CAUTION: The course offerings and requirements of the University are continually under examination and revision. This catalog presents the offerings and requirements in effect at the time of publication but is no guarantee that they will not be changed or revoked. Current information may be obtained from the following sources:

- **Admission Requirements**
  — Director of Admissions
  State of Tennessee: 1-800-221-8657
  All others: (865) 974-2184

- **Course Offerings**
  — Department offering course

- **Degree Requirements**
  — Office of the Registrar, faculty advisor, head of major department, college advising center, or dean of college/school

- **Fees and Tuition**
  — Office of the Treasurer

- **UT Homepage**
  — http://www.utk.edu/

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**EEO/TITLE IX/AA/SECTION 504 STATEMENT**

The University of Tennessee does not discriminate on the basis of race, sex, color, religion, national origin, age, disability, or veteran status in provision of education programs and services or employment opportunities and benefits. This policy extends to both employment by and admission to the University.

The University does not discriminate on the basis of race, sex, or disability in the education programs and activities pursuant to the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) of 1990.

Inquiries and charges of violation concerning Title VI, Title IX, Section 504, ADA, the Age Discrimination in Employment Act (ADEA), or any of the other above referenced policies should be directed to the Office Equity and Diversity (OED); 1210 Terrace Avenue; Knoxville, Tennessee 37996-3560; telephone (865) 974-2498 (TTY available). Requests for accommodation of a disability should be directed to the ADA Coordinator at the Office of Human Resources Management; 600 Henley Street; Knoxville, Tennessee 37996-4125.

A project of UT Undergraduate Academic Affairs, 420 Communications Building, Knoxville, Tennessee 37996-0349, with assistance from Creative Services, (865) 974-2225. Revisions: 5358.

In accordance with the Tennessee College and University Security Information Act of 1989 and the Student Right-to-Know and Campus Security Act, the University of Tennessee has prepared a report containing campus security policies and procedures, data on campus crimes, and other related information. A free copy of this report may be obtained by any student, employee, or applicant for admission or employment from the Office of the Dean of Students; The University of Tennessee; 413 Student Services Building; Knoxville, Tennessee 37996-0248.

Publication Authorization Number: E01-0425-003-01
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### Board of Trustees

**Ex-Officio Members**
- Governor, State of Tennessee
- Commissioner of Education
- Commissioner of Agriculture
- President, The University of Tennessee
- Executive Director, Tennessee Higher Education Commission

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<td>John C. Thornton, Chattanooga</td>
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<td>From Davidson County</td>
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<td>R. Clayton McWhorter</td>
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<td>From Hamilton County</td>
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<td>From Knox County</td>
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<td>Susan Richardson-Williams</td>
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<td>James A. Haslam II</td>
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<td>From Shelby County</td>
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<td>Arnold E. Perl</td>
<td>2000</td>
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<td>Rynette N. Hurd</td>
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<td>Johnnie D. Amonette, Vice Chairman</td>
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<td>Linda Logan, Assistant Secretary</td>
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### Administration

- J. Wade Gilley, President and Chief Executive Officer, B.S., M.S., Ph.D.
- Loren W. Crabtree, Vice President and Provost, B.A., M.A., Ph.D.
- Emerson H. Fly, Executive Vice President and Chief Operating Officer
- Katherine N. High, Vice President and Chief of Staff Affairs, A.B., M.A.T., Ed.D.
- Jack H. Britt, Vice President for Agriculture, B.S., M.S., Ph.D.
- Dwayne McCay, Vice President for Research and Information Technology, B.S., M.S., Ph.D.
- Catherine S. Mizell, Vice President, General Counsel, B.A., J.D.
- Charles M. Peccolo, Vice President and Treasurer, M. Acct., C.P.A., C.C.M.
- William R. Rice, Vice President for Health Affairs, A.B., J.D.
- Jack E. Williams, Vice President for Development and Alumni Affairs, B.S., T.E.D.P.
- Thomas B. Ballard, Vice President for Public and Governmental Relations, B.S.
- Theotis Robinson, Vice President for Equity and Diversity
- Philip A. Scheurer, Vice President for Knoxville Operations, B.A., M.S.
- Sylvia S. Davis, Vice President for Budget and Finance, B.S., M.S., CPA
- Philip W. Conn, Vice President for Special Programs, Ph.D.

### Colleges and Schools

- Dean of the College of Agricultural Sciences and Natural Resources and Tennessee Agricultural Experiment Station, C. A. Speer, B.S., M.S., Ph.D.
- Dean of the College of Architecture and Design, Marleen K. Davis, B. Arch., M. Arch.
- Dean of the College of Arts and Sciences, Lorayne W. Lester, B.S., M.A., Ed.D.
- Interim Dean of the College of Business Administration, Jan R. Williams, B.S., M.B.A., Ph.D.
- Dean of the College of Communications, Dwight L. Teeter, A.B., M.J., Ph.D.
- Dean of the College of Education, C. Glennon Rowell, B.S., M.A., Ed.D.
- Dean of the College of Engineering, Jerry E. Stoneking, B.S., M.S., Ph.D.
- Dean of the College of Human Ecology, James D. Moran III, B.A., M.S., Ph.D.
- Director, School of Information Sciences, Elizabeth S. Aversa, B.A., M.Ln., Ph.D.
- Dean of the College of Law, Thomas C. Galligan, Jr., A.B., J.D., L.L.M.
- Dean of the College of Nursing, Joan L. Creasia, B.S.N., M.S.N., Ph.D., R.N.
- Dean of the College of Social Work, Karen M. Sowers, B.A., M.S.W., Ph.D.
- Dean of the College of Veterinary Medicine, Michael J. Blackwell, B.S., D.V.M., M.P.H.
- Dean of University Libraries, Barbara I. Dewey, B.A., M.A.
- Interim Dean of Graduate Studies and Vice Provost, Anne Mayhew, B.A., M.A., Ph.D.
- Dean of Undergraduate Academic Affairs, Faye D. Julian, B.A., M.A., Ph.D.
- Dean of University Outreach and Continuing Education, Robert B. Leiter, B.S., M.S., Ed.D.
- Dean of Admissions and Records, Richard Bayer, B.A., M.A.

