations of professional nursing practice in the clinical setting.


NURS 4821 HEALTH PROMOTION IN FAMILY SYSTEMS LAB (1). LAB. 6, SU. Pr., NURS 3810, NURS 3840, NURS 3831. Coreq., NURS 4820. Concepts and theory underlying health promotion and primary prevention in family systems utilized in family health care practices. Fall.

NURS 4830 LEADERSHIP AND MANAGEMENT IN NURSING (2). LEC. 3. Pr., NURS 3840, NURS 3841. Coreq., NURS 4831. Concepts and theoretical foundation for implementation of the leadership and management role to the professional nurse in healthcare organization. Fall.

NURS 4831 LEADERSHIP AND MANAGEMENT IN NURSING CLINICAL (1). LAB. 6, SU. Pr., NURS 3840, NURS 3831. Coreq., NURS 4830. Concepts and theoretical foundation for implementation of the leadership and management role of the professional nurse in healthcare organization. Fall.

NURS 4840 TRANSITION TO PROFESSIONAL NURSING II (4). LEC. 2. Pr., NURS 3810, NURS 3840, NURS 3830, NURS 3831, NURS 4810, NURS 4820, NURS 4830. Coreq., NURS 4850, NURS 4860. Issues related to transformation into professional nursing practice and continuing personal professional development are analyzed. Legal and ethical aspects and current trends in nursing are explored. Spring.


NURS 4861 LEADERSHIP/ MANAGEMENT AND INFORMATION MANAGEMENT IN NURSING LAB (1). LAB. 5, SU. Pr., admission to the EARN program. Coreq., NURS 4880. Practice in the management of information and nursing care delivery systems in a rapidly changing technological environment.

NURS 4872 EARN SEMINAR (2). LEC. 2. Pr., EARN clinical courses. Exploration of issues related to nursing and health care to facilitate socialization into the role of the professional nurse.

NURS 4880 ACCELERATED PROFESSIONAL NURSING PRACTICE III (5). LEC. 5. Pr., NURS 3880, NURS 3320. Coreq., NURS 4881, NURS 3420. Theories and concepts of nursing management of clients from multiple aggregates experiencing complex stressors in various settings. Includes special populations with chronic physiological or psychological stressors.

NURS 4881 ACCELERATED PROFESSIONAL NURSING PRACTICE III LAB (5). LAB. 05, SU. Pr., NURS 3880, NURS 3320. Coreq., NURS 4880, NURS 3420. Applications of theories and concepts of nursing management of clients from multiple aggregates experiencing complex stressors in various settings. Includes special populations with physiological and psychological stressors.

NURS 4900 INDEPENDENT STUDY IN NURSING (1-6). IND. Pr., admission to the professional program. Directed readings and/or clinical study in student-selected areas related to nursing.


NURS 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College. Course may be repeated for a maximum of 3 credit hours.
PHIL 3110 SYMBOLIC LOGIC (3). LEC. 3. Pr., PHIL 1010 or departmental approval. Propositional logic and predicate logic through relations: natural language and logic; some philosophical problems in logic.

PHIL 3160 PHILOSOPHIES OF HUMAN NATURE (3). LEC. 3. An historical survey of major theories of human nature.

PHIL 3300 PHILOSOPHY OF RELIGION (3). LEC. 3. Nature religion, religious language, religious knowledge, religious theories of humanity and evil, examines arguments for the existence of God and immortality of soul.

PHIL 3320 HISTORY OF PHILOSOPHY I: ANCIENT AND EARLY MEDIEVAL (3). LEC. 3. Philosophic thought from the Pre-Socratics through Aquinas, emphasizing Plato and Aristotle.

PHIL 3340 HISTORY OF PHILOSOPHY II: LATE MEDIEVAL AND EARLY MODERN PHILOSOPHY (3). LEC. 3. Philosophical thought from Occam to Kant emphasizing major thinkers.

PHIL 3350 HISTORY OF PHILOSOPHY III: RECENT AND CONTEMPORARY PHILOSOPHY (3). LEC. 3. Various representatives of the major philosophical trends during these periods.

PHIL 3400 MEDIEVAL PHILOSOPHY (3). LEC. 3. Philosophical thought from late antiquity through the Middle Ages. Emphasis on Plotinus, Islamic thinkers, Augustine, Abelard, Anselm and Thomas Aquinas.

PHIL 3420 BRITISH EMPIRICISM (3). LEC. 3. Pr., junior standing, 17th and 18th century empiricism emphasizing Locke, Berkeley, Hume.

PHIL 3440 CONTINENTAL RATIONALISM (3). LEC. 3. Pr., junior standing. Major themes in such thinkers as Descartes, Spinoza, Leibniz, Gassendi.

PHIL 3450 PHILOSOPHICAL PERSPECTIVES ON THE SCIENTIFIC REVOLUTION (3). LEC. 3. Changes in science and world view from Copernicus to Newton, including the political and theological implications of the changes.


PHIL 3550 PHILOSOPHICAL LANGUAGE (3). LEC. 3. A survey of contemporarily philosophical discussions of the nature of language.


PHIL 3640 PHILOSOPHY OF LAW (3). LEC. 3. The function of law including judicial reasoning, ground of authority, natural law, legal responsibility, punishment, civil disobedience, and the relation of law to ethics.

PHIL 3660 APPLIED ETHICS (3). LEC. 3. Advanced philosophical study of the ethical issues that arise in such intellectual endeavors as medicine, law, business, military science, engineering, etc.

PHIL 3700 METAPhysics (3). LEC. 3. Pr., junior standing. A critical analysis of such topics as monism and pluralism, freedom and determinism, realism and nominalism and the mind-body problem.


PHIL 3740 EXISTENTIALISM (3). LEC. 3. Pr., junior standing. Selected works of such authors as Kierkegaard, Nietzsche, Sartre, Jaspers, and Heidegger.

PHIL 3970 SPECIAL TOPICS (3). LEC. 3. Pr., junior standing, departmental approval. Topics vary. Course may be repeated for a maximum of 6 credit hours.

PHIL 4500 PHILOSOPHY OF SCIENCE (3). LEC. 3. Empirical meaning, verifiability, measurement, probability, causality and determinism.


PHIL 4620 MODERN ETHICAL THEORIES (3). LEC. 3. Recent analyses of the meanings, presuppositions, and problems of ethical terms and judgements.

PHIL 4700 PLATO (3). LEC. 3. Pr., junior standing. Plato's Methodology, epistemology, metaphysics, ethics, political theory.

PHIL 4750 ARISTOTLE (3). LEC. 3. Pr., junior standing. Aristotle's logic, epistemology, metaphysics, ethics, political theory, psychology.

PHIL 4870 KANT AND TRANSCENDENTAL IDEALISM (3). LEC. 3. The philosophy of Kant in particular but also of the early Fichte and Schelling and of neo-Kantians.
gravitation, cosmology, conservation of energy, momentum and angular momentum, special relativity, and fluids using introductory calculus.

PHYS 1601 ENGINEERING PHYSICS I LAB (0). LAB., NG Coreq., PHYS 1600. Laboratory course for PHYS 1600. Two 2-hour sessions per week.


PHYS 1608 HONORS PHYSICS I LAB (0). LAB., NG Coreq., membership in the Honors College and PHYS 1607. Laboratory course for PHYS 1607. Two 2-hour sessions per week.


PHYS 1611 ENGINEERING PHYSICS II LAB (0). LAB., NG Coreq., PHYS 1610. Laboratory course for PHYS 1610. Two 2-hour sessions per week.

PHYS 1617 HONORS PHYSICS II (4). LEC. 3, LAB. 4. Pr., PHYS 1600 or PHYS 1607 and MATH 1610 or MATH 1710. Coreq., membership in the Honors College and PHYS 1618. MATH 1620 or MATH 1720. Science Core. Thermodynamics, electricity and magnetism, simple AC circuits, waves, and geometric optics.

PHYS 1618 HONORS PHYSICS II LAB (0). LAB., NG Coreq., membership in the Honors College and PHYS 1617. Laboratory course for PHYS 1617. Two 2-hour sessions per week.


PHYS 2200 INTRODUCTORY QUANTUM PHYSICS AND RELATIVITY (3). LEC. 3. Pr., PHYS 1617 or PHYS 1610. Observational foundations of quantum physics, relativity and developments of several branches of physics up to their present frontiers.

PHYS 2300 PHYSICS LABORATORY SKILLS (2). LEC. 3. Pr., PHYS 1617 or PHYS 1610. The measurement process and its unavoidable uncertainties; standard laboratory instruments; data analysis techniques and tools.


PHYS 3200 STATISTICAL THERMODYNAMICS (3). LEC. 3. Pr., PHYS 2200. The basic laws of thermodynamics, kinetic theory, and statistical mechanics including entropy, the partition function, free energy, and the quantum statistic of Fermions and Bosons.

PHYS 3500 PHYSICS OF THE WORLD AROUND US (3). LEC. 3. Interdisciplinary topic e.g. Biophysics, Astrophysics, Physics of Weather, Physics of Music, or Environmental Physics. Course may be repeated for a maximum of 12 credit hours.


PHYS 4100 FUNDAMENTALS OF QUANTUM MECHANICS (3). LEC. 3. Pr., PHYS 2200, MATH 2630. Schrodinger equation, stationary and time-dependent solutions, spin and the exclusion principle, perturbation theory, scattering and resonances, the interpretation of quantum mechanics.

PHYS 4200 FUNDAMENTAL EXPERIMENTS IN PHYSICS (2). LEC. 3. Pr., PHYS 2300. Experiments that demonstrate the fundamental ideas and facts of physics. Data will be collected, analyzed, interpreted and reported in comprehensive lab reports.

PHYS 4900 INDEPENDENT STUDY IN PHYSICS (1-5). IND. Pr., SU. Pr., departmental approval. Student will investigate a topic of interest under the direction of a faculty member. Course may be repeated for a maximum of 10 credit hours.

PHYS 4930 DIRECTED READING IN PHYSICS (1-5). IND. Pr., departmental approval. Student will study a topic of interest under the direction of a faculty member. Course may be repeated for a maximum of 10 credit hours.

PHYS 4967 HONORS READING (1-3). IND. Pr., Membership in the Honors College; departmental approval. Course may be repeated for a maximum of 6 credit hours.

PHYS 4990 UNDERGRADUATE RESEARCH IN PHYSICS (1-5). IND. Pr., departmental approval. Student will work under the direction of a faculty member on a problem of mutual interest. Course may be repeated for a maximum of 10 credit hours.

PHYS 4997 HONORS THESIS (1-6). IND. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 6 credit hours.

PHYS 6100 APPLICATIONS OF QUANTUM MECHANICS (3). LEC. 3. Pr., PHYS 4100. Quantum mechanics applied to atomic physics, solid state physics, nuclear physics, particle physics, electrodynamics, and cosmology.

PHYS 6500 FUNDAMENTALS OF PHYSICS (3). LEC. 3. Pr., departmental approval. A subject such as Wave Mechanics, Mathematical Physics, Nonlinear Dynamics, Optics, Nuclear Physics, Elementary Particles, Relativity, or Electrodynamics. Course may be repeated for a maximum of 9 credit hours.

PHYS 6600 FRONTIERS OF PHYSICS (3). LEC. 3. Pr., PHYS 4100 or PHYS 3100 or departmental approval. A subject from the research areas in the Department such as Solid State, Atomic, Plasma, Space, or Computational Physics will be selected by the lecturer. Course may be repeated for a maximum of 9 credit hours.

PHYS 6610 INTRODUCTION TO SOLID STATE PHYSICS (3). LEC. 3. Pr., PHYS 6100 or departmental approval. Lattice vibrations, band description of electronic states in metals, semiconductors and insulators, and magnetic, superconducting and defect properties of solids.

PHYS 6620 SURVEY OF PLASMA PHYSICS (3). LEC. 3. Pr., PHYS 3100 or departmental approval. Single particle motions; fluid description of a plasma; plasma waves and oscillations; kinetic description, diffusion, and resistivity; non-linear effects.

PHYS 7100 CLASSICAL MECHANICS (3). LEC. 3. Introductory course on Lagrangian and Hamiltonian formulations of mechanics, canonical transforms. Hamilton-Jacobi theories, action angle variables, rigid rotators, normal modes, and mechanics of continuous media.


PHYS 7250 ELECTRICITY AND MAGNETISM II (3). LEC. 3. Pr., PHYS 7200 or departmental approval. Time dependent Maxwell theory, wave propagation and dispersion, diffusion, scattering, radiation, relativistic covariance and applications.

PHYS 7300 QUANTUM MECHANICS I (3). LEC. 3. Pr., PHYS 7300 or departmental approval. Time dependent Maxwell theory, wave propagation and dispersion, diffusion, scattering, radiation, relativistic covariance and applications.

PHYS 7350 QUANTUM MECHANICS II (3). LEC. 3. Pr., PHYS 7300 or departmental approval. Time dependent Maxwell theory, wave propagation and dispersion, diffusion, scattering, radiation, relativistic covariance and applications.


PHYS 7520 NONLINEAR DYNAMICS (3). LEC. 3. Pr., PHYS 7100 or departmental approval. Dynamical systems, maps, flows, fixed points and neighborhoods, chaos, fractals and fractal dimensions. Lyapunov exponents, strange attractors, dissipative and Hamiltonian systems, controlling chaos.

PHYS 7540 NON-EQUILIBRIUM STATISTICAL MECHANICS (3). LEC. 3. Pr., PHYS 7400 or departmental approval. Dynamics of non-equilibrium systems, stochastic descriptions of evolution, transitions, metastable states, and relaxation to equilibrium.

PHYS 7900 INDEPENDENT STUDY IN PHYSICS (1-5). IND. Pr., SU. Pr., departmental approval. Student will work with a faculty member to study a topic of interest. Course may be repeated for a maximum of 6 credit hours.

PHYS 7930 DIRECTED READING IN PHYSICS (1-5). IND. Pr., departmental approval. Student will work with a faculty member to study a topic of interest. Course may be repeated for a maximum of 6 credit hours.

PHYS 7950 PHYSICS COLLOQUIUM (1). SEM. Pr., SU. Offers a series of talks presented by invited speakers on broad fields of physics. Check with the departmental adviser for credit allowed. Course may be repeated for a maximum of 6 credit hours.

PHYS 7970 SPECIAL TOPICS IN PHYSICS (1-5). IND. Pr., SU. Special topics course. Seminar or lecture series in a rapidly advancing specialty of physics. Course may be repeated for a maximum of 6 credit hours.

PHYS 8100 RELATIVISTIC QUANTUM MECHANICS (3). LEC. 3. Pr., PHYS 7500 or departmental approval. Dirac equation, 1D barrier scattering, 3D central potentials, S-matrix theory, Feynman diagrams, quantum electrodynamics, renormalization, tree and loop level problems.

PHYS 8600 PLASMA PHYSICS (3). LEC. 3. Pr., PHYS 6620 or departmental approval. A detailed study of plasma physics including particle orbit theory, magnetohydrodynamics, plasma waves and transport phenomena.

PHYS 8700 SOLID STATE PHYSICS (3). LEC. 3. Pr., PHYS 6610 or departmental approval. Atomic and electronic structures of solids and the associated electrical, optical and transport properties.

PHYS 8900 INDEPENDENT STUDY IN ADVANCED PHYSICS (1-5). IND. SU. Pr., departmental approval. Students will work with a faculty member to study a topic of interest. Course may be repeated for a maximum of 10 credit hours.

PHYS 8930 DIRECTED READING IN ADVANCED PHYSICS (1-5). IND. Pr., departmental approval. Student will work with a faculty member to study a topic of interest. Course may be repeated for a maximum of 10 credit hours.

PHYS 8970 SPECIAL TOPICS IN ADVANCED PHYSICS (1-5). LEC. Pr., departmental approval. Topic at the forefront of physics research will be chosen by the lecturer. Course may be repeated for a maximum of 10 credit hours.

PHYS 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

Plant Pathology (PLPA)
Dr. Mike L. Williams - 844-5006


PLPA 4930 DIRECTED STUDIES IN PLANT PATHOLOGY (1-3). IND. SU. Pr., departmental approval. Supervised work on a project in plant pathology. Areas of study are: A. Mycology; B. Nematology; C. Virology; D. Bacteriology; E. Extension and Clinic Experience; F. Physiological and Molecular Approaches. Course may be repeated for a maximum of 3 credit hours.

PLPA 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College; junior or senior standing and departmental approval. Assigned readings on topics pertinent to plant pathology or individual student endeavor consisting of directed research and writing of honors thesis. Course may be repeated for a maximum of 6 credit hours.

PLPA 6000 ESSENTIALS OF PLANT PATHOLOGY (3). LEC. 3. Pr., BIOL 1030 or departmental approval. Advanced discussion of concepts and topics in plant pathology; terminology, pathogenesis, and management of plant diseases.


PLPA 6060 PLANT DISEASE MANAGEMENT (3). LEC. 3. Pr., PLPA 3000 or PLPA 6000. Aspects of plant disease management including cultural practices, plant resistance, biological and chemical control, and disease forecasting. Spring.

PLPA 6080 FIELD SURVEY OF PLANT PATHOLOGY (3). LEC. 1. LAB. 6. Pr., PLPA 3000 or PLPA 6000. Practical aspects of plant diseases under field conditions; on-site visits via field trips; discussion of experimental design for field research. Summer.

PLPA 6200 INTRODUCTORY MYCOLOGY (4). LEC. 3. LAB. 2. Pr., BIOL 1030 or departmental approval. A systematic survey of the fungi with emphasis on morphology. Fall.

PLPA 7040 RESEARCH PRESENTATION IN PLANT PATHOLOGY (1). LEC. 1. Pr., departmental approval, major or minor in PLPA. Formal presentations on research and current issues in plant pathology and related disciplines. Fall, Spring. Course may be repeated with change in topic.

PLPA 7300 PLANT-BACTERIAL INTERACTIONS (4). LEC. 3. LAB. 2. Pr., BIOL 3200, equivalent, or departmental approval. Biochemical and molecular basis of plant-bacterial interactions, including colonization, pathogenesis, symbiotic and associative nitrogen fixation, and transformation. Fall.

PLPA 7400 PLANT VIROLOGY (4). LEC. 3. LAB. 2. Pr., PLPA 3000, PLPA 6000, CHEM 6180 or departmental approval. Introduction to plant viruses and the diseases they cause; virus particle structure and replication strategies; disease identification by symptoms and detection of pathogen; transmission, ecology, epidemiology and control. Spring.

PLPA 7500 PLANT NEMATODES (3). LEC. 2. LAB. 2. Pr., BIOL 1030 or departmental approval. The various roles of nematodes in relation to plant diseases. Identification of plant nematodes; nature of pathogenicity; principles and practices of control; recent advances in phytomolecular. Fall.

PLPA 7820 RESEARCH PROPOSAL WRITING FOR PLANT AND MICRO-BIAL SCIENCES (2). LEC. 2. Development, writing, Submission, and review process of a research proposal in microbial or plant sciences disciplines for a federal or regional granting agency. Fall.


PLPA 7930 DIRECTED STUDIES IN PLANT PATHOLOGY (1-3). IND. SU. Pr., departmental approval. Directed studies or projects, under the supervision of faculty, for understanding of topics beyond course materials or due to particular requirements. Course may be repeated for a maximum of 3 credit hours.

PLPA 7950 SEMINAR IN PLANT PATHOLOGY (1). SEM. 1. Pr., departmental approval. Seminar presentations on current departmental research and current issues in plant pathology and related disciplines. Fall, Spring. Course may be repeated for a maximum of 2 credit hours.

PLPA 7980 RESEARCH AND THESIS (1-10). DSR. TD. Pr., departmental approval. Research and thesis on problems in plant pathology. Course may be repeated with change in topic.


PLPA 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

Political Science (POLI)
Dr. Paul Johnson - 844-4370

HADM 2200 HEALTH POLICY (3). LEC. 3. Pr., POLI 1090 or POLI 2100. Political issues affecting health care services.

HADM 3300 INTRODUCTION TO HEALTH ADMINISTRATION (3). LEC. 3. Pr., POLI 1090 or POLI 2100. Basic concepts and principles of administration of health services organizations.

HADM 3700 LEGAL STRUCTURE OF HEALTH ADMINISTRATION (3). LEC. 3. Pr., POLI 1090 or POLI 2100. Legal issues that arise between patients and health care providers.

HADM 4000 DEVELOPING CARE ORGANIZATIONS (3). LEC. 3. Pr., HADM 2200, HADM 3300, MATH 1690. Organizational strategies for effective interfacing of medical, nursing, allied health and administrative staff with patient needs.