### Independent Departments

- Air Force Reserve Officers' Training Corps, Professor of Aerospace Studies, Colonel Charles F. Schreck, USAF
- Army Reserve Officer's Training, Professor of Military Science and Tactics, Lieutenant Colonel William P. Woodcock, USA
ACADEMIC CALENDAR FOR 2001-2002

FALL SEMESTER, 2001

August 22 Classes Begin
September 3 LABOR DAY HOLIDAY
October 11-12 Fall Break
November 22-23 THANKSGIVING HOLIDAYS
December 6 Classes End
December 7 Study Period
December 8, 10-13 Final Examinations
December 15 Commencement

SPRING SEMESTER, 2002

January 9 Classes Begin
January 21 MARTIN LUTHER KING, JR. HOLIDAY
March 18-22 SPRING BREAK
March 29 SPRING RECESS
April 29 Classes End
April 30, May 1 Study Period
May 29, May 3 Final Examinations
May 11 Commencement

MINI-TERM 2002

May 8-May 29 Mini-Term
May 27 MEMORIAL DAY HOLIDAY

SUMMER TERM 2002

May 30 Classes Begin
July 3 First Session Ends
July 4 INDEPENDENCE DAY HOLIDAY
July 5 Second Session Begins
August 7 Second Session Ends
The University of Tennessee is the state’s flagship institution, offering comprehensive programs of undergraduate, graduate, and professional education, research, and public service throughout the state. The university is composed of the campus at Knoxville, the Health Science Center at Memphis, the Space Institute at Tullahoma, and statewide institutes of agriculture and public service.

The campus at Knoxville is the only public institution in the state with the Carnegie classification of “doctoral/research university-extensive.” The campus offers more than 300 degree programs to its 25,500 students, who come from every county in Tennessee, every state in the nation, and more than 100 foreign countries. A faculty of 1,200 provides high quality educational experiences to students while also performing research and providing public service to the state and nation.

The campus has new Research Centers of Excellence in advanced materials, food safety, environmental biotechnology, structural biology, and information technology. The centers are expected to attract major federal grant support and spin off business and jobs to benefit Tennessee.

Information technology is central to the classrooms and offices of the university. All residence hall rooms are wired for the Internet, computer laboratories are constantly being updated, and more than 350 class sections have a Web presence.

UT-Battelle manages the Oak Ridge National Laboratory, located 25 miles northwest of campus. UT’s involvement places it among a select group of universities that manage national laboratories for the U.S. Department of Energy.

ORNL is the university’s largest research partner. The Science Alliance, a Tennessee Accomplished Center of Excellence, strengthens research ties between UT and the laboratory and improves science programs at the university. As part of the Science Alliance, UT and ORNL share 12 Distinguished Scientists, who hold the rank of full professor at the university and senior scientist at the laboratory.

The university’s libraries have more than 2 million volumes as well as online access to numerous prestigious collections.

Through public service, the university extends its resources throughout the state and nation. Lifelong learning programs are delivered online and via video and correspondence to off-campus students, particularly working adults seeking college degrees or career advancement.

HISTORICAL BACKGROUND

The University of Tennessee, one of the nation’s older institutions of higher education, celebrated its Bicentennial in 1994. Two years before statehood was achieved, the legislature of the Southwest Territory, which later became Tennessee, granted a charter to Blount College, named in honor of William Blount, territorial governor.

Located near the center of Knoxville’s present business district, Blount College was nonsectarian in character, which was unusual for an institution of higher education in that day. The University of Tennessee thereafter was fully coeducational.

From the outset, Blount College was all-male, as were most colleges at the time. The restriction was ended in 1892, when the first women students were admitted. The University of Tennessee thereafter was fully coeducational.

In 1807 the state legislature changed the name to East Tennessee College, and in 1826 the present site at Knoxville, the 40-acre tract known as “The Hill,” was acquired. The college’s name changed again in 1840—to East Tennessee University. The Civil War forced the institution to close, and its buildings were used as a hospital for Confederate troops and later occupied by Union troops.

East Tennessee University reopened after the war, and in 1869 UT became Tennessee’s land-grant institution, and the Institute for Public Service was founded and brought together several existing government and industrial outreach programs in 1971.

Today the University of Tennessee System serves the entire state through three separate institutions: the University of Tennessee (Knoxville, Memphis, and institutes of agriculture, public service, and space), the University of Tennessee at Chattanooga, and the University of Tennessee at Martin.

UT has among its faculty and alumni two Nobel laureates, seven Rhodes scholars, six Pulitzer Prize winners, and ten astronauts. UT alumni number more than 250,000.

ACCREDITATION

The University of Tennessee (Knoxville campus) is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, masters, and doctoral degrees.

STUDENT AFFAIRS AND SERVICES

ACADEMIC COMMON MARKET

The Academic Common Market is an agreement among states for sharing unique programs. Participating states can make arrangements for their residents who are fully admitted to specific programs at UT (Knoxville campus) to enroll on an in-state tuition basis, if these programs are not available in the state of residence.

Cooperating states in the Academic Common Market are Alabama, Arkansas, Delaware,
Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. 15 doctoral, 24 Master’s, and 30 Bachelor’s programs at UT are approved by the Academic Common Market for residents of these states to enroll at in-state tuition rates.

Students must be fully admitted to the appropriate degree program, and the letter of certification must be received in the Office of Graduate Admissions and Records no later than the first day of classes for the effective semester.

Residents of member states who seek further information should contact the Senior Admissions Specialist in the Office of Graduate Admissions and Records, 974-3251, or the Southern Regional Educational Board, 592 Tenth Street, N. W., Atlanta, GA 30316-5790. (404) 875-9211, fax: (404) 872-1477; e-mail: ann.creech@sreb.org or info@sreb.org or visit the SREB website at http://www.sreb.org.

ADULT STUDENT SERVICES CENTER

The Adult Student Services Center was created to help students who have delayed or interrupted their college education for a period of time and to assist students older than average (25 years or older).

Specifically, the office works with other departments on campus to provide admissions and readmissions counseling, academic advising, peer support programs, orientation programs, information about careers, financial aid, and educational workshops for adult students. Personalized referral for university services will be made as well.

The Office of Adult Student Services Center is located at 413 Student Services Building. 8:00 a.m.-5:00 p.m. Monday-Friday and in the evening hours by appointment.

ATHLETICS

The University of Tennessee encourages athletics as a part of its educational program. Men’s Intercollegiate sports are administered by the Department of Intercollegiate Athletics, Doug Dickey, Director. Women’s Intercollegiate sports are administered through the Division of Student Affairs and are under the direction of the Department of Intercollegiate Athletics for Women, Joan Cronan, Director.

There are men’s teams in football, basketball, cross country, indoor and outdoor track and field, baseball, swimming, tennis, and golf. Intercollegiate games are played according to the rules of the National Collegiate Athletic Association (NCAA) and the Southeastern Conference (SEC). Eligibility for participation is determined by the NCAA, SEC, and the University faculty.

There are women’s teams in basketball, swimming, rowing, softball, soccer, tennis, volleyball, cross country, and indoor and outdoor track and field. Intercollegiate varsity games are played according to the rules of the NCAA and the SEC. Eligibility for participation is determined by the NCAA, the SEC, and the University faculty. Any full-time female under-graduate student is eligible to try out. Additional information can be obtained by writing to the Director of Women’s Athletics, 207 Thompson-Boling Arena.

A varied intramural and sports club program is provided for all students. These programs are directed by the Office of Recreation and are housed at the Student Aquatic Center.

THOMPSON-BOLING ASSEMBLY CENTER AND ARENA

Thompson-Boling Assembly Center and Arena opened its doors in December 1987. The facility, which seats 24,535, is named for the late Knoxville newsman Ray Thompson and former UT President Edward J. Boling. Thompson-Boling Arena has already attracted events such as the 1989 SEC Basketball Tournament, 1990 Southeast Regional first and second round games, and the 1990 NCAA Women’s Final Four to the University of Tennessee. The 1994 Men’s Southeast Regional finals were held at Thompson-Boling Arena, as were the 1995 Women’s Mideast Regional Championships. The 1999 Men’s South Regional was also held at Thompson-Boling Arena.

NEYLAND STADIUM

Neyland Stadium, the University’s football stadium, was named in memory of the late General Robert R. Neyland, longtime coach and athletics director. Shields-Watkins Field is named in honor of William S. Shields, former member of the University Board of Trustees, and his wife, Alice Watkins-Shields. The stadium was completed and developed by the Department of Athletics over a period of years, was expanded in 1996 to a capacity of 102,854 fans.

New luxury boxes on the upper east side of the stadium were in place for the 2000 season, bringing total capacity to 104,075.

OTHER FACILITIES

Tom Black Track is host to regional and national meets and is built to Olympic specifications. The University hosted the 1995 NCAA Men’s and Women’s Division I Track Championships. The UT baseball facility, the 5,500-seat Lindsey Nelson Stadium, was completed in February of 1993. Named for broadcasting legend and UT alumnus Lindsey Nelson, the facility provides an ideal environment for fans. It was the site of the 1993, 1994, and 1995 NCAA Mideast Regionals. Outdoor tennis courts and a new indoor facility, named the Goodfriend Tennis Center, also afford an excellent vantage point for spectators.

RECREATIONAL SPORTS

The Office of Recreational Sports coordinates recreation activities of the Student Aquatics Center, H.P.E.R., Stokyler Athletics Center, including Intramurals, Sports Clubs, Aquatics Programs and Informal Recreation and Fitness Programs. Please refer to Hilloptics, The student handbook for more detailed information.

BLACK CULTURAL CENTER

The Center is an integral part of the University of Tennessee. The Center provides academic, cultural, and social outlets through programming and services as an on-going part of the University’s retention efforts. The Tutorial and Early Alert Programs—along with the Career Resource Library and Computer Lab—serve as an extension to services provided across campus. The Center houses several student organizations that plan activities ranging from Brown Bag Lecture Series, Black History Month activities; the Welcome Week Splash Party; carnivals; and renowned speakers such as Maya Angelou, Tavis Smiley, Cornel West, and Alice Walker. The Center is located at 812 Volunteer Boulevard. The University community is encouraged to visit the facility and take advantage of the opportunities provided for all students.

CAREER SERVICES

Career Services helps students through individual and group assistance to choose a major, assess career alternatives, find employment, and complete a successful transition from the University to the world of work. The Service is especially well-known for its effective placement help which includes on-campus recruitment, job referrals, and other sources of job contacts.