HADM 4810 CHANGE IN HEALTH ADMINISTRATION (3). LEC. 3. Pr., HADM 2200 and HADM 3300. Changes in modern technology, cultural diversity, and governmental policies on the administration of health services organizations.

HADM 4820 LONG-TERM CARE ADMINISTRATION (3). LEC. 3. Pr., HADM 2200 and HADM 3300. Analysis of the components (e.g. nursing homes, home health care) of the long-term care system for the elderly.

HADM 4830 COMPARATIVE PUBLIC HEALTH CARE FINANCE (3). LEC. 3. Pr., HADM 2200 and HADM 3300. Comprehensive analysis of the financing, management and political structure of leading international health care systems.

HADM 4850 LONG-TERM CARE POLICY (3). LEC. 3. Pr., HADM 2200 and HADM 3300. Policy issues surrounding the provision of long-term care to the elderly.

HADM 4920 INTERNSHIP (6). INT. Pr., senior standing and GPA of at least 2.8 in HADM Courses. Internship in selected areas of Health Administration.

HADM 4930 DIRECTED STUDIES (1-3). IND. Pr., extensive directed studies in Health Administration. Course may be repeated for a maximum of 3 credit hours.

HADM 4950 CAPSTONE SEMINAR (3). LEC. 3. Pr., senior standing and HADM 4000. Integrates knowledge from courses and internship; applies managerial
and research skills to the completion of a research project and the organiza-
tion of a research symposium.

HADM 4960 READINGS IN HEALTH ADMINISTRATION (1-6). IND. Directed readings in Health Administration. Course may be repeated for a maximum of 6 credit hours.

HADM 4970 SPECIAL TOPICS (1-3). IND. Pr., HADM 2200 and HADM 3300. Selected topics in Health Administration. Course may be repeated for a maximum of 3 credit hours.

POLITICAL SCIENCE (POLI)

POLI 1020 POLITICAL ECONOMY (3). LEC. 2. RCT. 1. Social Science II Core. The two-way interaction between politics and the economy with special atten-
tion to contemporary issues of public policy.

POLI 1021 POLITICAL ECONOMY RECITATION (0). LEC. 2. NG. Coreq., POLI 1020. Small group activities for POLI 1020.

POLI 1027 HONORS POLITICAL ECONOMY (3). LEC. 3. Pr., membership in the Honors College. Social Science II Core. The two-way interaction between politics and the economy with special attention to contemporary issues of pub-
lic policy.

POLI 1090 AMERICAN GOVERNMENT IN MULTICULTURAL WORLD (3). LEC. 3. American political institutions, processes and behavior in comparative context, with special attention to the ways in which cultural and social diversity in the U.S. has impacted its politics.

POLI 2100 STATE AND LOCAL GOVERNMENT (3). LEC. 3. The organization and functioning of American state and local governments, including their rela-
tionships to the U.S. Federal Systems.

POLI 3000 POLITICAL SCIENCE RESEARCH METHODS I (3). LEC. 3. Pr., Core Social Science. Introduction to basic concepts and methodology used in contemporary political analysis.

POLI 3010 POLITICAL SCIENCE RESEARCH METHODS II (3). LEC. 3. Pr., POLI 3000 or departmental approval. Introduction to empirical research meth-
ods in political science with attention to data collection, retrieval, transforma-
tion and analysis.

POLI 3020 INTRODUCTION TO POLITICAL THOUGHT (3). LEC. 3. Pr., Core Social Science or Philosophy. Selected major themes in political thought from ancient to modern times.

POLI 3030 AFRICAN-AMERICAN POLITICAL THOUGHT (3). LEC. 3. Pr., Core Social Science or Philosophy. African-American political thought along with a theoretical framework that is reflective of the Black experience.

POLI 3090 INTRODUCTION TO INTERNATIONAL RELATIONS (3). LEC. 3. Pr., Core Social Science. International relations, including a consideration of the bases of national power and the rudiments of international politics.

POLI 3100 INTRODUCTION TO WORLD AFFAIRS (3). LEC. 3. Pr., Core So-


POLI 3260 ORGANIZATION THEORY (3). LEC. 3. Pr., POLI 3250. Structure and function of governmental organizations with an emphasis on theories of administrative hierarchies and evaluation of bureaucracy.

POLI 3270 POLICY PROCESS (3). LEC. 3. Pr., Core Social Science. The formulation and implementation of public policy; the roles of the major govern-
mental institutions in policy making.

POLI 3290 THE AMERICAN PRESIDENCY (3). LEC. 3. Pr., Core Social Sci-
ence or POLI 1090. Examines political styles and personalities of recent presi-
dents and presidential decision-making.

POLI 3300 LAW AND SOCIETY (3). LEC. 3. Pr., Core Social Science. Intro-
duction to how the law mediates some of the basic conflicts in society.

POLI 3310 THE LEGISLATIVE PROCESS (3). LEC. 3. Pr., Core Social Sci-
ence or POLI 1090. Principles, procedures and problems of lawmaking in the U.S.; special attention to Congress and the state legislatures.

POLI 3320 JUDICIAL PROCESS (3). LEC. 3. Pr., Core Social Science or POLI 1090. A basic understanding of the structure and function of courts and the role of judges in all societies, but with a special focus on the American variation.


POLI 3340 INTRODUCTION TO CONFLICT RESOLUTION (3). LEC. 3. Pr., Core Social Science. Examines various methods of conflict resolution at vari-
ous levels from the interpersonal to international.

POLI 3400 POLITICAL PARTIES AND INTEREST GROUPS (3). LEC. 3. Pr., POLI 1090 or department approval. The nature, organization and operation of political parties in the United States; the support; nominating and electoral processes; importance and nature of interest groups.

POLI 3410 POLITICAL PARTICIPATION (3). LEC. 3. Pr., Core Social Science or POLI 1090. Political participation in the traditional and unconventional forms and the developing trends in citizen participation in recent years.

POLI 3420 POLITICS AND THE MEDIA (3). LEC. 3. Pr., Core Social Science or POLI 1090. Influences of the media on political action, the electoral process and popular concepts of political institutions, “use” of the media and its regula-
tion by government.

POLI 3510 GOVERNMENTS AND POLITICS OF WESTERN EUROPE (3). LEC. 3. Pr., Core Social Science. Political structure, politics and policy in na-
tional Western Europe and the European Community.

POLI 3520 COMPARATIVE POLITICS OF THE MIDDLE EAST (3). LEC. 3. Pr., Core Social Science. Domestic politics in the nations of the Middle East.

POLI 3530 SOVIET AND POST-SOVIET POLITICS (3). LEC. 3. Pr., Core So-


POLI 3610 ASIAN POLITICS (3). LEC. 3. Pr., Core Social Science. The polit-
ics of the leading nations in East Asia with major attention being devoted to China and Japan.

POLI 4010 CONSTITUTIONAL LAW: GOVERNMENT POWERS (3). LEC. 3. Pr., junior standing. Constitutional law cases dealing with limited powers, sepa-
ration of powers and federalism.

POLI 4020 CONSTITUTIONAL LAW: CIVIL LIBERTIES (3). LEC. 3. Pr., jun-
ior standing. Constitutional law cases dealing with First Amendment freedoms.

POLI 4030 CONSTITUTIONAL LAW: CIVIL RIGHTS (3). LEC. 3. Pr., junior standing. Supreme Court opinions defining voting rights, gender discrimina-
tion, race discrimination, age discrimination, affirmative action and the right to privacy.

POLI 4040 CONTEMPORARY POLITICAL THEORY (3). LEC. 3. Pr., Junior standing or department approval. Survey of post-World War II political philos-
ophy, including neoclassicist, postmodernist, communitarian, and critical theo-
ries. A previous course in political theory is recommended but not required.

POLI 4050 AMERICAN LOCAL GOVERNMENT (3). LEC. 3. Pr., POLI 1090 or POLI 2110. The structure of local government, the roles and incentives of key elected and appointed officials, and the policy issues faced by those offici-
cials. Credit will not be given for both POLI 4050 and POLI 7050.

POLI 4090 URBAN ADMINISTRATION (3). LEC. 3. Pr., POLI 3250 or depart-
ment approval. Different aspects of urban administration such as decision mak-
ing, political environment, budgeting, revenue systems and personnel admin-
istration.
Poli 4130 Politics of the Administrative Process (3). Lec. 3. Pr., Poli 3250 or department approval. How public agencies and their employees at all levels of government survive and sometimes prosper within an intensely political environment. Credit will not be given for both Poli 4130 and Poli 7130.

Poli 4140 Public Finance (3). Lec. 3. Pr., Poli 3250 or department approval. Theory and practice of public finance with an emphasis on applications in state and local government.

Poli 4160 Public Personnel Administration (3). Lec. 3. Pr., Poli 3250 or department approval. Responsibilities, challenges, and opportunities that confront modern public administration in the management of human resources.

Poli 4210 Voting Behavior and Representation (3). Lec. 3. Pr., junior standing. The causes of voting and vote choice and their consequences for the behavior of representatives. Credit will not be given for both Poli 4210 and Poli 7210.

Poli 4220 United States Political Economy (3). Lec. 3. Pr., junior standing. Social, economic and political factors that affect America’s national competitiveness and what they portend for political life in the United States.

Poli 4340 Theory and Practice of Mediation (3). Lec. 3. Pr., junior standing. Theoretical and comparative perspective on conflict resolution with emphasis on the role of mediation in various societies. Credit will not be given for Poli 4340 and Poli 7340.

Poli 4370 Non-Profit Management (3). Lec. 3. Pr., Poli 3250 or department approval. A comprehensive overview of the complex and diverse non-profit sector in the United States. Focuses on managerial functions such as governance, fundraising, marketing and planning. Credit will not be given for both Poli 4370 and Poli 7370.

Poli 4380 Public-Private Management (3). Lec. 3. Pr., junior standing. Theory and practice of the roles of the public and private sectors in the provision, production and delivery of traditional public services. Credit will not be given for both Poli 4380 and Poli 7380.

Poli 4410 Southern Politics (3). Lec. 3. Pr., junior standing. Introduction to the politics and government of the Southern region of the United States. Credit will not be given for both Poli 4410 and Poli 7410.

Poli 4610 Women in Politics (3). Lec. 3. Pr., junior standing. An examination of the political role of women in American society. Credit will not be given for both Poli 4610 and Poli 7610.

Poli 4620 African-American Politics (3). Lec. 3. Pr., junior standing. Political values, theories, problems, issues and behavior relating to African-Americans in the United States. Credit will not be given for both Poli 4620 and Poli 7620.


Poli 4900 Independent Study (1-3). Ind. Pr., departmental approval. 3.25 GPA. Course may be repeated with change in topic.

Poli 4920 Internship (1-6). Int. Pr., junior standing and departmental approval. Internship in selected areas of political science. Course may be repeated for a maximum of 6 credit hours.

Poli 4960 Directed Readings (1-3). Ind. Pr., senior standing, departmental approval, 3.00 GPA. Directed readings in Political Science: 1) American Politics; 2) Comparative Politics; 3) International Relations; 4) Political Theory; 5) Public Administration; 6) Public Policy; 7) Public Law; 8) Methodology. Course may be repeated with change in topic.

Poli 4967 Honors Readings (1-3). Ind. Pr., membership in the Honors College, departmental approval. Directed readings: 1) American Politics; 2) Comparative Politics; 3) International Relations; 4) Political Theory; 5) Public Administration; 6) Public Policy; 7) Public Law; 8) Methodology. Credit may be repeated with change in topic.

Poli 4970 Special Topics (1-3). Ind. Pr., junior standing. Selected topics in political science: 1) American Politics; 2) Comparative Politics; 3) International Relations; 4) Political Theory; 5) Public Administration; 6) Public Policy; 7) Public Law; 8) Methodology. Credit will not be given for both Poli 4970 and Poli 7970. Course may be repeated with change in topic.

Poli 4997 Honors Thesis (1-3). Ind. Pr., membership in the Honors College, departmental approval. Course may be repeated for a maximum of 6 credit hours.

Poli 6180 Administrative Law (3). Lec. 3. General nature of administrative law; types of administrative action and enforcement; analysis of rule-making and adjudication; administrative due process; judicial review.

Poli 7000 Research Methods (3). Lec. 3. Statistics and other quantitative techniques for the analysis of policy and for administrative decision making.

Poli 7050 State Politics (3). Lec. 3. Current and classical research on state government, politics, and policy. Students critique others’ research and design their own for submission to a professional journal.

Poli 7130 Politics of the Administrative Process (3). Lec. 3. Public agencies and their employees at all levels of government and how they survive and sometimes prosper within an intense political environment. Credit will not be given for both Poli 7130 and Poli 4130.

Poli 7140 Public Budgeting (3). Lec. 3. Comprehensive theoretical underpinning for research. Focuses on models associated with descriptive and prescriptive budgeting research.

Poli 7150 Public Personnel Administration (3). Lec. 3. Personnel policies, processes and politics in American governments.

Poli 7160 Financial Administration (3). Lec. 3. Application of macroeconomic theory to public finance; emphasizes capital budgeting, taxation, user charges, debt administration, cash management and investment for small government.

Poli 7210 Voting Behavior and Representation (3). Lec. 3. The causes of voting and vote choice and their consequences for the behavior of representatives. Credit will not be given for both Poli 7210 and Poli 4210.

Poli 7260 Organizational Theory and Administrative Behavior (3). Lec. 3. The structure and functioning of government organizations with an emphasis on applied management and on leadership techniques.

Poli 7270 Public Organizational Theory and Management (3). Lec. 3. Pr., Poli 7260 or equivalent. The development and refinement of research on administrative and organizational theory in public management.

Poli 7330 Seminar in Administrative Leadership, Responsibility, and Democratic Government (3). Sem. 3. Problems and ethics, democratic theory and leadership as they relate to public administration.

Poli 7340 Theory and Practice of Mediation (3). Lec. 3. Theoretical and comparative perspective on conflict resolution with emphasis on the role of mediation in various societies. Credit will not be given for both Poli 7340 and Poli 4340.

Poli 7350 Seminar in Public Administration (3). Sem. 3. An introduction to public administration as practiced in the United States.

Poli 7360 Seminar in Policy and Administration (3). Sem. 3. Formation, execution and evaluation of public policy and also an in-depth analysis of selected policy areas.

Poli 7370 Non-Profit Management (3). Lec. 3. A comprehensive overview of the complex and diverse non-profit sector in the United States. Focuses on managerial functions such as governance, fundraising, marketing and planning. Credit will not be given for both Poli 7370 and Poli 4370.

Poli 7380 Seminar in Public-Private Management (3). Sem. 3. Theory and practice of the roles of the public and private sectors in the provision, production and delivery of traditional public services. Credit will not be given for both Poli 7380 and Poli 4380.

Poli 7410 Southern Politics (3). Lec. 3. Introduction to the politics and to a lesser extent government of the Southern region of the United States. Credit will not be given for Poli 7410 and Poli 4410.

Poli 7520 Program Evaluation (3). Lec. 3. Theory and practice of program evaluation in the public sector with attention to program planning, assessment and impact analysis.

Poli 7610 Women in Politics (3). Lec. 3. A theoretical, historical, social and political examination of the role of women in American society. Credit will not be given for both Poli 7610 and Poli 4610.

Poli 7620 African-American Politics (3). Lec. 3. The political values, structure and behavior of African-Americans in the United States. Emphasis on the theories, problems and issues relating to Black political behavior. Credit will not be given for both Poli 7620 and Poli 4620.

Poli 7630 Diversity in Public Life (3). Lec. 3. Developing and institutionalizing diversity in complex public organizations as a major part of organizational culture.

Poli 7700 Economic Development and Competition (3). Lec. 3. Politics of economic development at the local, state and national level, especially the infrastructure offered by communities and the types of plans that might attract outside investment.

Poli 7920 MPA Internship (3-6). Int. Pr., departmental approval. Internship in selected areas of political science: 1) American Politics; 2) Comparative Politics; 3) International Relations; 4) Political Theory; 5) Public Administration; 6) Public Policy; 7) Public Law; 8) Methodology. Course may be repeated with change in topic.

Poli 7970 Special Topics (1-3). Ind. Pr., membership in the Honors College, departmental approval. Course may be repeated for a maximum of 6 credit hours.

Poli 7990 Directed Readings (1-3). Ind. Pr., membership in the Honors College, departmental approval. Directed readings in political science: 1) American Politics; 2) Comparative Politics; 3) International Relations; 4) Political Theory; 5) Public Administration; 6) Public Policy; 7) Public Law; 8) Methodology. Course may be repeated with change in topic.

Poli 7997 Honors Thesis (1-3). Ind. Pr., membership in the Honors College, departmental approval. Course may be repeated for a maximum of 6 credit hours.
POUL 4150 AVIAN PHYSIOLOGY (3). LEC. 3. Pr., BIOL 1030, and CHEM 2030 or CHEM 2070 and BIOL 3200. The physiological principles and characteristics of poultry species which differ in terms of digestion, the production of eggs, and the ability to support life. Credit will not be given for both POUL 8150 and CMBL 8160. Summer.


POUL 4920 POULTRY SCIENCE INTERNSHIP (1-5). INT. Pr., Departmental approval. Practical on-the-job training in the poultry industry. Course may be repeated for a maximum of 5 credit hours.

POUL 6100 SUPERVISED INVESTIGATION (1-4). IND. Pr., senior or graduate standing, departmental approval, cumulative GPA of 2.5 or higher. Advanced independent investigation in major field of poultry or avian science. Requirements include review of literature, successful and timely completion of research project, and presentation of results in written and/or oral report. Course may be repeated for a maximum of 8 credit hours.

POUL 7050 ADVANCED POULTRY FEEDING (4). LEC. 3. LAB. 2. Pr., departmental approval. An advanced study and review of the literature on the application of the principles of nutrition to poultry; the functions of individual nutrients, their deficiency symptoms and their supply in terms of feedstuffs and practical poultry diets. Credit will not be given for both POUL 4050 and POUL 7050. Fall.

POUL 7080 ADVANCED POULTRY HEALTH (3). LEC. 3. Pr., departmental approval. An advanced study of the prevention, diagnosis, control and treatment of economically important diseases of poultry. Credit will not be given for both POUL 4080 and POUL 7080. Spring.

POUL 7110 ADVANCED POULTRY PROCESSING (3). LEC. 3. Pr., departmental approval. An advanced study and review of poultry processing and products technology. Credit will not be given for both POUL 4110 and POUL 7110. Fall.

POUL 7160 ADVANCED PRINCIPLES OF FOOD SAFETY (3). LEC. 2. LAB. 3. Pr., departmental approval. An advanced study and literature review of the identification and control of foodborne hazards in foods of animal origin. Credit will not be given for both POUL 4160 and POUL 7160. Spring.

POUL 7790 RESEARCH AND THESIS (1-10). MST. TD. Technical laboratory problems related to poultry. Course may be repeated with change in topic.


PSYC 2520 PSYCHOLOGY OF GENDER (3). LEC. 3. Pr., PSYC 2010 or PSYC 1000. Biological, social and cultural determinants of gender similarities and differences.

PSYC 2970 BASIC TOPICS IN PSYCHOLOGY (3). LEC. 3. Pr., PSYC 2010. Selected introductions to specialty areas in psychology, emphasizing applications to living.

PSYC 3050 HISTORY OF IDEAS IN PSYCHOLOGY (3). LEC. 3. Pr., PSYC 2010. Major events and ideas from ancient to modern times that comprise the history of psychology.


PSYC 3510 BEHAVIORAL NEUROSCIENCE (3). LEC. 3. Pr., PSYC 2010. Exploration of the relationships between the brain and behavior.


PSYC 3560 ABNORMAL PSYCHOLOGY (3). LEC. 3. Pr., PSYC 2010. Exploration of our attempts to understand, explain and classify abnormal behavior patterns.

PSYC 3570 THEORIES OF PERSONALITY (3). LEC. 3. Pr., PSYC 2010 or PSYC 1000. Survey of selected classical and contemporary theories of personality.


PSYC 3600 TRAINING AND SUPERVISION IN INDUSTRY (3). LEC. 3. Pr., PSYC 2010 and PSYC 3590. The application of behavioral principles to problems common to the training and supervision of people in work organizations.

PSYC 3940 EXPERIENTIAL LEARNING (3-6). PRA. Pr., PSYC 2010. Supplementary instruction concurrent with experience in some field of work involving application of psychological perspectives to community life. Course may be repeated for a maximum of 6 credit hours.

PSYC 3970 TOPICS IN PSYCHOLOGY (3). LEC. 3. Pr., PSYC 2010 and departmental approval. Theories, research and issues in contemporary psychology on selected topics. Course may be repeated for a maximum of 6 credit hours.