Included in the services offered at Career Services are the Strong Interest Inventory; Exploring Majors and Careers, a one credit course designed to help students choosing a major; career counseling appointments; a Career Resource Center that includes a comprehensive collection of career-related books, magazines, articles, and videotapes; information about a wide variety of internships, annual Career Fairs providing opportunity to speak informally with representatives from hundreds of different employers about their entry level jobs and hiring practices; and an annual Summer Job Festival.

Also available are: Resume Critiques; Video-taped Mock Interviews; Workshops providing instruction in skills and tactics for successful interviewing, resume preparation, Business and Dining Etiquette, and other topics; and Credit Courses, including Business Career Planning and Placement, Engineering Career Planning and Placement, and Exploring Majors and Careers.

On-Campus Interviews are scheduled during the year of graduation and require registration. A state-of-the-art web-based information and scheduling system is used. Thousands of interviews are scheduled each year which include approximately 500 companies and government agencies, and school systems. Career Services also includes a Part-time Employment service for students seeking on-campus or off-campus jobs. Job vacancies are listed on the departmental website and in the Career Resource Center. An Alumni Placement Service offers assistance in the job search after graduation and a Credential Service is available for doctoral candidates in professions requiring documentation of career-related experiences along with letters of recommendation.

For information regarding Career Services call 974-5435 or check the web site at http://career.utk.edu.

CENTER FOR INTERNATIONAL EDUCATION

(Internal student interested in applying to UT should consult the requirements listed in the International Student Applicants section of this Catalog, or for graduate studies, the Graduate Catalog.)

The goal of the Center for International Education, 1620 Melrose Avenue, is to promote and facilitate the internationalization of the UT campus, curriculum and community. It successful students and faculty from other countries with matters of particular concern to them during their stay in the United States. It provides advice concerning visas and with the U.S. Immigration and Naturalization Service (INS). The Center is the University’s official representative to INS, to international educational organizations and to foreign governments.

The Center serves as a liaison with international students and scholars and the faculty and other University units. It assists with adjustment...
ment through orientation programs required of all new international students at the beginning of each academic term, and through individual advising and counseling on personal and academic matters.

The Center also serves students and faculty interested in travel, work or study abroad. Staff are available to advise, to assist in the preparation of fellowship/scholarship applications, and to provide information on a broad range of international topics. A reference library of overseas study and travel materials, scholarship and other special programs intended to serve those with international interests is at the Center. International exchange programs through which enrollment is available for more than 100 universities throughout the world becomes possible and affordable for UT students are available. The phone number of the Center is: 974-3177. E-Mail: CIE@UTK.EDU.

UT's International House, 1623 Melrose Avenue (phone (865) 974-4453), is an integral part of the Center for International Education. The 30,000 square foot facility opened in the winter of 1995-96 and serves as a meeting place for events related to the development of campus internationalization. The “I-House” always offers a cup of coffee or tea and features numerous meeting rooms, informal seating areas, a computer lab, international television, table tennis and a library. A list of I-House events may be accessed via the main UT Web home page.

CULTURAL OPPORTUNITIES

ART
Exhibits of the work of artists, craftspersons and architects are sponsored on a regular basis by the School of Art and the College of Architecture and Design. The Ewing Gallery of Art and Architecture, located on the ground floor of the Art and Architecture Building, hosts major exhibitions of work by national and international artists for periods of three to four weeks. A second gallery, also located on the ground floor of the Art and Architecture Building, is used for short-term exhibits and student critiques. The Reese collection, a group of outdoor sculpture, is on permanent display throughout the campus.

1010 Gallery, administered by the School of Art Student Advisory Committee, is located off-campus in the Candy Factory Building on the World's Fair Site. This gallery features student work in short-term exhibits.

Arrowmont School of Arts and Crafts, a UT affiliate located in Gatlinburg, Tennessee, displays works by faculty and students during the summer months, and works from both the permanent collection and sponsored competitions during the remainder of the year.

The Art Education Gallery is located on the ground floor of Claxton Education Building, and features work by elementary, high school and university students, and by regional artists. The gallery is open year-round and most exhibits are on display from three to four weeks.

The Ralph E. Dunford Art Collection and the Marian G. Heard Crafts Collection are housed and exhibited in the University Center. These collections are supplemented each year with purchases made possible through student programs. Acquisitions of works by area artists are emphasized by the selection committee. Additionally, shows selected by the Student Exhibition Committee are exhibited on a monthly basis in the Concours Gallery and the Barton Music Lounge of the Carolyn P. Brown Memorial University Center.

BROADCASTING
WUOT 91.9 FM broadcasts in stereo with an effective radiated power of 100,000 watts, as authorized by the FCC. 24 hours each day, WUOT presents a classical and information format designed to enrich and improve the quality of life for those within reception range. Programming includes National Public Radio news, classical, and jazz music.

WUOT is a charter member of National Public Radio, Public Radio International, and Southern Public Radio. WUOT meets Corporation for Public Broadcasting criteria for full service operation as a public radio station, and is a member in good standing of the National Association of Broadcasters. www.wuot.org

WUTK-FM is a student-oriented radio station operated by the Department of Broadcasting at the University of Tennessee (Knoxville campus). Broadcasting majors serve as announcers, news writers and reporters, producers, and account executives. The station is programmed as an alternative rock music station and is located at 90.3 on the FM band. The target audience for the station is the student population of UT. Studios are located at P-103 Andy Holt Tower.

CONCERTS
Popular and cultural concert series bring to the University community some of the finest artists in the entertainment field. Regularly scheduled are classical music concerts, folk music festivals, and instrumental music, student recitals performed in the 25,000 seat Thompson-Boling Arena.

The student “Campus Entertainment Board” has exclusive responsibility to sponsor smaller and emerging popular entertainment at various locations across the campus, Bands, comedians, and special events are part of the fun! Another student committee, the “Cultural Attractions Committee,” group is responsible for the presentation of programs in the arts to include dance and music, Jazz, strings, vocal, brass, modern and classical dance and music productions are annually presented.

FRANK H. MCCLUING MUSEUM

Officially dedicated in 1963, the McClung Museum is actively involved in the collecting, preservation, and exhibition of objects in the fields of anthropology, archaeology, decorative and fine arts, medicine, local history and architecture, geological sciences and natural history. Archaeological specimens, some as old as 12,000 years, recovered during the University’s extensive excavations in the Tennessee River Valley are included in a new major exhibition “Archaeology and the Native Peoples of Tennessee.” Another major, continuing exhibit “Ancient Egypt: The Eternal Voice” highlights life in the Nile Valley from the predynastic through the pharaonic period, with statuary, artifacts, and a Dynasty XXI mummy. The continuing exhibition “The Decorative Experience” in the Judge John and Ellen Green and Eleanor Deane Audigier Gallery showcases selections made in a variety of materials such as ceramics, glass, textiles and metals from the Museum’s collections. Some aspects of the geological sciences and the natural history of Tennessee are also displayed on the main floor. Four million years of human evolution is presented in “Lucy and Her Relatives” on the lower floor. In the case opposite Lucy, is another exhibit, “Treasures Past and Present: Freshwater Mussels” which displays the life cycle and many uses of the mussel, from tools to the pearl button industry in Tennesse. The Verhagen Gallery contains temporary exhibitions that change two or three times a year. Temporary lobby exhibits and other displays are installed throughout the year.

LECTURES
Each semester the student Issues Committee presents programs around a current theme. The programs feature speakers who are considered experts and represent diverse points of view on a variety of topics.

MUSIC

UT Choral Groups consist of the Concert Choir, Women’s Chorale, Men’s Choral, Chamber Singers, and UT Singers.

The UT Opera Theatre presents three performances yearly. The varied program of operatic music ranges from one-act to complete three-act operas with symphonic accompaniment, and from television opera to selected scenes from the classic repertory. The UT Symphony Orchestra plays concerts on campus and serves as orchestra for opera and choral productions. UT’s marching band, celebrated as “The Pride of the Southland,” presents outstanding entertainment on football Saturdays at both home and out-of-town games.

During winter and spring, the band is divided into two concert groups which tour the South; a variety pep band that performs at basketball games, and the laboratory group which provides valuable training for its members.

Fine Arts Presentations, scheduled under the auspices of the School of Music, consists of a series of faculty recitals which feature vocal and instrumental music; student recitals presented by upperclass and graduate members of the music department in partial fulfillment of degree requirements; and concerts by the bands, choirs, Symphony Orchestra, Jazz Ensemble, Percussion Ensemble, and small ensembles.

The Scottish Rite Masonic Chair of Choral Art brings to The University of Tennessee campus a distinguished conductor and/or composer in the field of choral music who serves as a guest lecturer for workshops sponsored by the School of Music.

The auditorium of the Music Building is named for East Tennessean Grace Moore, whose family donated a large collection of her memorabilia to UT. The collection may be viewed at the Frank H. McClung Museum by appointment.

THEATRE

Two theatre companies comprise The University of Tennessee Theatres.

The Clarence Brown Theatre Company is a professional theatre company in residence at the University of Tennessee, Knoxville. Founded in 1974 by Anthony Quayle and Ralph G. Allen, the Clarence Brown Theatre Company is a member of the League of Resident Theatres (LORT) and Theatre Communications Group, Inc.

The second company (University Company) has, under various titles, been staging productions since the late 1930s, using UT students and faculty as well as talent from the Knoxville Community.

In addition to these companies, the Department of Theater sponsors ACT (All Campus Theatre), a student troupe that performs in non-traditional spaces. Their aims are to provide educational opportunities in theatre, to assist in UT Theatres’ production
activities, to provide students with a forum, social activities and assistance, and to sponsor its own productions as time, human resources, interest, and space permit.

The professional and university companies perform in the Clarence Brown Theatre and the Carousel Theatre. The Clarence Brown Theatre was built in 1970, and includes the 600-seat main auditorium with a prosenium stage, and the Studio Theatre, a 125-seat prosenium thrust theatre.

The Ula Love Doughty Carousel Theatre is a theatre-in-the-round constructed in 1951. Preceded by a tent theatre, this permanent structure, the Carousel, provides intimate performance surroundings. The seating is flexible, accommodating 350 to 500 patrons.

The season runs from September through June, and features a combination of student/ faculty and professional productions. The Department of Theatre also hosts several international artists annually.

All University students are welcome to participate in the University of Tennessee Theatres.

DISABILITY SERVICES
The Office of Disability Services (ODS) is committed to providing equal opportunities for students and employees with disabilities at the University of Tennessee. The primary objective for the office is to eliminate accessibility barriers in order to provide individuals with disabilities equal access to academic, social, career, cultural, and recreational opportunities offered within the university.

To ensure that services are provided in a timely manner, prospective students with disabilities are encouraged to contact ODS one month prior to the semester in which they plan to attend. Contact with the student prior to registration enables the ODS staff to better assess the need for interpreters, readers, accessible facilities, and other support services. Van service is also provided to those individuals with mobility limitations whether permanent or temporary. Documentation of the disability within the last three years from an attending physician or psychologist is required.

To contact the office, call (865) 974-6087, fax: (865) 974-9552, or e-mail: www.ods.edu. To view the web site: ods.utk.edu.