PSYC 4010 INTRODUCTION TO CLINICAL PSYCHOLOGY (3). LEC. 3. Pr., PSYC 2010 and PSYC 3560. General introduction to the profession of clinical psychology focusing on techniques of assessment and intervention.


PSYC 4240 ADVANCED EXPERIMENTAL PSYCHOLOGY (3). LEC. 3. Pr., PSYC 2010 and PSYC 2140. In-depth study of one of the traditional areas of experimental psychology such as learning, cognitive or social. Course may be repeated for a maximum of 6 credit hours.

PSYC 4250 PSYCHOLOGY OF CHOICE AND DECISION (3). LEC. 3. Pr., PSYC 2010 and PSYC 3520. In-depth treatment of the psychological science of choice (behavioral allocation) and decision-making.

PSYC 4260 PSYCHOLOGY OF ADDICTIVE BEHAVIORS (3). LEC. 3. Pr., PSYC 2010. Overview of various psychological features of addictive behaviors including alcohol and drug abuse, eating disorders, gambling and excessive sexual behavior.

PSYC 4900 INDEPENDENT STUDY (1-3). IND. Pr., junior standing and departmental approval. Work under the direction of a faculty member on a psychological topic of mutual interest. Maximum of 6 hours may be used for PSYC major. Course may be repeated for a maximum of 9 credit hours.

PSYC 4910 HUMAN SERVICE PRACTICUM (3). FRA. 3, SU. Pr., PSYC 2010 and PSYC 3520. Supervised experience in service-delivery settings. May enroll only once.

PSYC 4960 SEMINAR IN PSYCHOLOGY (3). SEM. 3. Pr., departmental approval. Seminar in research and theory on psychological topics. Course may be repeated with changes in topic.

PSYC 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College; junior or senior standing. Course may be repeated for a maximum of 3 credit hours.

PSYC 4970 ADVANCED TOPICS IN PSYCHOLOGY (3). LEC. 3. Pr., departmental approval. Topics assigned by course instructor.

PSYC 4997 HONORS RESEARCH AND THESIS (1-3). IND. Pr., membership in the Honors College; junior or senior standing. Research in specialized topics. Course may be repeated for a maximum of 6 credit hours.

PSYC 6610 BEHAVIORAL EFFECTS OF ENVIRONMENTAL CONTAMINANTS (3). LEC. 3. Laboratory, occupational and epidemiological assessment of neurotoxic chemicals; risk analysis; developmental exposures; and policy considerations. Coverage includes heavy metals, pesticides, solvents, and abused drugs.


PSYC 7100 HISTORY OF IDEAS PSYCHOLOGY (3). LEC. 3. Historical developments in psychology with emphasis on the major theories and systems that have had an impact on current conceptions in psychology.


PSYC 7120 THE TEACHING OF PSYCHOLOGY (1). LEC. 1. The problems and practices of teaching psychology at the college level. In addition to seminar meetings, students will work with faculty in appropriate courses.

PSYC 7130 RESEARCH SEMINAR IN PSYCHOLOGY (1). SEM. 1. Overview of the research process, including the development of research questions, proposal writing and issues involved in protecting the welfare of research participants.

PSYC 7140 LEARNING AND CONDITIONING (3). LEC. 3. Respondent conditioning and operant behavior, including acquisition of language and other forms of individual/environ mental interactions.

PSYC 7150 BIOLOGICAL PSYCHOLOGY (3). LEC. 3. Behavior from a biological perspective, including theory and research from the neurosciences and biopsychology.

PSYC 7160 HUMAN DEVELOPMENT (3). LEC. 3. Introduction to conceptual and substantive issues of developmental psychology from a life-span developmental perspective.

PSYC 7170 THEORIES OF PERSONALITY (3). LEC. 3. Analysis of current issues in personality theory.

PSYC 7180 SOCIAL PSYCHOLOGY (3). LEC. 3. Topics and literature on the social foundations of behavior.

PSYC 7190 COGNITIVE PSYCHOLOGY (3). LEC. 3. A survey of the nature of human intellectual functioning, including pattern recognition, memory, problem solving, reasoning and language comprehension and generation.

PSYC 7230 PSYCHOMETRIC THEORY (3). LEC. 3. Pr., STAT 7000. Coreq., STAT/PSYC 7270 or STAT 7020. Introduction to basic quantitative theory behind the construction and interpretation of test scores and scales.

PSYC 7240 METHODS FOR STUDYING INDIVIDUAL BEHAVIOR (3). LEC. 3. Examination of strategies for measuring individual/environmental interaction, using environmental interventions and identifying behavior change and its causes.

PSYC 7270 EXPERIMENTAL DESIGN IN PSYCHOLOGY (4). LEC. 4. Pr., STAT 7000 and STAT 7020. Introduction to the analysis of data collected under different experimental designs. Credit will not be given for both PSYC 7270 and STAT 7270.


PSYC 7900 INDEPENDENT STUDY (1-3). IND. Pr., departmental approval. Work under the direction of a faculty member on a psychological topic of mut-
tual interest. No more than 3 hours count toward major. Course may be repeated for a maximum of 9 credit hours.

**PSYC 7910 PRACTICUM IN APPLIED PSYCHOLOGY** (1-10). PRA. Pr., Departmental approval. Coreq., Graduate standing in Psychology. Supervised practicum in applied psychology. A maximum of 12 hours will apply toward degree. Course may be repeated for a maximum of 30 credit hours.

**PSYC 7960 SEMINAR IN PSYCHOLOGY** (3). SEM. 3. Pr., Departmental approval. Seminar in research and theory on psychological topics. Course may be repeated with change in topic.

**PSYC 7970 RESEARCH IN SPECIAL TOPICS** (3). IND. 3. Pr., Departmental approval. Supervised scholarly activity related to student’s field of study. Course may be repeated with change in topic.

**PSYC 7980 APPLIED BEHAVIOR ANALYSIS CAPSTONE PROJECT** (1-10). IND. 3. Pr., Departmental approval. Supervised practicum in applied psychology involving a behavior analysis project involving delivery of services to a consumer. Maximum of 6 credit hours will count toward degree. Course may be repeated for a maximum of 30 credit hours.

**PSYC 7990 RESEARCH AND THESIS** (1-10). MST. TD.

**PSYC 8180 ADVANCED SOCIAL PSYCHOLOGY** (3). LEC. 3. Pr., PSYC 7180 or departmental approval. Theories, research and issues in contemporary social psychology.

**PSYC 8250 MULTIVARIATE METHODS** (4). LEC. 3, LAB. 2. Pr., STAT 7000 or 7020. Introduction to the theory behind multivariate analyses and the statistical programs that support them.

**PSYC 8260 ANALYSIS OF TIME-RELATED DATA IN PSYCHOLOGY** (3). LEC. 3. Pr., STAT 7020 or PSYC 8250. Theory and practical applications of statisti- cal approaches for time-related data.

**PSYC 8310 INTRODUCTION TO CLINICAL ETHICS AND METHODS** (3). LEC. 3. Pr., PSYC 7020 or departmental approval. Supervised seminar in research and theory on psychological topics. Course may be repeated with change in topic.


**PSYC 8350 APPLIED PSYCHOMETRIC PRINCIPLES** (3). LEC. 3. Pr., STAT 7020. Analysis of classical and modern test theory with an emphasis on applied psychometric principles.

**PSYC 8400 ADVANCED CHILD AND ADOLESCENT PSYCHOPATHOLOGY** (3). LEC. 3. Pr., PSYC 7300. Examination of current research and theory of behavioral, cognitive, and emotional disorders in childhood and adolescence.


**PSYC 8420 BEHAVIOR CHANGE IN CHILDREN** (3). LEC. 3. Pr., PSYC 8310 and PSYC 8400 or PSYC 8410. Introduction to methods of prevention and treatment of cognitive, behavioral and emotional disorders of children.

**PSYC 8440 HEALTH PSYCHOLOGY AND BEHAVIORAL MEDICINE** (3). LEC. 3. Pr., departmental approval. Contemporary research in health psychology and behavioral medicine and the empirical foundations of clinical practice.

**PSYC 8450 THEORY AND METHOD IN HUMAN ALCOHOL AND DRUG RESEARCH** (3). LEC. 3. Pr., Departmental approval. Theoretical framework and methodological practices in basic research on human alcohol and drug abuse.


**PSYC 8470 BEHAVIORAL ECONOMICS OF SUBSTANCE ABUSE** (3). LEC. 3. Introduction to behavioral theories of choice and behavioral economics, and the application of these basic science areas to the study of substance abuse.

**PSYC 8500 EXPERIMENTAL ANALYSIS OF BEHAVIOR SEMINAR** (1). SEM. 1. Pr., Departmental approval. Examination of professional preparation issues and recent scientific developments relevant to careers in the experimental analysis of behavior.

**PSYC 8510 CONTEXT AND CONSEQUENCES OF BEHAVIOR** (3). LEC. 3. Pr., PSYC 7140. Advanced survey of the role that consequences play in acquisition, maintenance, and structure of behavior, and the methods by which this role is studied.

**PSYC 8520 CONCEPTUAL AND THEORETICAL ANALYSIS IN PSYCHOLOGY** (3). LEC. 3. Techniques of conceptual analysis relevant to the evaluation of theories and the interpretation and integration of psychological data.

**PSYC 8530 BEHAVIOR ANALYSIS AND HUMAN DEVELOPMENT** (3). LEC. 3. Examination of conceptual, theoretical, and scientific issues relevant to the study of psychological development from a behavior analytic perspective.

**PSYC 8540 BEHAVIORAL PHARMACOLOGY** (3). LEC. 3. Pr., PSYC 7150 or departmental approval. Drugs that influence behavior and behavioral mecha- nisms that modify them. Topics include drug self-administration, behavioral toler- ance, context and history, and direct actions of behaviorally active drugs.

**PSYC 8550 APPLIED BEHAVIOR ANALYSIS** (3). LEC. 3. Pr., PSYC 7140 or departmental approval. The scientific and conceptual foundations of applied behavior analysis and its strategies of intervention and evaluation.


**PSYC 8700 ADVANCED INDUSTRIAL PSYCHOLOGY** (3). LEC. 3. Coreq., graduate standing in PSYC or departmental approval. Analysis of methods and content of industrial (Personnel) psychology.

**PSYC 8710 ADVANCED ORGANIZATIONAL PSYCHOLOGY** (3). LEC. 3. Coreq., graduate standing in PSYC or departmental approval. Analysis of major issues in organizational psychology.

**PSYC 8720 PERSONNEL SELECTION** (3). LEC. 3. Pr., PSYC 7000, PSYC 8700. Analysis of classical, contemporary, theoretical, and practical issues re- lated to personnel selection.


**PSYC 8740 LEADERSHIP AND MOTIVATION SEMINAR** (3). SEM. 3. Pr., STAT/PSYC 7270, PSYC 8700. Analysis of historical and contemporary theo- ries of leadership and motivation and related research.

**PSYC 8750 PROFESSIONAL ISSUES IN I/O PSYCHOLOGY** (1). LEC. 1. Pr., Departmental approval. Analysis of contemporary professional issues in I/O psychology.

**PSYC 8910 CLINICAL PRACTICUM** (1-4). LEC. 3. Pr., Departmental approval. Supervised practicum experience in clinical assessment and interven- tion techniques. Course may be repeated for a maximum of 30 credit hours.

**PSYC 8920 INTERNSHIP**. (3). Pr., Doctoral candidacy. Coreq., May not enroll in other course work. Enrollment in full-time APA-approved 1-year pre- doctoral internship required for the Ph.D. in clinical psychology.

**PSYC 8930 DIRECTED STUDIES IN PSYCHOLOGY** (3). IND. 1. Pr., Approved doctoral plan of study. Review of a body of literature leading to the generation and defense of the Major Area Paper (written portion of the general doctoral examination). Course may be repeated for a maximum of 9 credit hours.

**PSYC 8970 SPECIAL TOPICS** (1-3). SEM. 1. Pr., Departmental approval. In-depth seminar on issues related to selected specializations in psychology. Course may be repeated for a maximum of 3 credit hours.

**PSYC 8990 RESEARCH AND DISSERTATION** (1-10). DSR. TD. Pr., Departmental approval. Course may be repeated with change in topic.

**Pharmacy Doctorate (PYDI)**

Dr. Paul Jungnickel - 844-8351

**PYDI 5090 PHARMACY PRACTICE EXPERIENCE 1** (1). Pr., 1. Su. Pr., First-year PYDI standing. First of a six-course introduction to the practice setting providing experiential activities in the provision of pharmaceutical care.

**PYDI 5130/5133 DRUG LITERATURE 1** (2). LEC. 2. Pr., First-year PYDI standing. Computer assisted drug literature retrieval, analysis, and communication.

**PYDI 5190 PHARMACY PRACTICE EXPERIENCE 2** (1). Pr., 1. Su. Pr., PYDI 5090. Second of a six-course introduction to the practice setting providing experiential activities in the provision of pharmaceutical care.

**PYDI 5230/5233 DRUG LITERATURE 2** (2). LEC. 2. Pr., Second-year PYDI standing. Drug literature analysis focusing on clinical trials, biostatistics, design and epidemiology.


PYDI 5390 PHARMACY PRACTICE EXPERIENCE 1 (1). PRA. 1. SU. Pr., PYDI 5290. Preparation of a six-course introduction to the practice setting providing experiential activities in the provision of Pharmaceutical care.


PYDI 5490 PHARMACY PRACTICE EXPERIENCE 5 (1). PRA. 1. SU. Pr., third-year PYDI standing. Fifth of a six-course introduction to the practice setting providing experiential activities in the provision of Pharmaceutical care.


PYDI 5590 PHARMACY PRACTICE EXPERIENCE 6 (1). PRA. 1. SU. Pr., PYDI 5480. Sixth of a six-course introduction to the practice setting providing experiential activities in the provision of Pharmaceutical care.

Pharmacy Care Systems (PYPC)

Dr. Heidi Anderson - Harper - 844-5152

PYPC 5040 PHARMACY CARE SYSTEMS 1 (3). LEC. 3. Pr., first-year PYDI standing. Introduction to delivery of health care services with emphasis on the role of the profession of Pharmacy (weeks 1-8). Methods of systems and decision analysis applied to problems of optimizing the use of money, equipment, drug products, information and personnel within community and institutional environments (weeks 9-16).

PYPC 5140 PHARMACY CARE SYSTEMS 2 (3). LEC. 3. Pr., PYPP 5260. Methods of systems and decision analysis (weeks 1-5). The nature, purpose and process of communication for the Health Professional (weeks 5-15).

PYPC 5240 PHARMACY CARE SYSTEMS 3 (2). LEC. 2. Pr., second-year PYDI standing. The provision of patient care within containment constraints.


PYPC 5720 ADVANCED PROFESSIONAL COMMUNICATIONS (2). LEC. 2. Pr., PYPC 5140. Continuation of PYPC 5140.

PYPC 5900 SPECIAL PROBLEMS IN PHARMACY CARE SYSTEMS (1-3). LEC. Pr., departmental approval. Selected topics related to socio-behavioral aspects of pharmacy. Course may be repeated for a maximum of 6 credit hours.

PYPC 7820 RESEARCH METHODS AND DESIGN HEALTH SCIENCE 1 (2). LEC. 2. Pr., STAT 2150 or STAT 2640 or departmental approval. Application of scientific methods in health care.

Pharmacal Sciences (PYPS)

Dr. William R. Ravis - 844-4037

PYPS 5010 PHARMACEUTICS 1 (2). LEC. 2. Pr., first-year PYDI standing. Coreq., PYPS 5011. Physical-chemical principles are applied to development and understanding of solid dosage forms and homogenous liquid dosage forms. Selected official preparations are considered from this viewpoint.


PYPS 5200/5203 PRINCIPLES OF PHARMACOKINETICS (3). LEC. 3. Pr., second-year PYDI standing. The time course of drug absorption, distribution, metabolism and excretion and the pharmacodynamic relationships.

PYPS 5220 PRINCIPLES OF DRUG ACTION 2 (4). LEC. 4. Pr., second-year PYDI standing. The chemical and physio-chemical properties of drugs and the biochemical mechanisms of drug action to include neurologic agents, antihypertensives, antibiotics, antimicrobial and antineoplastic agents.

PYPS 5300 PHARMACEUTICAL BIOTECHNOLOGY (2). LEC. 2. Pr., PYPS 5220, BIOL 3200. Coreq., PYDI 5350. Principles of biotechnology as they relate to the pharmaceutical sciences, including recombinant DNA technology, recombinant proteins and oligonucleotides, monoclonal antibodies, and drug delivery systems.

PYPS 5900 SPECIAL PROBLEMS IN PHARMACAL SCIENCES (1-3). LEC. Pr., departmental approval. Selected laboratory research topics in pharmacal sciences. Course may be repeated for a maximum of 6 credit hours.

PYPS 6310 PHARMACOLOGY 1 (3). LEC. 3. Pr., BIOL 6600 and CHEM 6190. Biochemical and physiological effects, action mechanism, absorption, distribution, biotransformation, excretion, therapeutic and other uses of drugs.

PYPS 6320 PHARMACOLOGY 2 (3). LEC. 3. Pr., BIOL 6600 and CHEM 6190. Biochemical and physiological effects, action mechanism, absorption, distribution, biotransformation, excretion and therapeutic and other uses of drugs.

PYPS 6330 PHARMACOLOGY 3 (3). LEC. 3. Pr., BIOL 6600 and CHEM 6190. Biological and physiological effects, action mechanism, absorption, distribution, biotransformation, excretion and therapeutic and other uses of drugs.

PYPS 6350 TOXICOLOGY (3). LEC. 3. Pr., BIOL 6600. The basic science of poisons including the acute and chronic toxicology of common environmental, agricultural, industrial, commercial, medicinal and naturally occurring substances.

PYPS 6360 CELLULAR PHARMACOLOGY (3). LEC. 3. Pr., BIOL 6600 and CHEM 6190. Cytoblastic basis of pharmacodynamics including drug receptor interactions, drug metabolism, and characteristics of adverse drug reactions.

PYPS 6370 FUNDAMENTALS OF BIOMICROELECTRONS (3). LEC. 3. Pr., PHYS 1500. Theoretical and practical applications of trace-level radioactivity for research application to pharmacy and allied sciences.

PYPS 6390 NEUROPHARMACOLOGY OF DRUG ABUSE (2). LEC. 2. Pr., PYPS 5220 or departmental approval. An in-depth study of drugs of abuse, including mechanisms of action, pharmacokinetics, addiction, physical dependence and the effects of drug use during pregnancy. Substance abuse treatment strategies will also be discussed.

PYPS 6500 PHARMACOCOGNOSY (3). LEC. 3. Pr., CHEM 2080, BIOL 6600. Medicinal plants, folk medicines, herbal drugs and poisonous plants including constituents and uses.

PYPS 7010 PHARMACOKINETICS (4). LEC. 4. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Pharmacokinetic and pharmacodynamic principles and methods used to study the absorption, distribution, metabolism and excretion of drugs.

PYPS 7020 TABLET MANUFACTURING (4). LEC. 4. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Formulation, compression, coating and evaluation of tablets.

PYPS 7030 DRUG PRODUCT DEVELOPMENT (4). LEC. 4. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Formulation and evaluation as well as actual manufacture of pharmaceutical products.

PYPS 7050 NOVEL DOSAGE FORMS (3). LEC. 3. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Theoretical basis and design of controlled release and site specific drug delivery systems.

PYPS 7060 FORMULATION AND DELIVERY OF PEPTIDE/PROTEIN DRUGS (3). LEC. 3. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Formulation and delivery problems unique to peptide/protein pharmaceuticals and strategies to overcome such problems.

PYPS 7070 TRANSPORT PHENOMENA IN PHARMACEUTICAL SYSTEMS (3). LEC. 3. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Mechanisms of drug transport in various pharmaceutical dosage forms and biological systems. Elucidation of methods to characterize drug transport phenomena. Correlation of transport phenomena with drug disposition in the body. Emphasis on peptide, protein, and oligonucleotide drugs.

PYPS 7080 ADVANCED BIOPHARMACEUTICS (3). LEC. 3. Pr., PYPS 7010. The mathematical and pharmacokinetic relationships between physical and chemical properties of a drug and its dosage form and biological effects.

PYPS 7110 STABILITY KINETICS OF PHARMACEUTICALS (3). LEC. 3. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Principles of chemical kinetics as applied to the unique stability problems of the various pharmaceutical dosage forms.

PYPS 7230 CHEMISTRY OF SYNTHETIC DRUGS (3). LEC. 3. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Explanation of the principles of Medicinal Chemistry progressing to qualitative and quantitative descriptions of the synthesis, influence of physical and chemical properties of chemical substances on biological activity and biodisposition.

PYPS 7240 CHEMISTRY OF SYNTHETIC DRUGS 2 (3). LEC. 3. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Relationship of physiochemical properties to the pharmacological actions of drugs affecting the central and peripheral nervous systems. Synthetic methodology employed in the design and synthesis of drugs affecting the central and peripheral nervous systems.

PYPS 7250 CHEMISTRY OF SYNTHETIC DRUGS 3 (3). LEC. 3. Pr., 6 PYPS or 09 PYSC standing or departmental approval. Relationship of physiochemical properties to the pharmacological actions of drugs classified as chemotherapeutic agents. Synthetic methodology employed in the design and synthesis of chemotherapeutic agents.

PYPS 7260 ANALYTICAL AND CONTROL METHODS 1 (4). LEC. 4. Pr., 6 PYPS or 09 PYSC standing or departmental approval. A survey of the analytical methods used in the analysis and identification of drug substances with emphasis on separation science. The relationships between the chemical and physical properties of the drug molecules and the analytical methods are emphasized.

PYPS 7270 ANALYTICAL AND CONTROL METHODS 2 (4). LEC. 4. Pr., 6 PYPS or 09 PYSC standing or departmental approval. A survey of the analytical methods used in the analysis and identification of drug substances. The relationships between the chemical and physical properties of the drug molecules and the analytical methods are emphasized.

PYPS 7300 NEUROPHARMACOLOGY (3). LEC. 3. Pr., CHEM 6190, PYPS 6310. Neurochemical mechanisms related to the pharmacological actions of medicinal agents affecting the central nervous system.


PYPS 7330 PHARMACOLOGY RESEARCH METHODS (3). LEC. 1, LAB. 9. Experimental design, research methods and data analysis in pharmacology.

PYPS 7360 NEUROPHARMACOLOGY OF DRUG DEPENDENCE (2). LEC. 2. Pr., PYPS 5220 or departmental approval. An in-depth study of the neurochemical changes that occur during chronic drug use. Exploration of theories on the causes of drug dependence and current and proposed pharmacological treatments of drug addiction.

PYPS 7370 PHARMACOLOGY-TOXICOLOGY SEMINAR (1). SEM. 1. SU. Pharmacology-Toxicology Seminar. Course may be repeated for a maximum of 2 credit hours.

PYPS 7500 METABOLISM AND DISPOSITION XENOBIOTICS (2). LEC. 2. Pr., CHEM 6180 and BIOL 6600. Portals of entry, absorption, distribution and elimination of drugs and xenobiotics. Metabolic mechanisms relevant to chemical structure and principles of pharmacokinetics will be emphasized.

with respect to best practices in the school setting.

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the field of rehabilitation.

alyzed tests of intelligence, aptitude, achievement, interest and dexterity used in administration, scoring and interpretation of work sample systems and standard-

RSED 3120 ASSESSMENT IN REHABILITATION


RSED 6120 CURRICULUM IN ELEMENTARY SPECIAL EDUCATION

LEC. 3. Pr.; RSED 3010. Functional/developmental approach to the selection, development, implementation, and evaluation of curriculum materials for the collaborative instruction of secondary students with disabilities.

RSED 6140 CURRICULUM IN SPEECH PATHOLOGY AND SPECIAL EDUCATION

LEC. 3. Theoretical and practical foundation in methods, instruments, and procedures used to identify, assess, and instruct pre-school and school-aged children with communication disorders.

RSED 6150 TEACHING METHODS IN SPECIAL EDUCATION

LEC. 3. Instructional strategies in reading and math for students who have learning and behavior problems.

RSED 6160 COLLABORATION IN SPECIAL EDUCATION

LEC. 3. Collaborative teaching, consultation, and teaming as a critical best practice in serving students with disabilities.

RSED 6170/6176 TRANSITION FROM SCHOOL TO COMMUNITY

LEC. 3. History, philosophy, models, and definitions of transition with emphasis on best practices, programs, and services.

RSED 6200 VOCATIONAL EVALUATION IN REHABILITATION

LEC. 3. Vocational evaluation and work adjustment techniques and strategies used within the rehabilitation process.

RSED 6210/6216 OCCUPATIONAL INFORMATION

LEC. 3. Pr.; RSED 6200. Identification, location, and use of data resources for job accommodation and modification strategies, labor market surveys, and job placement of persons with disabilities.

RSED 6220/6226 PLACEMENT SERVICES IN REHABILITATION

LEC. 3. Theories, strategies, and techniques for job development, accommodation modification, and placement of people with disabilities with application skills needed to facilitate employment.

RSED 6230/6236 REHABILITATION ASSISTIVE TECHNOLOGY

LEC. 3. Basic computer literacy; use of commercially available software, and assistive technology for use by persons with disabilities.
RSED 7000 ADVANCED STUDY OF EXCEPTIONALITY (3). LEC. 3. Advanced study of the major categories of disabilities with emphasis on the educational and rehabilitative practices of each. Contemporary issues and trends are included.

RSED 7010/7016 REHABILITATION PROFESSIONS, PROGRAMS AND SERVICES (3). LEC. 3. Comprehensive examination of the evolution, nature and contemporary status of state-federal vocational rehabilitation system including roles of the professionals within this system.

RSED 7100 ADVANCED ASSESSMENT IN EARLY INTERVENTION (3). LEC. 3. Pr., RSED 3100, RSED 4010. Standardized, norm-referenced procedures, curriculum, criterion assessments, play techniques; and naturalistic strategies for special-needs children, birth to age three, and their families.

RSED 7110 ADVANCED ASSESSMENT IN EARLY CHILDHOOD SPECIAL EDUCATION (3). LEC. 3. Pr., RSED 3100, RSED 4010. Advanced concepts and methodologies for developmental screening and assessment for young children (ages 3-8) with developmental delays.

RSED 7120 ADVANCED ASSESSMENT IN SPECIAL EDUCATION (3). LEC. 3. Pr., RSED 3110 or departmental approval. Advanced study of educational tests and procedures for diagnosing special learning problems.

RSED 7310/7136 ADVANCED ASSESSMENT IN REHABILITATION (3). LEC. 3. Pr., RSED 7100. Principles, process and techniques used to diagnose vocationally-related assets and liabilities of the individual with disabilities.

RSED 7140 ADVANCED ASSESSMENT II IN REHABILITATION (3). LEC. 3. Pr., RSED 7130. Interpretation of vocational evaluation data for prescriptive purposes and communication of that data through report writing and oral communication.

RSED 7150/7156 MULTICULTURAL ASPECTS OF DISABILITIES (3). LEC. 3. Coreq., RSED 7010/7016. Study of three main areas relevant to multicultural competencies and standards for rehabilitation professionals: (a) acquisition of communication skills; (b) attitudes towards ethnic minorities, and (c) knowledge about minority populations. Spring.

RSED 7200 ADVANCED INTERVENTION WITH INFANTS AND TODDLERS WITH DISABILITIES (3). LEC. 3. Pr., RSED 7100. Administration and on-going management of early intervention programs and service coordination of individualized family service plans and family support.

RSED 7210 ADVANCED INTERVENTION IN EARLY CHILDHOOD SPECIAL EDUCATION (3). LEC. 3. Pr., RSED 7110. Curriculum methods, intervention plans, intervention methods, physical and medical management, environmental and behavioral management, and evaluation of child and family outcomes.

RSED 7220/7226 ADVANCED TEACHING METHODS IN SPECIAL EDUCATION (3). LEC. 3. Pr., RSED 6150. Application and practice in analyzing, designing, constructing and evaluating teaching sequences and programs with empirical emphasis for design of instructional principles.

RSED 7230 ADVANCED BEHAVIOR MANAGEMENT IN SPECIAL EDUCATION (3). LEC. 3. Pr., RSED 4010. Provides skills necessary to direct academic and social performance and appropriately manage the behavior of students with special needs.

RSED 7250/7306 REHABILITATION COUNSELING TECHNIQUES (3). LEC. 3. Pr. Facilitative communication skills and systematic problem solving skills for effective clinical practice.

RSED 7310/7316 PROPRIETARY REHABILITATION (3). LEC. 3. Pr., RSED 6210, RSED 7130. Vocational rehabilitation in private sector including case management and vocational expert witness for workers compensation, personal injury litigation, and social security.

RSED 7400 CURRICULUM AND TEACHING IN SPECIALIZATION (3). LEC. 3. Pr., departmental approval. Curriculum design, content, and materials selection related to teaching practices in areas of specialization (mental retardation, learning disabilities, behavioral disorders, etc.). Course may be repeated for a maximum of 6 credit hours.

RSED 7410/7416 PROGRAM IMPLEMENTATION IN SPECIALIZATION (3). LEC. 3. Pr., departmental approval. Program organization and development of materials for curriculum improvement and teaching practices in specialization area (mental retardation, learning disabilities, etc.). Course may be repeated for a maximum of 6 credit hours.

RSED 7420 RESEARCH IN SPECIALIZATION (3). LEC. 3. Pr., departmental approval. Examination and interpretation of applied research in specialization area (mental retardation, learning disabilities, behavioral disorders, etc.).

RSED 7430 RESEARCH INTO PRACTICE (3). LEC. 3. Pr., departmental approval. Applied opportunities for translating instructional and behavioral research into practice by working with students with disabilities who attend RSE’s Summer Learning Clinic.

RSED 7440/7446 SEMINAR IN SPECIALIZATION (3). SEM. 3. Pr., departmental approval. Advanced students and professor(s) engage in critical thinking regarding selected concepts, theories, research and issues germane to the field of disabilities. Course may be repeated with change in topic.

RSED 7900/7906 DIRECTED INDEPENDENT STUDY (1-3). IND., SU. Pr., departmental approval. Content focus of study area will be translated into specific objectives with advanced student learning guided by the instructor. Course may be repeated for a maximum of 3 credit hours.

RSED 7910/7916 PRACTICUM (1-6). PRA., SU. Pr., departmental approval. Participants in educational or community service setting aligned with degree program option. Course may be repeated for a maximum of 6 credit hours.

RSED 7920/7926 INTERNSHIP (3). LEC. 9. SU. Pr., departmental approval. Comprehensive supervised on-the-job experience in a school, college or community-based setting serving individuals with disabilities.

RSED 7980 NON-THESIS PROJECT (1-10). LEC. 1, SU. Pr., departmental approval. Course may be repeated with change in topic.

RSED 7990 RESEARCH AND THESIS (1-10). MST, TD. Pr., departmental approval.

RSED 8010 DISABILITIES AND RESEARCH METHODS (3). LEC. 3. Pr., departmental approval. History, principles, and methodology of single subject research with emphasis on the various types of research designs applied in rehabilitation and special education.

RSED 8020 DISABILITIES AND APPLIED RESEARCH IN MEASUREMENT (3). LEC. 3. Pr., departmental approval. Classical measurement theory, individual differences determination, constructs related to diagnostic labels, measurement bias and fairness, nature-nurture controversy, and clinical versus statistical inference.

RSED 8030 DISABILITIES AND PROFESSIONAL ISSUES (3). LEC. 3. Pr., departmental approval. Critical and contemporary issues regarding the disability population and their relationship to the roles and leadership of professionals in special education and rehabilitation.


RSED 8050 DISABILITIES AND THE LAW (3). LEC. 3. Pr., departmental approval. Advanced knowledge of legislative and litigative basis for special education and rehabilitation programs and services.

RSED 8060 DISABILITIES AND LIFE SPAN TRANSITIONS (3). LEC. 3. Pr., departmental approval. Advanced study of historical, legal, legislative, philosophical, and service delivery issues and trends with emphasis on research studies and programs.

RSED 8070 PROFESSIONAL SEMINAR (3). LEC. 3. SU. Pr., departmental approval. The first of two consecutive doctoral seminars is devoted to professional technical writing, whereas the second seminar addresses grant writing and management. Course may be repeated with change in topic.

RSED 8900 DIRECTED INDEPENDENT STUDY (1-3). IND., SU. Pr., departmental approval. Content focus of study area will be translated into specific objectives with student learning guided by the instructor. Course may be repeated with change in topic.

RSED 8980 NON-THESIS PROJECT (1-10). IND., SU. Pr., departmental approval. Course may be repeated with change in topic.

RSED 8990 RESEARCH AND DISSERTATION (1-10). DSR, TD. Pr., departmental approval. Course may be repeated with change in topic.

Science and Mathematics, Interdepartmental (SCMH)

SCMH 1010 CONCEPTS OF SCIENCE (3). LEC. 3. LAB. 1. Science Core. Interdisciplinary course which presents major scientific concepts and stresses the interactions between the sciences and the humanities. Credit will not be given for both SCMH 1010 and either BIOL 1000 or BIOL 1020.

SCMH 1990 PRE-HEALTH PROFESSIONS ORIENTATION (1). LEC. 1. SU. Orientation and guidance for all freshmen planning to seek admittance to health professions schools, such as medicine, dentistry, optometry, physical therapy, pharmacy, podiatry and veterinary medicine.

SCMH 3990 PRE-MEDICAL PRECEPTORSHIP (1). LEC. 1. LAB. 2. SU. junior standing and departmental approval. Direct observation and interaction with physicians at East Alabama Medical Center in various medical specialties.

Sociology (SOCY)

Dr. Thomas Pettee - 844-2825

ANTHROPOLOGY (ANTH)

ANTH 1000 INTRODUCTION TO ANTHROPOLOGY (3). LEC. 3. Social Science Core. Introduction to the study of human evolution, early civilizations and globalization, linguistic and cultural problems using the four sub-fields of anthropology: biological/physical anthropology, archaeology, cultural anthropology and linguistics.

ANTH 2100 INTRODUCTORY ARCHAEOLOGY (3). LEC. 3. Pr., ANTH 1000 or departmental approval. A broad introduction to archaeology, designed to introduce the history, principles and methods of modern anthropological archaeology.

ANTH 2300 INTRODUCTION TO PHYSICAL ANTHROPOLOGY (3). LEC. 3. Pr., ANTH 1000. An introduction to human origins and development using a genetic and anthropometric approach.


ANTH 3100 LANGUAGE AND CULTURE (3). LEC. 3. Pr., Social Science I Core and junior standing. The course examines the interplay between language and culture, including socio-linguistics, discourse, mythology and folklore.

ANTH 3270 ANTHROPOLOGY OF GENDER (3). LEC. 3. Pr., ANTH 1000 or UNIV 1010. Gender relations and representations in different cultures, historical periods, and discourses.


ANTH 3450 ARCHAEOLOGICAL FIELD PROBLEMS (1-3). LEC. 1. LAB. 2. Pr., ANTH 1000 or departmental approval and junior standing. A practical investigation of a specific field problem that involves excavation techniques, mapping and data recording. Course may be repeated for a maximum of 3 credit hours.

ANTH 3500 ARCHAEOLOGICAL LABORATORY TECHNIQUES (1-3). LEC. 1. LAB. 2. Pr., ANTH 1000 and junior standing. Analysis, preservation, cataloging and restoration of archaeological materials. Course may be repeated for a maximum of 3 credit hours.

ANTH 3550 ARCHAEOLOGICAL LABORATORY PROBLEMS (1-3). LEC. 1. LAB. 2. Pr., ANTH 1000 or departmental approval and junior standing. Investigates a specific archaeological problem or problems and involves students in laboratory techniques and research. Course may be repeated for a maximum of 3 credit hours.

ANTH 3600 MEDICAL ANTHROPOLOGY (3). LEC. 3. Pr., Social Science Core I and junior standing. How universal experiences of illness and healing are understood by people of different cultures.

ANTH 3700 POLITICAL ECOLOGY (3). LEC. 3. Pr., Social Science Core I and junior standing. Problems in ethnoecology, cultural ecology, political ecology and environmentalism.

ANTH 3800 MESOAMERICAN ARCHAEOLOGY (3). LEC. 3. Pr., ANTH 1000 or departmental approval and junior standing. The prehistoric cultures of Mesoamerica, from the Olmecs to the Aztecs.

ANTH 3850 SOUTHEASTERN ARCHAEOLOGY (3). LEC. 3. Pr., ANTH 1000 and junior standing. The diversity and complexity of prehistoric to protohistoric cultures of the southeastern United States.

ANTH 3900 HISTORICAL ARCHAEOLOGY AND ETHNOHISTORY (3). LEC. 3. Pr., ANTH 1000 and junior standing. Historical archaeology and ethnohistory with emphasis on the cultures of peoples who left written records.

ANTH 4100 NORTH AMERICAN INDIANS (3). LEC. 3. Pr., ANTH 1000 and junior standing. Historical and ethnohistorical overviews of Native Americans.

ANTH 4200 GENDER, DEVELOPMENT AND CULTURE (3). LEC. 3. Pr., ANTH 1000 or UNIV 1010. The role of gender and culture in Third World economic development from an anthropological perspective.

ANTH 4960 DIRECTED READING (3). LEC. 3. Pr., ANTH 1000 and junior standing. An independent reading program to pursue specific interests in anthropology not covered in other courses.

ANTH 4967 HONORS READINGS (1-3). IND. 3. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

ANTH 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

ANTH 6970 SPECIAL TOPICS IN ANTHROPOLOGY (3). LEC. 3. Pr., ANTH 1000 and senior or graduate standing. Examination of a specific problem in ethnographic methods, theory, and cultural analysis.

ANTH 7100 NORTH AMERICAN INDIANS (3). LEC. 3. An advanced comparative cultural and ethnohistorical overview of the Native American cultures of North America, emphasizing change and contact situations.

ANTH 7200 GENDER, DEVELOPMENT AND CULTURE (3). LEC. 3. The role of gender and culture in Third World economic development from an anthropological perspective.

ANTH 7600 CULTURE, MEDICINE AND POWER (3). LEC. 3. Power in the context of illness and healing at local, national and international levels.

ANTH 7700 CRITIQUE OF DEVELOPMENT (3). LEC. 3. The meanings and structures of national and international development in historical perspective to include cultural values, power, inequality and resistance.

CRIMINOLOGY (CRIM)

CRIM 2000 CRIME AND JUSTICE IN AMERICA (3). LEC. 3. The distribution and measurement of crime, different variations in criminal behavior and the handling of crime in the American criminal justice system.

CRIM 3000 CRIMINOLOGY (3). LEC. 3. Examine etiological issues related to crime. Major theories of crime causation from a wide variety of perspectives are explored in detail.

CRIM 3100 POLICE AND SOCIETY (3). LEC. 3. A sociological overview of policing and current issues that relate to the police.

CRIM 3200 SENTENCING AND CORRECTIONS (3). LEC. 3. An in-depth analysis of sentencing policy and the corrections system.


CRIM 3500 DELINQUENCY AND JUVENILE JUSTICE (3). LEC. 3. Pr., CRIM 2000. The nature and distribution of delinquency in the United States, as well as the various components of the juvenile justice system.


CRIM 4100 CONSTITUTIONAL LAW: CRIMINAL JUSTICE (3). LEC. 3. United States Supreme Court opinions defining due process and other issues related to the national and state administration of criminal justice.

CRIM 4200 SOCIOCULTURAL CRIMINAL LAW (3). LEC. 3. Controversial and contemporary issues in the field of criminal law from a sociological perspective.


CRIM 4350 CRIMINAL INVESTIGATION AND FORENSICS (3). LEC. 3. Criminal investigation procedures including case preparation, specific techniques for specific offenses and crime science.

CRIM 4400 COMPARATIVE CRIMINAL JUSTICE (3). LEC. 3. Institutional comparison, social control problems and policies and functional analysis of the criminal justice systems in selected countries.

CRIM 4500 VIOLATION OF CRIMINAL LAW (3). LEC. 3. Pr., junior standing. The impact of victimization upon the crime victim, offender, and society, as well as the dynamics of the victim-offender relationship.

CRIM 4550 SERIAL AND MASS MURDER (3). LEC. 3. Pr., junior standing. The phenomena of serial homicide and mass murder with emphasis on etiological issues, crime-scene investigation and profiling.

CRIM 4600 SEX CRIMES (3). LEC. 3. Pr., junior standing. Criminal sexual behavior, the social influences on what is defined as sexually deviant, and how the criminal justice system handles sex offenders.


CRIM 4920 INTERNSHIP (3-6). INT. Pr., junior standing and departmental approval. Field experience in a work setting under the joint supervision of the
agency and the Criminology and Criminal Justice Program. Course may be repeated for a maximum of 6 credit hours.

CRIM 4960 READINGS IN CRIMINOLOGY/CRIMINAL JUSTICE (3). LEC. 3. Pr., junior standing. Independent reading course under the supervision of a faculty member from the Criminology and Criminal Justice Program. Course may be repeated for a maximum of 6 credit hours.

CRIM 4967 HONORS READINGS (1-3). IND. 3. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

CRIM 4970 SPECIAL TOPICS IN CRIMINOLOGY/CRIMINAL JUSTICE (3). LEC. 3. Pr., junior standing. Selected topics related to Criminology/Criminal Justice.