DINING SERVICES FACILITIES
UT Dining Services recognizes that campus dining is a large part of your college experience. Students have the choice of the following meal plan options depending on the type of dining desired. Meal plans are available to all students living on or off campus.

MEAL PLAN OPTIONS

Unlimited Access Plus Plan
Unlimited Access means just that! You may enter Presidential Court Cafe, Sophie’s Place, and Morrill Dining facilities as many times as you like and eat as much as you want, full meals or snacks! You also receive $300 bonus bucks per semester.

The Any Ten Plus Plan
You choose up to 10 meals weekly that may be eaten at Presidential Court Cafe, Sophie’s Place, and Morrill Dining facilities. You also receive $500 bonus bucks per semester.

Unlimited Access Plan
This plan allows you to eat as much as you want as often as you like at Presidential Court Cafe, Sophie’s Place, and Morrill Dining facilities. You also receive $100 bonus bucks per semester.

The Any Ten Plan
You choose up to 10 meals weekly to be eaten at Presidential Court Cafe, Sophie’s Place, and Morrill Dining facilities. You also receive $300 bonus bucks per semester.

The Varsity Inn Fifteen Plan
Fifteen meals per week are provided to be eaten exclusively at Varsity Inn Dining. These 15 meals include breakfast, lunch, and dinner, Monday through Friday. Bonus bucks are not included with the Varsity Inn Fifteen Plan.

• Fees are paid on a per semester basis.
• Rates subject to final University approval.
• Local sales tax is added to the price of off campus meal plans.

• Meal plan contract covers the entire academic year (i.e. fall and spring semesters). Meal plan is not valid between semesters and during Spring Break.
• Meal week begins on Monday at breakfast and ends on Sunday after lunch.
• Bonus bucks may be used whenever you choose at any Dining Services’ facility on campus, including convenience stores. Unused bonus bucks are forfeited at the end of the semester.
• Meal equivalency is another feature of your meal plan that may be used at select retail dining facilities. Certain restrictions apply at these locations.
• Any Ten Plus and Any Ten meal plan participants can elect to eat all their meals at Varsity Inn Dining. Please contact Dining Services for more information.
• Students living in North Carrick, South Carrick, Humes, Reese, Gibbs, and Morrill Halls are required to select a meal plan.
• The AllStar Account and The Diner’s Club may also be used in Dining Services’ facilities. Contact the VoCard Office at 974-3430 for more information on these accounts.

To initiate or amend a meal plan, call UT Dining Services at 974-4111.

EDUCATIONAL ADVANCEMENT PROGRAM
The Educational Advancement Program is a federally funded project (Department of Education-Student Support Services) designed to provide counseling, academic advising, instructional, tutorial, and mentoring services to students with demonstrated academic needs who are also first generation college student, low income or who have physical disabilities.

The project serves 250 students and provides the following services to those who meet program eligibility criteria after application and interview:

Counseling: Trained professionals offer advice and help students develop personal strategies in matters related to financial aid, learning styles, relations with family and friends, adjustment to college, personal and career decision making.

Academic Advising: EAP Counselors provide accurate, thorough and personal one-on-one advice about general curriculum and major requirements for majors in every college in the university.

Academic review advising is an additional service provided by the counselors.

Tutoring: The program employs 35 experienced and knowledgeable undergraduate and graduate students who are trained to provide one-on-one tutoring in a wide range of 100, 200 and 300 level subjects. Students receive 2 to 3 hours of individualized assistance per week. Group tutoring is also available.

Mentoring: A series of structured cultural and social events is scheduled for selected EAP students centered around the need to develop networking skills. Citizens of the Knoxville metropolitan community are invited to share with students.

Instruction: EAP offers special sections of selected classes that have limited class size (25), increased number of class meetings, with empathetic faculty for students who have a need for the personal touch.

Mathematics 123—Finite Mathematics
Mathematics 125—Basic Calculus
Biology 101, 102—Human Kind in a Biotic World
Chemistry 120, 130—General Chemistry

RONALD MCNAIR POST-BACCALAUREATE ACHIEVEMENT PROGRAM
The Ronald McNair Program is designed to encourage and facilitate doctoral studies by first generation college students, low income, handicapped, and students from under-represented groups in the fields of agriculture, engineering, biology, chemistry, computer science, microbiology, math, physics, statistics, anthropology, psychology and other related fields of study.

The McNair Program provides comprehensive student needs assessment and a paid eight-week summer research internship ($2,800). In addition, it provides students six hours of academic credit (summer coursework in oral and written communications, statistics, and research techniques), graduate survival skills seminars, interaction with researchers, housing, meals, and travel allowances, graduate placement services, and long term contact and follow-up. The program also operates an academic year component which offers graduate school application workshops, Graduate Record Examination preparation seminars, and graduate school visitation tours.

For additional information, offices are located at 201 Aconda Court or phone 974-7900.

FRATERNITIES AND SORORITIES
Greek Life at the University of Tennessee includes 24 social fraternities and 17 social sororities. These groups are coordinated by the Interfraternity Council and Panhellenic Council, respectively. These organizations are dedicated to the development of individual potential, emphasizing sound scholarship and the interests and talents of their members. Fraternities and sororities foster a balanced program of social activities and service projects within both the university and the community. Greek organizations are open to new members throughout the school year and encourage interested men and women to acquaint themselves with the Greek system at any time.

HEARING AND SPEECH SERVICES
The Hearing and Speech Center, located at 1600 Peyton Manning Pass, offers complete diagnostic and treatment services to all
University students with speech and language disorders/difficulties or hearing disorders. Services are available to any student who has paid the full University Programs and Services Fee or, if taking fewer than nine hours, for any student who has paid the optional student health insurance fee. The Center serves as a clinical observation and education facility for students majoring in Speech-Language Pathology or Audiology. It also serves as a community hearing and speech center providing diagnostic and treatment services for persons of all ages exhibiting communication disorders/differences.