CRIM 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

CRIM 7200 SOCIOLOGY CRIMINAL LAW (3). LEC. 3. Controversial and contemporary issues in the field of criminal law from a sociological perspective.

CRIM 7300 ADVANCED CRIMINOLOGICAL THEORY (3). LEC. 3. The etiology of crime, including recent advances and issues in criminological theory.

CRIM 7590 VIOLENT CRIME (3). LEC. 3. The social, behavioral, cultural, spatial and situational antecedents of criminal violence.

CRIM 7500 VICTIMOLOGY (3). LEC. 3. The impact of victimization upon the victim, offender and society, as well as the dynamics of the victim-offender relationship.

CRIM 7550 SERIAL AND MASS MURDER (3). LEC. 3. The phenomena of serial homicide and mass murder with emphasis on etiological issues, crime scene investigation and profiling.

CRIM 7600 SEX CRIMES (3). LEC. 3. Criminal sexual behavior, the social influences on what is defined as sexually deviant, and how the criminal justice system handles sex offenders.

CRIM 7650 DRUGS AND SOCIETY (3). LEC. 3. The context and correlates of drug use, relationship with crime and delinquency, and societal reaction to drug abuse.

CRIM 7970 SPECIAL TOPICS IN CRIMINAL JUSTICE (3). LEC. 3. Select topics related to Criminology/Criminal Justice.

SOCIOLOGY (SOCY)


SOCY 2000 SOCIAL ISSUES (3). LEC. 3. Pr., SOCY 1000. An exploration of the claims and conflicts of public issues and moral apprehensions; topics may include crime, the environment, gender and racial inequality, various syndromes.

SOCY 2100 POPULATION AND SOCIETY (3). LEC. 3. A survey of theories and research of demographic processes and their interaction with the economy, education, family, medicine, science and technology.

SOCY 2200 SOCIAL PSYCHOLOGY: SOCIOLOGICAL PERSPECTIVES (3). LEC. 3. An examination of collective influences on the person and the role the person plays in sustaining collective conditions.

SOCY 3200 SPORTS IN AMERICA (3). LEC. 3. Sociological perspectives on sports in the social system; organization and culture of sports relationship to social class, race and gender; and the interconnections between sport and the larger society.

SOCY 3300 SOCIOLOGY OF THE FAMILY (3). LEC. 3. The family as a major social institution with emphasis on the American family; cross-cultural comparisons provide perspective.

SOCY 3400 SOCIAL THOUGHT (3). LEC. 3. Pr., SOCY 1000. Examines ancient and contemporary thinking influencing the social and behavioral sciences and public commentaries on social issues and criticisms.

SOCY 3500 MINORITY GROUPS (3). LEC. 3. Pr., SOCY 1000. An exploration of the sources and uses of minority representations in the U.S. addressing inequalities such as race, ethnicity, gender and sexual orientation.

SOCY 3700 METHODS OF SOCIAL RESEARCH (3). LEC. 3. Pr., SOCY 1000. Methodological approaches to data collection used by social scientists including logic of science, hypothesis formation and research design.


SOCY 4100 DEVIANCE (3). LEC. 3. Pr., junior standing. Analysis of creation and reaction to deviance using theoretical approaches including demonic pos-

session, social disorderization, pathological models and labeling examining several deviant groups.

SOCY 4200 MEDICAL SOCIOLOGY (3). LEC. 3. Pr., junior standing. The nature and organization of medical practice and health delivery systems with special attention to the role of physicians, patients, disease and the relationship between culture, politics and health.

SOCY 4300 FIELD INSTRUCTION (3). LEC. 3. Pr., junior standing and departmental approval. Supplementary instruction concurrent with experience in some field of work involving application of sociological perspectives to community life. Course may be repeated for a maximum of 6 credit hours.

SOCY 4400 CONTEMPORARY THEORY (3). LEC. 3. Pr., junior standing. A survey of theorists from Comte to the present, emphasizing theory construction, theoretical analysis and differences in theoretical approaches.

SOCY 4960 DIRECTED READING IN SOCIOLOGY (3). IND. 3. Pr., junior standing and departmental approval. An independent reading program under supervision, to allow pursuit of specific interests in sociology not covered in other course offerings. Course may be repeated for a maximum of 6 credit hours.

SOCY 4967 HONORS READINGS (1-3). IND. 3. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

SOCY 4970 SPECIAL TOPICS IN SOCIOLOGY (3). LEC. 3. Pr., junior standing and departmental approval. Advanced topics in population and ecology, social structure, social institutions, socialization and religion.

SOCY 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

SOCY 7000 ADVANCED SOCIOLOGICAL THEORY (3). LEC. 3. Pr., SOCY 4400 or departmental approval. Reviews major types of sociological theory within the context of theoretical paradigms, and significant theoretical issues that face the discipline.

SOCY 7100 STATISTICAL ANALYSIS OF SURVEY, AGGREGATE AND LARGE DATA SOURCES (3). LEC. 3. Pr., STAT 2010 or departmental approval. Techniques commonly used in multivariate statistical analysis of data sources such as surveys, archival records and other large data sets. Credit will not be given for both SOCY 7100 and STAT 7100.

SOCY 7200 SEMINAR IN SOCIAL BEHAVIOR (3). SEM. 3. Research and theory concerning social and group influences on behavior.

SOCY 7500 CRIMINOLOGY AND CRIMINAL JUSTICE (1-3). LEC. 3. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

SOCY 7970 SOCIOLOGICAL PERSPECTIVES (3). LEC. 3. Focuses on substantive areas related to the discipline of sociology. Course may be repeated for a maximum of 6 credit hours.

SOCY 7990 RESEARCH AND THESIS (1-10). MST, TD. In conjunction with the preparation of a thesis. Course may be repeated with change in topic.

SOCIAL WORK (SOWO)

SOWO 2000 INTRODUCTION TO SOCIAL WORK (3). LEC. 3. Introduction to Social Work practice, examining career opportunities, history of the profession, practice settings, values, ethics and types of clientele.


SOWO 3400 CHILDREN IN CRISIS AND TRANSITION (3). LEC. 3. Pr., SOWO 3800 or HDFS 2010. The normal childhood transitions and crisis situations and the social work knowledge and skills required for assisting both children and their parents or caregivers.

SOWO 3500 CHILD WELFARE (3). LEC. 3. Pr., SOWO 1000 or SOWO 2000. Social work practice in settings dealing with child abuse and neglect, foster care, child care and adoption. Work with court investigations and procedures, and worker burnout emphasized.

SOWO 3600 AGING ISSUES AND SERVICES (3). LEC. 3. Pr., SOCY 1000. Introduction to social services and social work with the elderly. Various socio-cultural issues and impact on the elderly are covered.
STATISTICS (STAT)


SOWO 3800 HUMAN BEHAVIOR IN SOCIAL ENVIRONMENT I (3). LEC. 3. Pr., SOWO 2000, BIOL 1000. Lifespan approach to biopsychosocial examination of behavior and early development. Special emphasis is given to influences of racism, sexism and ethnocentrism.

SOWO 3850 HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT II (3). LEC. 3. Pr., SOWO 3800. Lifespan approach to biopsychosocial examination of behavior from adulthood through old age, emphasizing role of gender, sexism and sexual orientation.

SOWO 3910 FIELD PRACTICUM SEMINAR (3). SEM. Pr., departmental approval. Introduces fields and settings of social work practice via placement in a selected social service agency. Includes a concurrent integrative seminar to analyze the experience.

SOWO 4060 SOCIAL WORK PRACTICE METHODS I (3). LEC. 3. Pr., SOWO 2000, SOWO 2650, SOWO 3910. Introduces the student to generalist practice methods and skills in engagement, assessment and goal setting with individual clients.

SOWO 4070 SOCIAL WORK METHODS II (3). LEC. 3. Pr., SOWO 4060. The practice skills and perspectives required for work with families and groups.

SOWO 4080 SOCIAL WORK METHODS III (3). LEC. 3. Pr., SOWO 4070. Focuses on generalist practice theory and skills as applied to communities, organizations and oppressed populations. Issues of social justice and social action emphasized.

SOWO 4090 SOCIAL WELFARE POLICY (3). LEC. 3. Pr., SOWO 2650. Critical analysis of policy issues and proposals in selected social welfare programs and their impact upon current social problems and social work values and ethics.

SOWO 4920 SOCIAL WORK FIELD PLACEMENT (9). FLD. 9. Pr., SOWO 4080. 480-hour field experience under joint supervision of agency and university. Application of generalist practice skills and research project required.

SOWO 4950 SENIOR INTEGRATIVE SEMINAR (3). SEM. 3. Pr., SOWO 4080. Coreq., SOWO 4920. Taken concurrently with the senior field placement, seminar serves to guide students in integrating theory with practice through analysis of behavior and evaluation of practice skills.

SOWO 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 2 credit hours.

SOWO 4970 SOCIAL WORK SPECIAL TOPICS (3). LEC. 3. Pr., junior standing. Select, timely and/or controversial topics related to social work. Course content will depend upon the designated topics.

SOWO 4997 HONORS THESIS (1-3). IND. Pr., membership in the Honors College; departmental approval. Course may be repeated for a maximum of 3 credit hours.

Statistics (STAT)

Dr. Kevin Phelps - 844-3608
Dr. Anthony Carey - 844-2182

STAT 2010 STATISTICS FOR SOCIAL AND BEHAVIOR SCIENCES (4). LEC. 3. LAB. 2. Pr., MATH 1100 or MATH 1120. Introduction to basic principles of statistical reasoning and statistical procedures used in data analysis in the social and behavioral sciences.

STAT 2510/2513 STATISTICS FOR BIOLOGICAL AND HEALTH SCIENCES (3). LEC. 3. Pr., MATH 1100 or MATH 1120. Introduction to statistical concepts, reasoning and methods used in data analysis, descriptive statistics, sampling distributions, statistical inference, confidence intervals, regression or correlation, contingency tables. Students who have previous credit in any higher-numbered math course may not receive credit.

STAT 2610 STATISTICS FOR BUSINESS AND ECONOMICS (3). LEC. 3. Pr., MATH 1690. Introduction to statistical analysis, theory, and interpretation used in business and economics.

STAT 2710 STATISTICAL COMPUTING (1). LEC. 1. Pr., or corequisite STAT 2010, STAT 2510, STAT 2610, STAT 3010. Introduction to basic statistical computing programs and methods.

STAT 3010 STATISTICS FOR ENGINEERS AND SCIENTISTS (3). LEC. 3. Pr., MATH 1610. Introduction to statistical methods and analysis used in engineering and science.


STAT 3610 PROBABILITY AND STATISTICS II (3). LEC. 3. Pr., STAT 3600 or departmental approval. Coreq., STAT 3610 or COD Continuation of STAT 3600.

STAT 3611 PROBABILITY & STATISTICS II LAB (1). LAB. 2. Coreq., STAT 3610 or departmental approval. The application of statistical techniques from STAT 3610.

STAT 6020 INTERMEDIATE STATISTICAL METHODS (3). LEC. 3. Pr., STAT 3010 or departmental approval. Two-way ANOVA: experimental design; contingency tables; multiple regression techniques; modeling building; introductory non-parametric methods; goodness-of-fit tests.

STAT 6110 SAS PROGRAMMING (2). LEC. Pr., STAT 3010 or STAT 7000. Coreq., STAT 7000 Emphasis is placed on using SAS routines to obtain statistical analyses for common statistical methods and interpreting output.


STAT 6630 SAMPLE SURVEY, DESIGN & ANALYSIS (3). LEC. 3. Pr., STAT 3600 or departmental approval. Estimation of means, proportions, finite populations, stratified sampling, systematic sampling ratio estimations.


STAT/MATH 6680 PROBABILITY AND STOCHASTIC PROCESSES II (3). LEC. 3. Pr., STAT/MATH 6670. Multivariate distributions, Central Limit Theorem, Laplace transforms, convolutions, simulations, renewal processes Continuous-time Markov chains, Markov renewal and semi-regenerative processes, brownian motion and diffusion. Credit will not be given for both STAT 6680 and MATH 6680.

STAT/MATH 6690 CHAOTIC & RANDOM PHENOMENA (3). LEC. 3. Pr., MATH 1620. Statistics and modelling of random phenomena in connection to computational complexity, data analysis, processes of chance and chaotic nonlinear systems. Credit will not be given for both STAT 6690 and MATH 6690.

STAT 6970 SPECIAL TOPICS IN STATISTICS (1-3). LEC. Pr., departmental approval. Special topics designed to meet the needs and interest of students. Course may be repeated for a maximum of 6 credit hours.

STAT 7000 EXPERIMENTAL STATISTICS I (4). LEC. 4. Pr., MATH 1120, STAT 2510 or departmental approval. Paired and independent sample t-tests, ANOVA, F-tests, contrasts, tests for trends, multiple comparisons, CR and RCB designs of experiments, regression.

STAT 7010 EXPERIMENTAL STATISTICS II (3). LEC. 3. Pr., STAT 7000. Advanced topics in experimental design: writing linear models for experiment-expected mean squares, variance components, nested designs, Latin Square Designs, split plot designs, ANOVA and multiple regression.

STAT 7020 REGRESSION ANALYSIS (3). LEC. 3. Pr., STAT 7000 or consent of department. Introduction to the method of least squares as it applies to regression and analysis of variance. Simple linear regression, multiple regression, model selection and diagnostics.

STAT 7030 CATEGORICAL DATA ANALYSIS (3). LEC. 3. Pr., MATH 3600 or STAT 7000 or departmental approval. Methods for analysis of categorical response data. Topics include Chi-square tests, Likelihood Ration tests, Logistic Regression and Loglinear Modeling.

STAT 7040 BIOSTATISTICS (3). LEC. 3. Pr., STAT 7000 or consent of department. Epidemiology, biometry, methods of survival analysis.

STAT/SOCY 7100 STATISTICAL ANALYSIS OF SURVEY, AGGREGATE AND LARGE DATA SOURCES (3). LEC. 3. Pr., STAT 7010 or departmental approval. Techniques commonly used in multivariate statistical analysis of data sources such as surveys, archival records and other large data sets. Credit will not be given for both STAT 7100 and SOCY 7100.

STAT/PSYC 7270 EXPERIMENTAL DESIGN IN PSYCHOLOGY (4). LEC. 4. Pr., STAT 7000 and STAT 7020. Introduction to the analysis of data collected under differential experimental designs. Credit will not be given for both STAT 7270 and PSYC 7270.

STAT/INSY 7300 ADVANCED ENGINEERING STATISTICS I (3). LEC. 3. Pr., STAT 3610 or departmental approval. Advanced concepts of experimental design including blocking, regression approach to analysis of variance, fractional factorials in base-2 and base-3 designs. Emphasis throughout is on improving industrial products and processes. Credit will not be given for both STAT 7300 and INSY 7300.

STAT/INSY 7310 ADVANCED ENGINEERING STATISTICS II (3). LEC. 3. Pr., STAT/INSY 7300. Fractional factorial experimentation applied for the purpose of process and quality improvement and optimization, introduction to analysis of covariance, multiple regression analysis, and response surface analysis. Credit will not be given for both STAT 7310 and INSY 7310.
Theatre (THEA)

THEA 2000 BEGINNING ACTING (3). LEC. 1. STU. 4. Introduction to basic acting techniques, literature, and performance through improvisation, contemporary scene study, and attendance at theatre performances.


THEA 2030 PRODUCTION STUDIO I (1). STU. 4. SU. Experience in the design/technical and management areas of production.


THEA 2100 APPLIED THEATRE I: ACTING (1-2). STU. 4. Pr., casting in AU Theatre productions; freshman or sophomore standing only. Leading roles are eligible for 2 hours credit; all others for 1 hour credit. Course may be repeated for a maximum of 4 credit hours.

THEA 2110 BEGINNING VOICE FOR THE ACTOR (3). LEC. 2. STU. 2. Basic theory and technique with an emphasis on structural and tonal energy in voice production and speech.

THEA 2120 ADVANCED VOICE FOR THE ACTOR (3). LEC. 2. STU. 2. Pr., THEA 2110. Integration of structural, tonal and consonant energy with an emphasis on vocal exploration of texts in heightened language.


THEA 2310 THEATRE TECHNOLOGY I (3). LEC. 3. A comprehensive introduction to the study of technical theatre; theoretical and practical applications of equipment, materials, and techniques used in technical theatre.

THEA 2400 THEATRICAL DESIGN (3). LEC. 3. An exploration of the fundamental elements and principles of design, pictorial composition, and design theory; and their relationships and potential for application in scenic, costume, and lighting design.

THEA 2510 COSTUME CONSTRUCTION (3). LEC. 1. STU. 4. Fundamentals of machine sewing techniques, pattern drafting and draping, fabric dyes, and craftwork as they relate to theatrical costuming.

THEA 2650 STAGE MAKEUP (3). LEC. 1. STU. 4. Theories and techniques of stage makeup, practical design and execution of basic makeup techniques, special effects, and character makeups.

THEA 2810 THEATRE PRODUCTION I (3-6). STU. Pr., departmental approval. Coreq., THEA 2820. Intensive study of theatre arts through participation in the Auburn Summer Repertory Company, focusing mainly on technical work and design. Summer. Course may be repeated for a maximum of 12 credit hours.

THEA 2820 SUMMER REPERTORY THEATRE COMPANY I (3-6). STU. Pr., departmental approval. Coreq., THEA 2810. A concentrated workshop experience in all aspects of theatre production through participation in rehearsal and performance. Summer. Course may be repeated for a maximum of 12 credit hours.

THEA 2840 BEGINNING DANCE TECHNIQUES (2). STU. 4. Exploration of applied dance theory and technology including ballet, jazz, and the history of dance.

THEA 2850 INTERMEDIATE DANCE TECHNIQUES I (2). STU. 4. Pr., THEA 2840 or departmental approval. Exploration of applied dance theory and technique with an emphasis on ballet.

THEA 2860 INTERMEDIATE DANCE TECHNIQUES II (2). STU. 4. Pr., THEA 2840 or departmental approval. Exploration of applied dance theory and techniques with an emphasis on jazz.

THEA 3000 PRODUCTION STUDIO II (1-2). STU. 4. Pr., 4 credit hours of THEA 2030. Experience in the design/technical and management areas of production. Course may be repeated for a maximum of 8 credit hours.

THEA 3010 PRODUCTION STUDIO III (1-2). STU. 4. Pr., admission to Bachelor of Fine Arts program in Design/Technical or Production Management. Four credit hours of THEA 2030. Leadership positions in the Design/Technical and Management areas of production. Course may be repeated for a maximum of 8 credit hours.

THEA 3100 APPLIED THEATRE II: ACTING (1-2). PRA. Pr., casting in Auburn University theatre productions, junior or senior standing. Performance experience in Auburn University theatre productions. Leading roles are eligible for 2 hours credit, all others for 1 hour credit. Course may be repeated for a maximum of 8 credit hours.


THEA 3200 STAGE MANAGEMENT (3). LEC. 3. Examination of the role and responsibilities of the stage manager in the producing organization: management, organization, auditions, rehearsal and production procedures.

THEA 3210 FUNDAMENTALS OF DIRECTING (3). LEC. 2. STU. 2. Pr., THEA 2000 or departmental approval. Theories and techniques of stage direction including play analysis, production preparation, and production of a one-act play for a public audience.

THEA 3230 THEATRE TECHNOLOGY II (3). LEC. 2. STU. 2. Pr., THEA 2310. Theoretical and practical applications of equipment and techniques in technical
of designing scenery for the stage. Emphasis on traditional style or methods of
mental approval. Discussion, research, and execution of theory and practices
analyze a diversity of dramatic and performative styles.

THEA 2400 RENDERING FOR THE THEATRE (3). LEC. 1, STU. 4. Pr., THEA 2400 or departmental approval. Traditional drawing and rendering techniques and medias that help the designer to communicate scenic, costume, and lighting designs.

THEA 3410 SCENE DESIGN I (3). LEC. 2, STU. 2. Pr., THEA 2400 or departmental approval. A comprehensive study of the techniques and methods used in the graphic representation of stage scenery, equipment, and properties design.

THEA 3510 LIGHTING DESIGN (3). LEC. 1, STU. 4. Pr., THEA 2310 or departmental approval. Studio course that explores the theory, research, and practice of stage lighting, practical illumination, and effects lighting.

THEA 3520 SOUND DESIGN (3). LEC. 2, STU. 2. Pr., THEA 3320 or departmental approval. A course to develop an in-depth understanding of the equipment and techniques used in sound design, as both a design and technical medium.

THEA 3610 ADVANCED COSTUME CONSTRUCTION (3). LEC. 1, STU. 4. Pr., THEA 2610. Historical pattern making and draping, millinery skills, and craft techniques, and their practical applications in theatre costuming.

THEA 3640 COSTUME DESIGN (3). LEC. 2, STU. 2. Pr., THEA 2400. Costume design and rendering as it relates to historical and original design for the theatre. Exploration of design for television, commercials, and rock stars.

THEA 3700 ANALYSIS OF DRAMATIC LITERATURE (3). LEC. 3. Survey of plays from the major periods of theatre history with an emphasis on how to analyze a diversity of dramatic and performative styles.

THEA 3710 THEATRE HISTORY I (3). LEC. 3. Social, religious, political and artistic forces that have contributed to the development of theatre in Western civilization from its origins through 1850.

THEA 3720 THEATRE HISTORY II (3). LEC. 3. Social, religious, political and artistic forces that have contributed to the development of theatre in Western civilization from 1850 to the present.

THEA 3730 TOPICS IN HISTORY AND CRITICISM (3). LEC. 3. Advanced study of specific areas of theatre history and dramatic criticism. Individual topics announced prior to offering of the course. Course may be repeated for a maximum of 6 credit hours.

THEA 3740 COSTUME HISTORY (3). LEC. 3. History of Western costume and its uses in the theatre from ancient times to the present.

THEA 3840 ADVANCED DANCE TECHNIQUES (3). LEC. 1, STU. 4. Pr., THEA 2850 or departmental approval. Advanced exploration of dance techniques in theory and practice. Course often serves as a training and preparation ground for public production and execution. Course may be repeated for a maximum of 12 credit hours.

THEA 4050 THEATRE OPERATIONS AND MANAGEMENT (3). LEC. 3. A comprehensive study of the economic and administrative aspects of theatrical producing: business management, promotion and marketing, and audience development.


THEA 4180 MOVEMENT: SPECIAL PROJECTS (1-3). LEC. Pr., THEA 2840 or departmental approval. Intensive exploration of movement theory and practice with emphasis on circus skills, stage combat, mask work, and period dance. Course may be repeated for a maximum of 6 credit hours.

THEA 4190 ACTING: SPECIAL PROJECTS (1-3). LEC. Pr., departmental approval. Selected advanced projects in performance. Course may be repeated for a maximum of 6 credit hours.

THEA 4290 DIRECTING: SPECIAL PROJECTS (3). LEC. 1, STU. 4. Pr., THEA 3210. Direction of a long one-act or full-length play for public performance. Course may be repeated for a maximum of 6 credit hours.

THEA 4420 SCENE DESIGN II (3). LEC. 2, STU. 2. Pr., THEA 3410 or departmental approval. Advanced course in theory and practice of scenic and lighting design for theatre. Emphasis on experimental and non-traditional staging in a variety of space.

THEA 4490 SCENE DESIGN: SPECIAL PROJECTS (1-3). LEC. Pr., departmental approval. Selected projects in scenic design executed for a public production. Course may be repeated for a maximum of 6 credit hours.

THEA 4590 LIGHTING DESIGN: SPECIAL PROJECTS (1-3). LEC. Pr., departmental approval. Selected projects in lighting design executed for a public production. Course may be repeated for a maximum of 6 credit hours.

THEA 4650 ADVANCED STAGE MAKEUP (3). LEC. 1. STU. 4. Pr., THEA 2650 or departmental approval. Comprehensive study of specialized makeup: film, television, mask making, prosthesis, facial hair design, and wig making.

THEA 4660 THEATRE TECHNOLOGY: SPECIAL PROJECTS (1-3). LEC. Pr., departmental approval. Selected projects in theatre technology and/or technical direction for a public production. Course may be repeated for a maximum of 8 credit hours.

THEA 4900 INDEPENDENT STUDY (1-3). IND. Pr., departmental approval. Directed readings, creative and tutorial projects of interest to the advanced student. Course may be repeated for a maximum of 6 credit hours.

THEA 4920 PROFESSIONAL INTERNSHIP (1-8). INT. Pr., junior or senior standing, departmental approval. Internship with professional or community theatre in the student’s field of specialization. Each 10-hour work week equals one hour of credit. Course may be repeated for a maximum of 8 credit hours.

THEA 4967 HONORS READINGS (1-3). IND. Pr., membership in the Honors College: junior or senior standing. Subject areas to be determined between student and Theatre instructor. Course may be repeated for a maximum of 6 credit hours.

THEA 4980 SENIOR PROJECT (3). LEC. 3. Pr., admission to Bachelor of Fine Arts program in Production/Design and Management. Research and production of a senior project in the student’s area of emphasis executed for a public audience. Required of all candidates in the BFA in Production/Design and Management program.

THEA 4997 HONORS THESIS (1-6). IND. Pr., Honors College enrollment. Final projects of varying natures and in the theatre program. Course may be repeated for a maximum of 6 credit hours.
TXEN 4910 SENIOR PROJECT II (1). IND. Pr., TXCH 4900. Senior design project in the area of textile chemistry.

TXCH 4970 SPECIAL TOPICS (1-3). LEC. 1. Pr., departmental approval. Reading course with varying emphases to give opportunity for overview in textile chemistry. Course may be repeated for a maximum of 3 credit hours.

TEXTILE ENGINEERING (TXEN)

TXEN 2100 FIBER-TO-YARD ENGINEERING (3). LEC. 2. LAB. 3. Pr., ENGR 1110, MATH 1720 or MATH 1620. Engineering aspects required to design and modify textile yarns in relation to textile end products.


TXEN 2500 BIOMEDICAL TEXTILES (2). LEC. 2. Coreq., CHEM 1010 or CHEM 1030 or CHEM 1110. Structure and properties of textile materials used in health-related applications including wound dressings and dressings, arterial grafts, surgical nets, bone and dental cements, synthetic tendons, ligaments, and skin, super-absorbent materials, and prosthetic devices. Fall.


TXEN 3600 MECHANICS OF FLEXIBLE STRUCTURES (3). LEC. 3. Pr., TXEN 2250, TXEN 3300. Coreq., ENGR 2050. Analysis of mechanical behavior and physical properties of flexible structures such as fibers, yarns and fabrics. The influence of geometric characteristics and physical properties on mechanical behavior.


TXEN 4500 TEXTILE REINFORCED MATERIALS (3). LEC. 3. Pr., TXEN 3600. Coreq., ENGR 2050. Material properties and manufacturing of textile reinforced materials; preform structures such as weaves and braids; analysis, design methodology and applications.

TXEN 4600 MECHANICS OF TEXTILE MANUFACTURING PROCESSES AND SYSTEMS (3). LEC. 3. Pr., TXEN 2250, ENGR 2350, PHYS 1610. Engineering analysis of mechanisms used in modern textile machinery, inter-machine effects, interaction between machine parameters and textile product properties.

TXEN 4910 TEXTILE ENGINEERING DESIGN I (3). LEC. 3. Pr., TXEN 4910. Undergraduate design project, first semester.

TXEN 4920 TEXTILE ENGINEERING DESIGN II (3). LEC. 3. Pr., TXEN 4910. Conclusion of undergraduate design project.

TXEN 4970 SPECIAL TOPICS (1-3). IND. Pr., departmental approval. Reading course with varying emphasis to give opportunity for overview in specific areas of textile engineering and technology. Course may be repeated for a maximum of 3 credit hours. Course may be repeated for a maximum of 3 credit hours.


TXEN 6310 STRUCTURE AND PROPERTIES OF POLYMERS (4). LEC. 3. LAB. 3. Pr., CHEM 2080 or departmental approval. The inter-relationships between chemical structure of a polymer, polymer properties and uses. Plastics, elastomers and fibers-synthesis and property requirements.

TXEN 6410 PHYSICAL CHEMISTRY OF DYING (4). LEC. 3. LAB. 3. Pr., TXEN 3400 or departmental approval. Thermodynamics and kinetics of dyeing systems; the laws of physical chemistry applied to dye/fiber interactions; color systems.

TXEN 6510 POLYMER CHEMISTRY (3). LEC. 3. Pr., CHEM 2090, ENGR 2050, and PHYS 2200. Polymer chemistry including polymer synthesis, polymer characterizations, polymer classes, solubility and swelling, and structure/property relationships.

TXEN 6610 TEXTILE FINISHES (3). LEC. 2. LAB. 3. Pr., TXEN 3400 or departmental approval. Theory, chemistry and mechanics of textile finishes. Coating and grafting.


TXEN 7250 ADVANCED ENGINEERING FIBROUS STRUCTURES (3). LEC. 3. Pr., TXEN 4250 or departmental approval. Application of advanced technology to the design, development and analysis of high performance industrial textiles.


TXEN 7620 ADVANCED MECHANICS OF FLEXIBLE STRUCTURES (3). LEC. 3. Pr., TXEN 3600. Recent advances in modeling and analysis of mechanical behavior of flexible structures.

TXEN 7950 GRADUATE SEMINAR I (1). SEM. 1. SU. Presentation of departmental textile research; practicing written and oral communication skills. Course may be repeated with change in topic. Course may be repeated with change in topic.

TXEN 7960 DIRECTED READING IN INTEGRATED TEXTILES (3). LEC. 3. Analysis of current issues in the integrated textile and apparel industry. Concurrent registration in TXEN 8950 is advised.

TXEN 7970 SPECIAL TOPICS (1-3). IND. Reading course with varying emphasis in particular areas of textile technology. Course may be repeated for a maximum of 3 credit hours.

TXEN 7980 GRADUATE PROJECT I (1-3). IND. Pr., graduate standing. In-depth work in a particular project of textile technology. Course may be repeated for a maximum of 3 credit hours.

TXEN 7990 RESEARCH AND THESIS I (1-10). MST, TD. Pr., departmental approval. Required of all students seeking an advanced degree in the department. Course may be repeated for a maximum of 10 credit hours.


TEXTILE MANAGEMENT (TXMT)

TXMT 2120 YARN FORMATION II (3). LEC. 2. LAB. 3. Pr., TXEN 2210. An extension of TXEN 2120 with emphasis on the management/technology aspects of yarn manufacturing including yarn structures, fiber selection techniques, and fiber/machine interaction.


TXMT 3220 NON-CONVENTIONAL FABRICS (2). LEC. 2. Pr., TXEN 2210, TXEN 3310. The manufacturing technology of non-woven and tufted textiles along with the properties and uses of those fabrics.

TXMT 3520 TEXTILE QUALITY CONTROL (2). LEC. 2. Pr., TXEN 2210, TXEN 3500. SPC and quality engineering aspects required for textile applications.

TXMT 4800 PLANT OPERATIONS AND COST CONTROL (3). LEC. 3. Pr., TXEN 2210. The principles of textile operations cost analysis based on labor cost, raw material cost, technological requirements and customer requirements. Strategies for improving competitive advantages.

TXMT 4900 SENIOR RESEARCH I (1). IND. Pr., senior standing. Undergraduate research sequence, initial semester.

TXMT 4910 SENIOR RESEARCH II (1). IND. Pr., TXMT 4900. Conclusion of an undergraduate research sequence.

TXMT 4970 SPECIAL TOPICS (1-10). IND. Pr., departmental approval. Reading and special projects course for overview in specific areas of textile technology and management. Course may be repeated for a maximum of 10 credit hours.

TEXTILE TECHNOLOGY (TXTN)

TXTN 2000 INTRODUCTION TO TEXTILE TECHNOLOGY (2). LEC. 2. Survey of the technology dealing with the manufacture of textiles, including fiber, yarn, fabric and coloration and finishing treatments.


TXTN 2220 INDUSTRY INTERNSHIP (3). LEC. 3. Pr., sophomore standing and departmental approval. A directed project in an industrial setting address-
Student must meet individual program requirements and complete a study
UNIV 6900 AUBURN ABROAD
UNIV 3900 AUBURN ABROAD
and interaction. Course may be repeated for a maximum of 2 credit hours.

versity Honors College. Weekly academic lectures followed by a discussion
ences and humanities.

18th century through the present by exploring connections between the sci-

UNIV 2717 HONORS HUMAN ODYSSEY I

Honors College. History Core. Examines the human endeavor from the
l8th century through the present by exploring connections between the sciences and humanities.

UNIV 2710 THE HUMAN ODYSSEY I (3). LEC. 3. History Core. Examines the human endeavor from pre-history through the 17th century by exploring connections between the sciences and humanities.

UNIV 2717 HONORS HUMAN ODYSSEY I (3). LEC. 3. Pr., membership in the Honors College. History Core. Examines the human endeavor from prehistory through the 17th century by exploring connections between the sciences and humanities.

UNIV 2720 THE HUMAN ODYSSEY II (3). LEC. 3. History Core. Examines the human endeavor from the 18th century through the present by exploring connections between the sciences and humanities.

UNIV 2727 HONORS HUMAN ODYSSEY II (3). LEC. 3. Pr., membership in the Honors College. History Core. Examines the human endeavor from the 18th century through the present by exploring connections between the sciences and humanities.

UNIV 2777 HUMAN PHYSIOLOGY I (1). LEC. 1. Pr., veterinary anatomy and/or DVM degree. The principles and effects of drugs on human beings. Spring.

UNIV 3900 AUBURN ABROAD (0). FLD. Pr., study abroad office approval. Student must meet individual program requirements and complete a study abroad course approval form prior to departure.

UNIV 6900 AUBURN ABROAD (0). FLD. Pr., study abroad office approval. Student must meet individual program requirements and complete a study abroad course approval form prior to departure.

Veterinary Medicine (VMED)

Dr. Donna W. Angarano - 844-2685

**BIOMEDICAL SCIENCES (VBMS)**

**VBMS 7000 NEUROANATOMY** (5). LEC. 3. LAB. 4. Pr., departmental approval. Functional morphology of nervous system from input/output through the long systems; limbic relations to endocrine and autonomic nervous system. Comparative among primates and domestic animals.

**VBMS 7020 MICROSCOPIC ANATOMY I** (3). LEC. 1. LAB. 4. Pr., departmental approval. A detailed study of and preparation of the basic tissues. Light microscopy and electron micrograph preparations are used to describe and interpret morphology.

**VBMS 7030 MICROSCOPIC ANATOMY II** (3). LEC. 1. LAB. 4. Pr., Departmental approval. Light microscopy and electron microscopy detailed study of the cardiovascular, hemopoietic, digestive, urinary and respiratory systems of domestic animals.

**VBMS 7050 DEVELOPMENTAL NEUROBIOLOGY** (3). LEC. 3. Pr., departmental approval. Overview of the development of the nervous system. Emphasis will be directed towards understanding sensory systems, development, plasticity and function. Fall.


**VBMS 7070 ENDOCRINOLOGY** (4). LEC. 4. Pr., BCH 7200, BCH 7260; BIOL 6600, or departmental approval. Molecular and cellular endocrinology and physiological regulation of hormone synthesis, secretion and action in mammalian species. Emphasis will be placed on metabolic regulatory hormones.

**VBMS 7080 MOLECULAR ENDOCRINOLOGY** (2). LEC. 2. Pr., VBMS 7070 or departmental approval. Examination of the literature of hormonal synthesis, secretion and mechanism of action with emphasis on receptors, second messenger systems and gene regulation.

**VBMS 7090 CLINICAL PHARMACOLOGY** (3). LEC. 3. Pr., acceptable courses in biochemistry and physiology; departmental approval. The actions and effects of drugs on human beings. Spring.


**VBMS 7120 MEMBRANE PHYSIOLOGY** (3). LEC. 2. LAB. 3. Pr., departmental approval. The classic and modern aspects of biological membranes. Labs include patch clamp, reconstruction of ion channels in bilayers, Langmuir-Blodgett techniques, and other methods. Summer.

**VBMS 7130 VETERINARY MEDICINE DIAGNOSTIC ULTRASONOGRAPHY** (3). LEC. 3. Pr., veterinary anatomy and/or DVM degree. The principles and practice of veterinary medical diagnostic ultrasonography as they are utilized in evaluating normal and abnormal anatomy. All animals are used in this course.

**VBMS 7140 PHYSIOLOGY I** (5). LEC. 5. Pr., departmental approval. Cellular, Cardiovascular, Renal and Respiratory Physiology.

**VBMS 7150 PHYSIOLOGY 2** (4). LEC. 4. Pr., VBMS 7140 or departmental approval. Gastrointestinal Physiology, Metabolism, Endocrinology and Reproductive Physiology.

**VBMS 7160 NEUROSCIENCE** (3). LEC. 3. Pr., departmental approval. An overview of neuroscience on the subcellular, cellular and system levels.

**VBMS 7170 ANAT, PHYSIO & PHARM SEMINAR** (1). SEM. 1. Required of all graduate students in Anatomy, Physiology and Pharmacology. Fall, Spring.

**VBMS 7210 RADIATION BIOLOGY** (4). LEC. 4. Pr., DVM degree. Coreq., Residency in Radiation Oncology or Radiology or Small Animal Oncology and registered in the Graduate School. Exploration of biological, physical, and chemical basis of radiotherapy with emphasis on the biological effects of ionizing radiation at the cellular and molecular level. Effects of irradiation on the tumor, normal tissues, and the patient will be addressed.

**VBMS 7250 NORMAL RADILOGICAL ANATOMY** (5). LEC. 5. Pr., DVM Degree, acceptance in an established residency program. A detailed study of the normal structure, size and position of the various organs of the cat, dog, horse, cow and other veterinary species as they appear on plain and contrast radiographs.

**VBMS 7260 VETERINARY MEDICINE** (3-5). LEC. Pr., For graduate students and residents in DCS program or DVM or equivalent. Detailed study of concepts and techniques of all imaging procedures.

**VBMS 7270 RADIOLOGICAL INTERPRETATIONS** (5). LEC. 5. Pr., DVM Degree. Acceptance in established residency program. VBMS 7250. The interpretation of various diagnostic imaging modalities used in veterinary medicine and their applications in the diagnostic work-up of clinical cases presenting to the College of Veterinary Medicine.

**VBMS 7280 RADIOLOGICAL TECHNIQUES** (5). LEC. 5. Pr., DVM Degree. Acceptance in established residency program, VBMS 7250 and VBMS Pr., 7270. The application and performance of the specific imaging special procedures and studies used in the imaging modalities of radiography, ultrasonography, scintigraphy, computed tomography, magnetic resonance imaging and radiation therapy.

**VBMS 7290 GRADUATE SEMINAR** (1). SEM. 1. Pr., departmental approval. A mandatory graded seminar presentation, held in conjunction with the VBMS seminar series, presenting the resident student’s individual Master of Science degree research topic including pertinent review, hypothesis, materials, results and discussion of findings.

**VBMS 7340 LARGE ANIMAL SURGERY AND MEDICINE SEMINAR** (1). SEM. 1. Pr., departmental approval. Seminar required of all graduate stu-
VBMS 7810 ADVANCED SMALL ANIMAL MEDICINE I (03 - 05). LEC. Pr., DVM degree and currently enrolled in a residency program at the AU College of Pr., Veterinary Medicine and departmental approval. Special study of the causes, methods of diagnosis, treatment and control of non-surgical urogenital diseases of small animals. Course may be repeated for a maximum of 5 credit hours.

VBMS 7820 ADVANCED SMALL ANIMAL MEDICINE II (03 - 05). LEC. 3. Pr., DVM degree and currently enrolled in a residency program at the AU College of Pr., Veterinary Medicine and departmental approval. Special study of the causes, methods of diagnosis, treatment and control of non-surgical gastrointestinal diseases of small animals. Course may be repeated for a maximum of 5 credit hours.

VBMS 7830 ADVANCED SMALL ANIMAL MEDICINE III (03 - 05). LEC. 3. Pr., DVM degree and currently enrolled in a residency program at the AU College of Pr., Veterinary Medicine and departmental approval. Special study of the causes, methods of diagnosis, treatment and control of non-surgical cardiovascular and respiratory diseases of small animals. Course may be repeated for a maximum of 5 credit hours.

VBMS 7840 ADVANCED SMALL ANIMAL MEDICINE IV (03 - 05). LEC. Pr., DVM degree and currently enrolled in a residency program at the AU College of Pr., Veterinary Medicine and departmental approval. Molecular biology lectures and techniques related to diagnostic and research application to clinical problems in small animal veterinary medicine. Course may be repeated for a maximum of 5 credit hours.

VBMS 7870 ADVANCED VETERINARY OPHTHALMOLOGY: OPHTHALMIC MEDICINE (3). LEC. 3. Pr., DVM or equivalent degree. Advanced ophthalmology with emphasis on diagnosis, pathophysiology and treatment of ocular diseases of domestic animals.

VBMS 7880 ADVANCED VETERINARY OPHTHALMOLOGY: OPHTHALMIC SURGERY (3). LEC. 1, LAB. 6. Pr., VBMS 7870. Advanced ophthalmology with emphasis on ophthalmic surgery.