The Center is accredited by the American Speech-Language-Hearing Association Professional Services Board. Further information is available at www.uthearingandspeech.org.

HOUSING
The University strives to maintain convenient and comfortable residence hall facilities which are available to all single students at a reasonable cost. Many residence halls provide excellent study facilities, including computer rooms, and are all within easy walking distance of classrooms and other university facilities.

On-campus housing provides an atmosphere which is conducive to academic achievement and personal development and it is therefore recommended that all students reside in University housing. All freshman students who are not living with a parent or guardian are required to live in University housing. Housing contracts are a commitment for the academic year, or for shorter periods if the student enters the University during spring. A Housing Application will be mailed as a part of the Application for Admission. Residence Hall assignments for the academic year are made in the late spring and summer. The student must be admitted to the University prior to being assigned. If a student withdraws from the University, the housing contract is cancelled in accordance with policy and the student is responsible for the remainder of the housing contract. Students assigned to residence halls desiring a meal plan will be issued contracts for both room and meals. A contract for housing signed by a student is binding for the term of contract and is non-transferable.

Additional information pertaining to single student housing may be obtained from the Department of University Housing, 405 Student Services Building, The University of Tennessee, Knoxville, Tennessee 37996-0241.

Off-Campus Housing. Students living in off-campus housing are expected to observe the same rules of conduct and standards that are applicable to all students. The student is responsible for obtaining off-campus housing. The University does not inspect or approve these facilities. Terms and conditions for the rental of off-campus housing are between the student and the landlord.

Graduate Students. Single graduate students may be assigned to the residence halls or the single student apartments. For information concerning University residence facilities, please refer to the appropriate paragraphs above describing Undergraduate Students and Off-Campus Housing.

Married Students. The University maintains modern apartment facilities in several locations for married students with families. In addition, single graduate students are accommodated on a space available basis. Information and application for these facilities may be secured from the Department of University Housing, The University of Tennessee, Knoxville, Tennessee 37996-0241.

INFORMATION INFRASTRUCTURE
The Division of Information Infrastructure provides computing and telecommunications resources and services for students, faculty, and staff. DII consists of three operating units: Computing and Network Services, Customer Technology Support, and Telephone Services. Information about DII is available on the DII web site http://dii.utk.edu.

DII provides the core information technology infrastructure for The University of Tennessee. DII provides public-access computer labs, central computing, administrative information systems and network services, as well as information security for UT. Individual computer accounts are provided at no charge for all UT students. These accounts may be used for e-mail, course work, research, and personal Web pages. Information and on-line registration for computer accounts are available at http://dii.utk.edu/accounts.html. Students are also encouraged to download Norton AntiVirus software from http://nav.utk.edu. The AntiVirus is also provided at no cost to students.

Students on the Knoxville campus may access the Internet through direct Ethernet or dial-up accounts. For on-campus students, each dorm room is provided with two switched 10 Mbit Ethernet ports. For off-campus students, the Enhanced Remote Access (ERA) pool is sustained by 756 modems supporting 56 Kbps analog and 64Kbps/128Kbps ISDN connections.

To provide access to computing facilities on campus, DII maintains seven staffed computing labs, 15 unstaffed labs, and supports computing installations in residence halls. The computing labs are equipped with more than 300 microcomputers including current models of Apple, Dell, and Gateway machines. In addition, there are laser printers, scanners, CD-Writers and zip drives available. A variety of industry standard software applications are available for use on the machines in the computing laboratories. For more information, please refer to http://www.dii.utk.edu/labs.html.

DII Help Desk
DII provides the telephone Help Desk as a centralized source of information and service for the computer and network resources managed by DII. Help Desk services are available to all UT students about your UNIX account, ERA account setup and billing, desktop hardware and software, e-mail, network usage and Web page design, and computer connectivity all can be handled by the Help Desk staff. Call 974-9900 for help. Send e-mail to helpdesk@utk.edu (UNIX, Internet, e-mail, or general) or era@utk.edu (connectivity problems or questions).

DII Customer Service Center
DII maintains a Customer Service Center that centrally locates all contact points for walk-in computer support. When students need help, they get an internet account, get an Ethernet card installed, register for an e-mail account, have their password reset, retrieve portions of a research paper from a virus-infected diskette, learn how to construct Web pages, or learn how to download or transfer files across the network, they can come to Aconda Court at the corner of Volunteer and Cumberland.

Walk-in Consulting
The walk-in consulting center (Aconda Court 104) devotes its time to solving problems and teaching. Assistance is given on Web page construction, the use of scanner hardware and software, and uploading files and scanned images to a Web page. Students can come to the consulting center to register for an e-mail account or to get assistance with password problems. Users are taught how to Telnet, how to download and use virus protection programs, how to use WebMail and Lotus Notes, how to surf the Internet on both Netscape and Microsoft Explorer, and how to access the campus computer system through a modem.

Enhanced Remote Access (ERA) and Support
DII supports approximately 6,000 users of ERA. Currently DII provides up to 128K ISDN connections and 56K analog connections. Any UT student, staff, or faculty member can obtain an ERA account that will give them access to the UT computer network, computer resources, and Internet access, all from home. The Enhanced Remote Access office is located in room 103 of Aconda Court at the corner of Volunteer and Cumberland. The ERA office personnel will help you set up your account as well as provide technical assistance either over the phone or for walk-in customers.