VBMS 7890 ADVANCED VETERINARY OPHTHALMOLOGY: OPHTHALMIC BASIC SCIENCES (3). LEC. 3. Pr., DVM or equivalent degree. Advanced ophthalmology with emphasis on diagnosis, pathophysiology and treatment of ocular diseases of domestic animals.

VBMS 7950 GRADUATE SEMINARS IN VETERINARY CLINICAL SCIENCES (1). SEM. 1, SU. Pr., DVM degree or departmental approval. Enrollment in graduate school. Presentation of thesis research. Fall, Spring.

VBMS 7970 RESEARCH PROBLEMS IN BIOMEDICAL SCIENCES (1-5). RES. Pr., Faculty approval. Research problems for graduate students, under supervision of faculty, in a variety of specialized disciplines related to the biomedical sciences. Course may be repeated for a maximum of 15 credit hours.

VBMS 7990 RESEARCH AND THESIS IN BIOMEDICAL SCIENCES (1-10). MST. TD. Credit is to be arranged. Course may be repeated with change in topic.

VBMS 8950 BIOMEDICAL SCIENCES SEMINAR (1). SEM. 1, SU. Recent advances in biochemistry, cell biology and molecular biology will be critically presented and discussed by graduate faculty and students.

VBMS 8990 RESEARCH AND DISSERTATION (1-10). DSR. TD. Course may be repeated with change in topic.

VETERINARY MEDICINE (VMED)

VMED 5000 ORIENTATION TO VETERINARY MED (0). SEM. 1, SU. Pr., enrollment in the AU College of Veterinary Medicine (AUCVM). Overview of organized veterinary medicine, history of the profession, professional responsibilities and privileges, and career opportunities within the profession.

VMED 5010 VETERINARY MEDICAL ETHICS (1). LEC. 1, SU. Pr., enrollment in AUCVM. Ethical issues confronting veterinarians in every phase of the profession.

VMED 5012 PROBLEM-SOLVING IN VETERINARY MEDICINE I (1). LEC. 1, SU. Pr., enrollment in AUCVM. Moderator-guided, student-directed solving of problems selected by faculty to reflect integration of course material presently and previously covered in the CVM curriculum.

VMED 5020 VETERINARY MEDICINE AND THE LAW (1). LEC. 1, SU. Pr., enrollment in AUCVM. Laws relating to the veterinary profession, public policies and government regulations.

VMED 5022 PROBLEM-SOLVING IN VETERINARY MEDICINE II (1). LEC. 1, SU. Pr., enrollment in AUCVM. Moderator-guided, student-directed solving of problems selected by faculty to reflect integration of course material presently and previously covered in the CVM curriculum.


VMED 5032 PROBLEM SOLVING IN VETERINARY MEDICINE III (1). LEC. 1, SU. Pr., enrollment in AUCVM. Moderator-guided, student-directed solving of problems selected by faculty to reflect integration of course material presently and previously covered in the CVM curriculum.

VMED 5042 PROBLEM SOLVING IN VETERINARY MEDICINE IV (1). LEC. 1, SU. Pr., enrollment in AUCVM. Moderator-guided, student-directed solving of problems selected by faculty to reflect integration of course material presently and previously covered in the CVM curriculum.

VMED 5052 PROBLEM SOLVING IN VETERINARY MEDICINE V (1). LEC. 1, SU. Pr., enrollment in AUCVM. Moderator-guided, student-directed solving of problems selected by faculty to reflect integration of course material presently and previously covered in the CVM curriculum.

VMED 5110 PHYSIOLOGY I (5). LEC. 5. Pr., enrollment in AUCVM. Cellular, Cardiovascular, Renal and Respiratory Physiology.

VMED 5111 VETERINARY ANATOMY I (SMALL ANIMAL) (4). LAB. 12. Pr., enrollment in AUCVM. Basic concepts of body structure and small animal gross anatomy with veterinary medical applications. Fall.


VMED 5121 VETERINARY ANATOMY II (3). LAB. 9. Pr., enrollment in AUCVM. In-depth study of the gross anatomy of the ox, horse and minor species with inclusion of clinical relevance.

VMED 5130 CELL PHYSIO & MOLECULAR GENETICS (2). LEC. 2. Pr., enrollment in AUCVM. Introduction to advanced concepts in the mechanisms regulating cell function and molecular biology and genetics.

VMED 5131 BASIC MICROANATOMY/DOMESTIC ANIM (3). LEC. 1, LAB. 4. Pr., enrollment in AUCVM. Functional comparative microstructure of cells, basic tissues, cardiovascular system, urinary system, skeleton and osteogenesis, respiratory system, and blood of domestic animals.

VMED 5141 ORGANOLOGY OF DOMESTIC ANIMALS (2). LEC. 4. Pr., enrollment in AUCVM. Comparative microstructure of the digestive system, lymphoid system, endocrine system, integumentary systems, reproductive system, and placentation of domestic animals.

VMED 5150 DIAGNOSTIC IMAGING (2). LEC. Pr., enrollment in AUCVM. Basic radiographic and ultrasonographic physics; introduction to computed tomography, magnetic resonance imaging, and nuclear imaging.

VMED 5151 VETERINARY NEUROSCIENCES (5). LEC. 4. LEC. 2. Pr., enrollment in AUCVM. Gross and microscopic morphology and physiology of the peripheral and central nervous systems.

VMED 5180 VETERINARY ETHOLOGY (1). LEC. 1. Pr., enrollment in AUCVM. Basic concepts of ethology and other approaches to animal behavior, introduce diagnostic and treatment methods, discuss relevant cases.

VMED 5200 VETERINARY PARASITOLOGY I (3). LEC. 2. LEC. 2. Pr., enrollment in AUCVM. Platyhelminthes, trematodes, and nematodes of domestic animals.

VMED 5210 VETERINARY PARASITOLOGY II (2). LEC. 2. LEC. 2. Pr., enrollment in AUCVM. Arthropods, protozoa, helminths, and acanthocephalans of domestic animals. Parasitcides.

VMED 5220 PRINCIPLES OF VETERINARY PATHOLOGY (3). LEC. 2. Pr., enrollment in AUCVM. General principles of pathology and mechanisms of disease processes affecting animals.

VMED 5230 VETERINARY CLINICAL PATHOLOGY (3). LEC. 3. Pr., enrollment in AUCVM. Laboratory test principles and results interpretations in evaluation of hematopoietic, coagulation, hepatic, renal, gastrointestinal, acid/base and fluid status of animals.

VMED 5240 PRINCIPLES OF VET IMMUNOLOGY (3). LEC. 3. Pr., enrollment in AUCVM. Principles underlying the immune system’s ability to protect animals from disease and mechanisms by which immune responses contribute to disease.


VMED 5260 VETERINARY PHARMACOLOGY (3). LEC. 3. Pr., enrollment in AUCVM. Overview of drugs relevant to veterinary practice; pharmacodynamics, pharmacokinetics, clinical application.

VMED 5301 PHYSICAL DIAGNOSES OF LARGE AND SMALL ANIMALS (2). LEC. 1. LAB. 2. Pr., enrollment in AUCVM. Basic approach to physical examination of large and small animals.

VMED 5310 INTRODUCTION TO SURGERY (1). LEC. 1. Pr., Enrollment in AUCVM. Basics of surgical instruments, aseptic technique, wound healing, approaches and management of surgery of abdomen and thorax, fluid and nutritional needs of perioperative patients.

VMED 5311 SURGICAL PRACTICUM (2). PRA. 4. Pr., enrollment in AUCVM. Aseptic technique, instrument handling, suture patterns, surgical ties, anes-
thetetic administration/monitoring, surgical incision/tissue handling, wound closure, postoperative patient management.

VMED 5320 CLINICAL VETERINARY NUTRITION (2). LEC. 2. Pr., enrollment in AUCVM. Nutritional requirements and feeding programs of cats, dogs, horses, cows, sheep, goats, llamas and some exotic pets.

VMED 5330 MULTISPECIES MEDICINE (3). LEC. 3. Pr., enrollment in AUCVM. Cause, pathology, diagnosis, and control of common diseases of poultry, companion birds, small mammal, fish, amphibian and reptile pets.

VMED 5340 EMERGENCY MEDICINE: CRITICAL CARE AND OCULARITICS (3). LEC. 3. Pr., enrollment in AUCVM. Emergency presentations, critical care monitoring techniques; and diagnostic and therapeutic measures used to manage animals with oncologic disease.

VMED 5350 TOXICOLOGY (3). LEC. 2, LAB. 2. Pr., enrollment in AUCVM. Poisons and poisonous plants affecting large and small animals, chemical properties, signs, lesions, diagnosis, treatment.


VMED 5502 CURRENT TOPICS IN VETERINARY MEDICINE (1). LEC. 1, SU., Pr., enrollment in AUCVM. Emerging topics in veterinary medicine, current literature. Course may be repeated for a maximum of 15 credit hours.

Fall, Spring.

VMED 5510 HEMOLYMPHATIC/INTEGUMENTARY SYSTEM (4). LEC. 4. Pr., enrollment in AUCVM. Diagnosis, treatment and prevention of diseases affecting the integumentary and hemolymphatic systems.

VMED 5512 COMPUTER APPLICATION IN VETERINARY MEDICINE (1). LEC. 1, SU., Pr., enrollment in AUCVM. Presentation software, Internet applications, library searching, databases, continuing education, specialized veterinary medical networks, Web page design, practice management software.

VMED 5520 CARDIOVASCULAR SYSTEM (2). LEC. 2. Pr., enrollment in AUCVM. Pathophysiology, pathologic lesions, radiographic and ultrasonographic lesions, diagnosis, treatment and prevention of diseases affecting the cardiovascular system.

VMED 5530 RESPIRATORY SYSTEM (3). LEC. 6. Pr., enrollment in AUCVM. Pathophysiology, pathologic lesions, radiographic and ultrasonographic lesions, diagnosis, treatment and prevention of diseases affecting the respiratory system.

VMED 5540 ALIMENTARY SYSTEM (5). LEC. 5. Pr., enrollment in AUCVM. Pathophysiology, pathologic lesions, radiographic and ultrasonographic lesions, diagnosis, treatment and prevention of diseases affecting the alimentary system.

VMED 5541 URINARY SYSTEM (2). LEC. 2. Pr., enrollment in AUCVM. Pathophysiology, pathologic lesions, radiographic and ultrasonographic lesions, diagnosis, treatment, and prevention of disease affecting the urinary system.

VMED 5560 ENDOCRINE SYSTEM (2). LEC. 3. Pr., enrollment in AUCVM. Pathophysiology, pathologic lesions, diagnosis, treatment and prevention of diseases of the endocrine system. Fall.

VMED 5570 REPRODUCTIVE SYSTEM (5). LEC. 5. Pr., enrollment in AUCVM. Pathophysiology, pathologic lesions, radiographic and ultrasonographic lesions, diagnosis, treatment; and prevention of diseases of the reproductive system.

VMED 5580 NERVOUS SYSTEM (2). LEC. 2. Pr., enrollment in AUCVM. Pathophysiology, pathologic lesions, radiographic and ultrasonographic lesions, diagnosis, treatment, and prevention of diseases affecting the nervous system.

VMED 5590 MUSCULOSKELETAL SYSTEM (3). LEC. 3. Pr., enrollment in AUCVM. Pathophysiology; pathologic, radiographic and ultrasonographic lesions; diagnosis; treatment; and prevention of diseases affecting the musculoskeletal system.

VMED 5601 VETERINARY CLINICAL ROTATIONS (3). CLN. Clinical experiences through various specialty services in the Veterinary Medical Teaching Hospital. Course may be repeated for a maximum of 6 credit hours.

VMED 5650 CANINE SPORTS MEDICINE AND REHABILITATION (1). LEC. 1, SU., Pr., enrollment in AUCVM. Activities, requirements, and disorders encountered in canine athletes; role of veterinarian in care and rehabilitation; current research.

VMED 5660 LABORATORY ANIMAL MEDICINE (1). LEC. 1. Pr., enrollment in AUCVM. Husbandry, nutrition, handling, and diseases of common laboratory animals.

VMED 5670 RATITE PRODUCTION AND MEDICINE (1). LEC. 1, SU., Pr., enrollment in AUCVM. Diseases, treatment, husbandry, handling, and role of the veterinarian in ratted production.

VMED 5680 POCKET PET MEDICINE (1). LEC. 1, SU., Pr., enrollment in AUCVM. Diseases, treatment, restraint, examination, sample collection in rabbits, Guinea pigs, hamsters, rats, mice, and ferrets.

VMED 5690 REPTILE AND AMPHIBIAN MEDICINE (1). LEC. 1, SU., Pr., enrollment in AUCVM. Diseases, treatment, husbandry, handling, restraint, examination, sample collection in reptiles and amphibians.

VMED 5700 MEDICAL VOCABULARY (2). LEC. 2. Pr., enrollment in AUCVM. Greek and Latin roots, prefixes and suffixes and their use to define medical words, terms or phrases.

VMED 5702 WRITING REINFORCEMENT FOR THE HEALTH PROFESSIONAL (1). LEC. 3. Pr., enrollment in AUCVM. Current diagnostic and therapeutic administration/monitoring, surgical incision/tissue handling, wound closure, postoperative patient management.

VMED 5704 WRITING REINFORCEMENT FOR THE SENIOR VETERINARY STUDENT (1). LEC. 1, SU., Pr., enrollment in AUCVM, fourth-year student. Written and oral presentation of interesting clinical case, contest with monetary reward.

VMED 5705 BASIC SCIENCE OF NEUROLOGY (1). LEC. 1, SU., Pr., enrollment in AUCVM. Interactive case-based review of functional neuroanatomy using clinical neurological cases.


VMED 5730 AVIAN AND EXOTIC ANIMAL PHYSIOLOGY (1). LEC. 1. Pr., enrollment in AUCVM, VMED 5110, VMED 5120. Homeostatic physiological mechanisms of birds, reptiles, fish, and other species, differences from mammals emphasized.

VMED 5732 APPLIED ANATOMY II (1). LEC. 1. Pr., VMED 5111. Detailed anatomical basis for small animal diagnostics and therapeutics.


VMED 5741 EQUINE LIMB JOINTS AND FOOT (1). LAB. 3, SU., Pr., VMED 5121. A study of the functional anatomy of the joints and foot of the horse fore and hind limbs.

VMED 5750 DIAGNOSTIC VETERINARY ULTRASONOGRAPHY (2). LEC. 1, LAB. 2. Pr., enrollment in AUCVM, VMED 5121. Basic physics, instrumentation, and scanning techniques of ultrasonography. Normal sonographic anatomy correlated with the cross-sectional anatomy of body structures and organs.

VMED 5751 ELECTROPHYSIOLOGIC DIAGNOSTIC TECHNIQUES (1). LAB. 3, SU., Pr., VMED 5111, VMED 5151, enrollment in AUCVM. Practical study of clinical electrodiagnostic regimes, theory, practice and diagnostic use of BAER, ERG, VER, SER, EMG, NCV.

VMED 5760 ADVANCED CLINICAL OPHTHALMOLOGY (1). LEC. 1. SU., Pr., enrollment in AUCVM, VMED 5590, VMED 5311. Strategies and methods of diagnosis, treatment and prevention of diseases of the eye in large and small animals.

VMED 5761 RATIONAL ANTIMICROBIAL THERAPY (1). LEC. 2. Pr., enrollment in AUCVM, VMED 5140. Pharmacology of antimicrobial drugs, case based format, emphasis on drug selection.

VMED 5770 ADVANCED VETERINARY DERMATOLOGY (1). LEC. 1. SU., Pr., enrollment in AUCVM, VMED 5510. Clinical dermatology in a case-based format.

VMED 5780 ADVANCED SMALL ANIMAL ONCOLOGY (1). LEC. 1. SU., Pr., enrollment in AUCVM, VMED 5540. Enrollment in the AUCVM. Current diagnostic and therapeutic methods used in small animal oncology.

VMED 5790 SMALL ANIMAL WOUND MANAGEMENT AND SURGERY (1). LEC. 1. SU., Pr., Enrollment in AUCVM, VMED 5510, VMED 5310. Wound management, reconstructive/salvage surgery.

VMED 5800 APPLIED SMALL ANIMAL NEUROLOGY (1). LEC. 1. SU., Pr., enrollment in AUCVM. Clinical management of commonly occurring neurologic disease of small domestic animals.
VMED 5801 PRECEPTORSHIP (3). LAB. 20, SU. Pr., approval of Preceptorship Committee, enrollment in AUCVM. Training in a practice situation under the direct supervision of a veterinarian or, under certain conditions, in specialized programs.

VMED 5810 FOREIGN ANIMAL PARASITES (1). LEC. 1, SU. Pr., enrollment in AUCVM, VMED 5200, VMED 5210. Foreign parasites of domesticated and wild animals from continents other than North America.

VMED 5820 ADVANCED REPRODUCTIVE TECHNIQUES (2). LEC. 2. Pr., VMED 5120 or departmental approval. Techniques associated with embryo transfer, fetal sexing, in-vitro fertilization, applied and experimental techniques in cattle emphasized.

VMED 5830 VETERINARY MEDICINE AND THE PUBLIC (1). LEC. 1, SU. Pr., enrollment in AUCVM. News events related to veterinary medicine and the role of the veterinarian in public education and public policy.

VMED 5840 WILDLIFE DISEASES (2). LEC. 2, SU. Pr., enrollment in AUCVM. Control and role of veterinarian in prevention of disease in wild animals, specifically wildlife indigenous to U.S.

VMED 5850 CAGE BIRD PRACTICE (1). LEC. 1, SU. Pr., enrollment in AUCVM. Techniques for handling, examination, sample collection, diseases and nutrition of cage birds.

VMED 5860 ADVANCED TECHNIQUES IN POPULATION MEDICINE (1). LEC. 1, SU. Pr., enrollment in AUCVM. Techniques for investigation of disease problems in populations with emphasis on computer software specialized for outbreak investigation and disease mapping.

VMED 5870 AQUARIUM FISH MEDICINE (1). LEC. 1, SU. Pr., Enrollment in AUCVM. Prevention, diagnosis, and treatment of freshwater and marine aquarium fish diseases.

VMED 5880 EQUINE REPRODUCTION (1). LEC. 1. Pr., enrollment in AUCVM, third or fourth year student. Reproductive physiology, endocrinology, breeding soundness evaluation, breeding management and advanced technologies.

VMED 5890 BEEF PRODUCTION/COMPUTER RECORD SYSTEM (1). LAB. 1. Pr., VMED 5243. Hands-on experience with computerized record systems for beef cattle operations.

WMST 2100 INTRODUCTION TO WOMEN'S STUDIES (3). LEC. 3. Interdisciplinary examination of the definitions of gender and impact of culture on the construction of gender. Diversity of representation, reflecting upon the histories of woman from a local and global perspective will be the keynote of the course.

WMST 3900 DIRECTED READINGS IN WOMEN STUDIES (1-3). LEC. Pr., Departmental approval. Directed study in an area of special interest.
Faculty

The following is a list of full-time teaching faculty at Auburn University by department. The asterisk before the name indicates the individual is a member of the Graduate Faculty. The date indicates the year of first appointment to any position in the institution.

**ACCOUNTING**
- BALLOU, BRIAN J., Associate Professor, 1997. Ph.D., Michigan State; B.S.B.A., Ohio State
- CAMPBELL, AMY BETH, Graduate Program Director, 1994. M.Ac.; B.S.B.A., Auburn
- CLARK, RONALD L., Professor, 1995. Ph.D., Alabama; M.B.A., Tennessee-Nashville; B.S., Western Kentucky
- GODWIN, NORMAN H., Associate Professor, 1996. Ph.D., Michigan State; B.S., Auburn
- HEITGER, DANIEL L., Assistant Professor, 1999. Ph.D., Michigan State; B.S., Indiana
- JONES, JEFFERSON P., Associate Professor, 1997. Ph.D., Florida State; M.Ac.; B.S., Auburn
- KEY, KIMBERLY G., Associate Professor, 1999. Ph.D., Michigan State; M.S., Wisconsin-Milwaukee; B.B.A., Iowa

**AGRICULTURE - ADMINISTRATION**
- DUNCAN, BRYAN L., Professor & Director, 1975 Ph.D., Wayne State; B.A., Pittsburg State
- GUTHRIE, RICHARD L., Associate Dean and Professor, 1983. Ph.D., Cornell; M.S., B.S., Auburn
- HARDY JR, WILLIAM E., Associate Dean, 1972. J.D., Jones Law; Ph.D., M.S., Virginia Tech
- HUETTEL, ROBIN, Executive Associate Director, 2001. Ph.D., M.S., Florida; B.S., Sam Houston

**AGRONOMY & SOILS**
- ADAMS, JAMES F., Associate Professor, 1985. Ph.D., Kansas St.; M.S., B.S., Auburn
- BALL, DONALD M., Alumni Professor, 1976. Ph.D., M.S., Auburn; B.B.A., Western Kentucky
- BRANSBY, DAVID I., Professor, 1987. Ph.D., Natal; M.S., South Africa; M.S., Missouri
- BURRER, GREGORY L., Assistant Research Professor, 1995. Ph.D., M.S., Auburn
- DELANEY, DENNIS P., Extension Program Associate, 1980. M.S., Clemson; B.S., Michigan State
- EVEREST, JOHN W., Professor, 1976. Ph.D., M.S., Auburn; B.S., Alabama
- FENG, YUCHENG, Assistant Professor, 1998. Ph.D., M.S., Clemson; B.S., Virginia Tech
- GROSS, ROBERT S., Associate Professor, 1988. Ph.D., M.S., Clemson; B.S., Virginia Tech
- HARTFIELD, ROY J., Associate Professor, 1999. Ph.D., M.S., Virginia; B.S., Southern Mississippi

**AEROSPACE ENGINEERING**
- AHMED, ANWAR, Associate Professor, 1998. Ph.D., M.S., Wichita State; B.S., Peshawar
- BARRETT, RONALD M., Alumni Associate Professor, 1993. Ph.D., Kansas; M.S., Maryland; B.S., Kansas
- BURK, JOHN, Professor, 1972. Ph.D., Texas; M.S.A.E., B.A.E., Auburn
- CICCIO, DAVID A., Professor, 1987. Ph.D., Texas; M.S., Carnegie Mellon; B.S., West Virginia
- COCHRAN, JOHN E., Professor and Head, 1966. J.D., Jones Law; Ph.D., Texas; M.S., B.A., Auburn
- DUNBAR, ROBERT A., Professor, 1968. Ph.D., M.S., Auburn; B.S., Auburn
- GROSS, ROBERT S., Associate Professor, 1988. Ph.D., M.S., Clemson; B.S., Virginia Tech
- HARTFIELD, ROY J., Associate Professor, 1999. Ph.D., M.S., Virginia; B.S., Southern Mississippi
- JENKINS, RHONALD M., Associate Professor, 1985. Ph.D., Purdue; M.S., B.S., Florida State

**AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY**
- ADRIAN JR, JOHN L., Professor, 1974. Ph.D., Tennessee; M.S., B.A.A., Auburn
- BALLEY JR, L. CONNER, Alumni Professor, 1985. Ph.D., Cornell; M.A., Ohio B.A.; Southern Oregon
- BERRY, RALPH, Professor, 1977. Ph.D., Auburn; M.S., B.S., Alaska
- DUFFY, PATRICIA A., Professor, 1985. M.A., Auburn; Ph.D., Texas A&M; B.A., Boston College
- DUNKELBERGER, JOHN E., Professor, 1962. Ph.D., Mississippi State; M.S., Penn State; A.B., Franklin & Marshall
- FIELD, DEACUE, Assistant Professor, 1982. Ph.D., LSU; M.S., Missouri; B.S., Southern University
- GOODWIN, NORMAN H., Associate Professor, 1996. Ph.D., M.S., Auburn
- HARDY, WILLIAM E., Associate Professor, 1972. J.D., Jones Law; Ph.D., M.S., B.S., Virginia Tech
- HARTKAR, VALENTINA, Assistant Professor, 2002. Ph.D., M.A., Ohio State; B.F.A., Rhode Island School of Design
- JONES, JEFFERSON P., Associate Professor, 1997. Ph.D., Florida State; M.Ac.; B.S., Auburn
- KEY, KIMBERLY G., Associate Professor, 1999. Ph.D., Michigan State; M.S., Wisconsin-Milwaukee; B.B.A., Iowa

**ANATOMY, PHYSIOLOGY & PHARMACOLOGY**
- BRADEN, TIMOTHY D., Associate Professor, 1994. Ph.D., Colorado State; B.S., Oklahoma State
- BRANCH, CHARLES E., Professor, 1970. Ph.D., Auburn; M.B.E., Auburn

**ARMS, JAMES L., Professor, 1985. Ph.D., Clemson; M.S., B.S., New Hampshire
- PREVATT, JAMES W., Professor, 1991. Ph.D., Clemson; M.S., B.S., Florida
* BROWN, ALFRED E., Professor, 1980, Ph.D., UCLA; B.S., Cal. State-Long Beach
* CHERRY, JOE H., Professor, 1989, Ph.D., M.S., Illinois; B.S., Tennessee
* COLIN, DALE, Assistant Professor, 2003, Ph.D., B.S., United Kingdom
* DONALD JR, JAMES M., Assistant Professor, 1989, B.A., Hunter; Ph.D., Columbia
* DOBSON, F. STEPHEN, Professor, 1988, Ph.D., Michigan; M.A.; A.B., California
* DUTE, ROLAND R., Professor, 1982, M.S., B.S., Ohio State; Ph.D., Wisconsin
* FEMINELLA, JOHN W., Associate Professor, 1991, B.S., SUNY; Ph.D., California-Berkeley; M.S., North Texas
* FOLKERTS, DEBBIE R., Assistant Professor, 1986, Ph.D., Georgia; M.S., B.S., Auburn
* FOLKERTS, GEORGE W., Professor, 1969, M.A., B.A., Southern Illinois; Ph.D., Auburn
* GUYER, CRAIG, Professor, 1987, Ph.D., Miami; M.S., Idaho State; B.S., Humboldt State
* HANLON, KENNETH, Assistant Professor, 2003, Ph.D., Texas; B.S., North Carolina
* HENRY, RAYMOND P., Scharnagel Professor, 1983, Ph.D., Texas; M.S., B.S., California-Davis
* HILL, DAVID T., Professor, 1979, Ph.D., Clemson; M.S., B.S.A.E., Georgia
* HILL, GEORGE, Assistant Professor, 1985, Ph.D., Hawaii; B.S., Case Institute
* HILL, GAYLORD L., Professor, 1970, Ph.D., Iowa State; M.S.; B.S., Illinois
* HODGES, HARRY M., Assistant Professor, 1997, Ph.D., Oklahoma State; B.S., California-Aberdeen
* HODGKINS, RICHARD L., Associate Professor, 1997, Ph.D., Indiana; M.S., B.S., Utah
* HODGE, ROBERT H., Professor, 1979, Ph.D., Ohio State; B.S., Miami
* HODGE, WILLIAM, Assistant Professor, 1999, Ph.D., Miami; M.S., B.S., California-Los Angeles
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BOOZER, ROBERT T., (Clanton) Area Horticulturist, 1986. B.S., M.S., Auburn
BROWN, TOMMY J., (Blackbelt) Area Animal Scientist, 1971. B.S., M.S., Auburn
DAVIS, MICHEAL A., (Blackbelt) Extension Agronomist, 1994. B.S., M.S., Auburn
FIELD, CHRISTY MICHELLE, (Clanton) Extension Specialist, Beef Cattle, 2001. B.S., Mississippi State
HARDIN, WILLIAM HOLT, (Scottsboro) Extension Economist, 2002. B.S., University of North Alabama
HARTZOG, DALLAS L., (Wiregrass) Extension Agronomist, 1969. B.S., M.S., Auburn
HESSELEIN, CHARLES, (Mobile), Extension Horticulturist, 1994. B.S., Cal Poly, M.S., California-Davis
LaPRADE, JESSE C., (Blackbelt) Extension Environmental Specialist, 1990. B.S., VPI, M.S., North Carolina St.; Ph.D., Florida
LISEC, ROBERT G., (Wiregrass) Extension Economist, Farm Business Mgt., 1995. B.S., Peru St.; M.S., Nebraska
PIERCE, JERRY S., (Scottsboro) Extension Economist, Farm Business Management, 1993. B.S., M.S., Auburn
WHITIS, GREGORY, (Greensboro) Extension Economist, Farm Business Mgt., 1985. B.S., Auburn; M.S., North Carolina St.; Ph.D., Auburn

COUNTY STAFFS

Autauga County – Prattville
BOUTIELIER, DEBORAH L., ACENEP Agent, 2001. B.S., Chapman
CONNER, VALERIE Y., County Extension Coordinator, 1983. B.S., Montevallo; M.S., Troy St.
KUYKENDALL, LEONARD L., County Extension Agent, 1979. B.S., Auburn; M.S., Murray St.
MILLER, LINDA C., ACENEP Agent, 2002. B.S., Troy State; M.S., UAB
MOBLEY, PERRY, Multi-County Extension Agent, 1999. B.S., Auburn

Baldwin County – Bay Minette
MAHLER, SONYA W., County Extension Agent, 2000. B.S., Auburn; M.S. Wisconsin
FAVER, MARLA K., County Extension Agent, 2000 B.S., Texas Tech. M.S., Eastern Illinois
KNOWLTON, CYNTHIA G., County Extension Agent, 2002. B.S., McNeese St.
WINGARD, SUSAN F., Interim County Extension Coordinator, 1980. B.S., North Alabama; M.P.A., Jacksonville

Barbour County – Clayton
HUNTER, RUTH H., County Extension Agent, 1974. B.S., N. Alabama
KONN, DAVID, County Extension Agent, 1994. B.S., M.S., Auburn
MASON, CHARLES R., Multi-County Extension Coordinator, 1980. B.S., M.S., Auburn

Bibb County – Centreville
AKINWUNMI, GIGI V., ACENEP Agent, 1999. B.S., AUM
TATUM, JACK B., County Extension Agent, 1979. B.S., M.S., Auburn; Montevallo
HERNDON-JONES, HELEN, County Extension Coordinator, 1989. B.S., M.S., Tuskegee
HICKS, JOY R., ACENEP Agent, 2003. B.S., Montevallo

Blount County – Oneonta
GRAVES, NANCY G., County Extension Agent, Urban, 1992. B.S., M.S., Auburn
PORCH, DANIEL W., County Extension Agent, 1990. B.S., M.S., Auburn
REID, BRENNT C., County Extension Coordinator, 1985. B.S., Samford; M.A.T., Montevallo; Ph.D. Auburn

Bullock County – Union Springs
LEWIS, YVONNE, ACENEP Agent, 2000. B.S., Tuskegee, M.S., Alabama St.
PITMAN, MERRI E., ACENEP Agent, 1999. B.S., Montevallo
COPE, JULIAN T., County Extension Agent, 2002. B.S., M.S., Troy State; Ph.D., Alabama
SMITHERMAN, JIMMY D., County Extension Coordinator, 1978. B.S., M.S., Auburn

Butler County – Greenville
LUMAN, LINDA, County Extension Coordinator, 1982. B.S., Auburn; M.S., Florida St.
PARRISH, RUSSELL, County Extension Agent, 1982. B.S., Auburn; M.S., Montgomery
WILLIAMS, WILLIE, County Extension Agent, 1993. B.S., Miles; M.S., Alabama A&M

Calhoun County – Anniston
BURTON, MARCIAHLE, County Extension Agent, 2000. B.S., M.S., Jacksonville St.
CHAPPELL, ISAAC B. County Extension Agent, 1994. B.S., M.S., Tuskegee
JACKSON, HAYES A., County Extension Agent, 2000. B.S., Auburn
SARRO, RUTH G., County Extension Agent, 1980. B.S., M.S., Auburn; M.S., Alabama
STEWARD, SUZETTE M., ACENEP Agent, 2001. B.S., Jacksonville State
WEST, DAVID H., County Extension Coordinator, 1994. B.S., M.S., Ph.D., Auburn

Chambers County – LaFayette
JONES, BRENDA, County Extension Coordinator, 1971. B.S., Jacksonville St.; M.S., Montevallo
WARD, DEBRA J., ACENEP Agent, 1998. B.S., Jacksonville St.
WILKINS KIMBERLY A., County Extension Agent, 1994. B.S., M.S., Auburn

Cherokee County – Centre
DERRICK, DAVID E., County Extension Agent, 1978. B.S., Auburn
GLASS, LINDA A., County Extension Coordinator, 1978. B.S., Alabama A&M; M.S., Alabama
HELMS, BRIDGET, County Extension Agent, 2003. B.S. Jacksonville St.

Chilton County – Clanton
GRAY, GARY, County Extension Agent, 1993. B.S., M.S., Alabama
MOBLEY, PERRY, Multi-County Extension Agent, 1999. B.S., Auburn
NELSON, CALLIE N., County Extension Agent, 1993. B.S., Alabama A&M; M.S., Montevallo
WEST, GAY, County Extension Coordinator, 1991. B.S., Montevallo; M.A., Alabama

Choctaw County – Butler
ALBERSON, ELAINE B., County Extension Agent, 1988. B.S. Samford; M.S., Livingston

Conecuh County – Evergreen
BRODGREN, EMILY H., County Extension Coordinator, 1990. B.S., Auburn; M.S., Livingston

Coosa County – Rockford
LUKER, MELINDA, County Extension Coordinator, 1978. B.S., M.S., Auburn
VINES, ROGER C, County Extension Agent, 1983. B.S., Auburn; M.S., LSU

Covington County – Andalusia
DUAN, WILLIE, County Extension Agent, 1979. B.S., M.S., Alabama A&M
GRiffin, BRIDGETTE F., ACENEP Agent, 1999. B.S., Montevallo

Crenshaw County – Luverne
BRYAN, DEREK F., County Extension Agent, 1992. B.S., M.S., Auburn
Saffold, HELEN J., County Extension Agent, 1977. B.S., Alabama A&M; M.S., Tuscaloosa
WHITE, GAYLE C., County Extension Coordinator, 1973. B.S., M.S., Auburn

Clarke County – Grove Hill
HOLLINGER, BETTY B., Multi-County Extension Coordinator, 1977. B.S., M.A.T., Montevallo
OGLESBY, MICHAEL N., Multi-County Extension Agent, 1999. B.S., Auburn

Clay County – Ashland
FARRROW, TOM, County Extension Coordinator, 1970. B.S., M.Ed., Auburn

Cleburne County – Heflin
EAST, WILLIAM T., County Extension Agent, 1997. B.S., M.S., Auburn
MATHews, ELEANOR, County Extension Coordinator, 1984. B.S., Auburn; M.S., Jacksonville St.
BEAM, CYNTHIA K., ACENEP Agent, 2003. B.S., Georgia Southern

Coffee County – New Brockton
COFFEE, SANDRA T., County Extension Coordinator, 1972. B.S., M.S., Tennessee; M.S., Auburn
Hughes, AnGELA L., County Extension Agent, 1973. B.S., Alabama

Colbert County – Tuscumbia
ANDrews, CHARLES E., County Extension Agent, 1973. B.S., Tuskegee
BECK, MARIAN, County Extension Agent, 1993. B.S., M.S., Alabama A&M; Northern Illinois
COLE, KATERINIA W., ACENEP Agent, 1999. B.S., North Alabama
McDonald, TERESA C., County Extension Coordinator, 1976. B.S., M.Ed., Alabama A&M
Norwood, SHANNON H., County Extension Agent, 1999. B.S., M.S., Auburn

Concord County – Evergreen
BRODGREN, EMILY H., County Extension Coordinator, 1990. B.S., Auburn; M.S., Livingston

Cook County – Rockford
LUKER, MELINDA, County Extension Coordinator, 1978. B.S., M.S., Auburn
VINES, ROGER C, County Extension Agent, 1983. B.S., Auburn; M.S., LSU

Covington County – Andalusia
DUAN, WILLIE, County Extension Agent, 1979. B.S., M.S., Alabama A&M
GRiffin, BRIDGETTE F., ACENEP Agent, 1999. B.S., Montevallo

Crenshaw County – Luverne
BRYAN, DEREK F., County Extension Agent, 1992. B.S., M.S., Auburn
Saffold, HELEN J., County Extension Agent, 1977. B.S., Alabama A&M; M.S., Tuscaloosa
WHITE, GAYLE C., County Extension Coordinator, 1973. B.S., M.S., Auburn

Battle, ADRIENNE, ACENEP Agent, 2001. B.S., Troy State
Marengo County – Hamilton

Marion County – Hamilton
MURPHY, LISA, County Extension Agent, 1981. B.S., N. Alabama; M.S., Mississippi St.

WALLACE, BOBBY J., County Extension Coordinator, 1979. B.S., Auburn; M.Ed., Mississippi St.

Marshall County – Guntersville
BROMAN, BETTY A., County Extension Agent, 1999. B.S., Florence St.; M.S., Alabama
HAMMET, CONNIE SUE, ACENEP Agent, 2001. B.S., Auburn

HOWARD, CHARLES, County Extension Coordinator, 1979. B.S., Auburn; M.S., Mississippi St.

WHEELER, EDDIE J., County Extension Agent, 1978. B.S., M.S., Alabama A&M

Mobile County – Mobile
BECK, VILETTA, ACENEP Agent, 2000. B.S., Mobile
DAUGHERTY, THOMAS H., County Extension Agent, Urban, 1999. B.S., South Alabama

DAY, MARJORIE S., County Extension Agent, 1972. B.S., Auburn; M.S., Alabama

ELMORE, JOSHUA B., County Extension Agent, 1999. B.S., Florida

HARTSELLE, JANE T., County Extension Agent, 1992. B.S., Auburn; M.S., South Alabama
McCOLUM, JULIA, County Extension Agent, 1975. B.S., North Carolina A&T; M.S., Southern Mississippi
MILES, JAMES D., County Extension Agent, Urban, 1999. B.S., Alabama A&M

OUTLAW, AMANDA C., County Extension Agent, Urban, 1999. B.S., Birmingham Southern

PHILLIPS, J. ELIZABETH, County Extension Agent, Urban, 1999. B.S., Lander; M.S., South Carolina

TOOD, JIMMY, County Extension Coordinator, 1992. B.S., Auburn; M.S., LSU

Monroe County – Monroeville

MUSSON, GLORIA R., County Extension Agent, 1983. B.S., Auburn; M.S., Southern Mississippi

RUFIN, RODIE M., County Extension Coordinator, 1973. B.S., M.Ed., Tuskegee

WIGGINS, ANTHONY G., MultiCounty Extension Agent, 2000. B.S., M.S., Auburn

Montgomery County – Montgomery
ANDRESS, SHANNON S., County Extension Agent, Urban, 1998. B.S., Auburn

BROWN, JUDY F., County Extension Coordinator, 1970. B.S., M.Ed., Auburn

CRAFT, LARRY J., County Extension Agent, 1980. B.S., M.S., Auburn

HALL, JANICE E., ACENEP Agent, 1996. B.S., Auburn; M.S., Alabama

LEWIS, GWENDOLYN M., County Extension Agent - Urban, B.S., Tuskegee, M.S., Troy St.

OSBY, PARICO, County Extension Agent, 1993. B.S., Tuskegee; M.A., Central Michigan

PINKSTON, ANTHONY D., County Extension Agent, 1992. B.A., SUNY, M.S., Auburn

TABB, GEORGE L., County Extension Agent, 1995. B.S., Alabama A&M; M.S., Troy St.

THOMAS, YVONNE D., County Extension Agent, Urban, 1994. B.S., Troy St.; M.S., Tuskegee

Morgan County – Hartsville
BRITNELL, RONALD W., County Extension Agent, 1976. B.S., Auburn; M.S., Alabama A&M

DUTTON, JULIE A., County Extension Coordinator, 1977. B.S., Tennessee Tech; M.S., Alabama A&M

GAMBLE, KENNETH W., County Extension Agent, 1990. B.S., M.S., Alabama A&M

GOTTLER, THELMMAE, County Extension Agent, 1974. B.S., M.A.T., Montevallo


MALONE, MARY P., County Extension Agent, 1994. B.S., M.Ed., Alabama

## Enrollment Statistics

### Fall Semester, 2002

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### College of Agriculture

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### College of Business

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<td>Finance (FINC)</td>
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### College of Education

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<td>Chemistry Education (CHEC)</td>
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<td>Computer Engineering (CENG)</td>
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### College of Forestry and Wildlife Sciences

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<td>Pre-Forestry (PFOR)</td>
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<td>Wildlife Sciences (WILD)</td>
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### College of Human Sciences

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<td>Consumer Affairs (CAHS)</td>
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<td>Hotel and Restaurant Management (HRMT)</td>
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<td>Human Development and Family Studies Early Education (HDFS)</td>
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### College of Liberal Arts

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* May include U.S. citizens living abroad.

## Enrollment Statistics

**TOTAL (U.S. Territories)**: 11,468

**TOTAL (All States)**: 10,895

**TOTAL (Foreign)**: 584

**TOTAL (Military Address Abroad)**: 319

* * *
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