Communications Software Distribution
DII distributes communications software to students through the Enhanced Remote Access office located in room 103 of Aconda Court. This software is free of charge. The software can be used to access the resources on the UT network and the Internet. Programs are provided for both PC and Macintosh computers and are available on CD. These software packages will allow students to check e-mail, surf the Web and transfer files.

Dorm Ethernet Card Installation
DII has wired every dorm room on campus for network access. Each network port in the room is a 10Mbps dedicated Ethernet connection. Students living in the dorms with network capable computers will be connected free of charge. Students with computers that do not have network cards installed may obtain a network card at a reduced price. Technicians are available to install the network card and communications software free of charge.

Technology Training
Several courses are offered aimed at improving skills with the technology available at UT. Life Preserver: An Introduction to UT Computing is offered several times each semester on supported application software and operating systems. Other courses include those about MS Office products, Dreamweaver, JavaScript, using the Internet and search engines, and Web Page Essentials, which offers four levels of HTML training. There is also a series of courses on Adobe Photoshop. Please refer to http://web.utk.edu/~train for more information.

Computer-Based Training

The University 13
MINORITY STUDENT AFFAIRS

The Office of Minority Student Affairs is housed in a four-story, free standing structure—the Black Cultural Center. The Office serves as a link between the University and its minority student population. The Office, located at 812 Volunteer Boulevard, provides academic, educational, social, and cultural programs to assist with the academic performance and retention of African-American students. Programming through the Office includes mentorship programs for freshmen and upperclassmen, academic support, leadership opportunities, graduate networking, and workshops for all students on a variety of academic, intellectual, and social topics. Through the Office, students learn to share ideas and embrace a sense of community.

OAK RIDGE ASSOCIATED

UNIVERSITIES (ORAU)

Since 1946, students and faculty of the University of Tennessee have benefited from its membership in Oak Ridge Associated Universities (ORAU), a consortium of colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) located in Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education, the DOE facility that ORAU manages, undergraduates, graduates, postgraduates, as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointments and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the Resource Guide and the Minority Research and Education Programs brochure, which are available by calling the contacts below.

ORAU’s office for University, Industry, and Government Alliances (UIGA) seeks opportunities for collaborative research and development alliances among ORAU’s members, private industry, and major federal facilities. Current alliances include the Southern Association for High Energy Research, the Biocleanmag- netics Research Consortium, High Performance Computing, Bioprocessing, Pan American Association for Physics, Materials Science, and international initiatives in support of the Nonproliferation States in Central and Eastern Europe. Other UIGA activities include the sponsorship of conferences and workshops, the Visiting Scholars program, and the Junior Faculty Enhancement Awards. A copy of Especially for Members, which details UIGA’s programs, is available from the contacts below.

For more information about ORAU and its programs, contact Dr. Anne Mayhew, ORAU Council member, at (865) 974-3265; or contact Ann H. Patton, ORAU Corporate Secretary, at (865) 576-3306.

PARKING AND VEHICLE OPERATION

The University of Tennessee endeavors to provide adequate facilities for vehicles operated by students and staff. However, areas available for parking are necessarily limited. To reduce traffic congestion within the campus area, large student parking areas are located on the perimeter of the campus. Presently, free bus service is provided from the Main Campus to the Agriculture Campus and Perimeter Lot located off Concord Street behind Tyson Park. Also, bus service is provided to UT Family and Graduate Housing Units at a nominal fee.

Each person who operates a motor vehicle in connection with attendance or employment at the University must register his vehicle with the Parking Services Office. There is no charge for vehicle registration; however, a parking permit is required for parking on all University lots, streets, parking structures, or leased lots.

DII Web Site and Documentation

The DII WEB site is located at http://dii.utk.edu/. The DII WEB page provides you with access to information about, and access to, the many DII technology services that are available. On-line and printed documents describe use of resources available to students, faculty, and staff. This documentation includes The Life Preserver, a manual to help you get started using your UNIX account and sending/receiving e-mail, quick reference guides, and frequently-asked-questions (FAQ) Web pages.

Campus Phone and Cable TV

DII provides telephone services for students living on-campus in residence halls and off-campus in University resident apartments. DII also offers on-campus students full cable TV service at an affordable price. Cable TV service provides more than 30 channels, including ESPN, MTV, BET, History, VTV-33 Movies, showing new releases, movie classics, and much more. Please refer to http://dii.utk.edu/students/telephone/ for more information.

RELIGIOUS RESOURCES

The University, established by a government that recognizes no distinction among religious beliefs, seeks neither to promote any creed nor to exclude any. However, it will always be diligent in promoting the spiritual life of its students in part through its work with the Campus Ministers Council.

STUDENT COUNSELING SERVICES CENTER

The Student Counseling Services Center provides services designed to help students with educational, vocational, personal, and social problems. Psychologists and advanced doctoral students in psychology work with the student in a setting that allows confidential discussion of the student’s concerns. In addition, various groups are available to meet the developmental needs of the students. These group settings provide the opportunity to share and learn from others and/or improve specific skills.

The Center also works with faculty and staff to develop educational programs and projects to meet the needs of various groups at the University.

First-time users of the Counseling Center may come during our walk-in hours, which are 10:00-11:30 a.m. and 1:00-3:30 p.m., Monday-Friday. If these times are not available in the student’s schedule, they may call the Center for a convenient time. Anyone in crisis is seen immediately at the Center during the week, Monday-Friday from 8:00 a.m.- 5:00 p.m.

The Counseling Center is located at 900...
STUDENT GOVERNMENT ASSOCIATION

The Student Government Association (SGA) is composed of the Student Senate, the Undergraduate Academic Council, the Graduate Student Association, Student Services Committees, and the Freshman Council. SGA is the governing body of the students at UT. Some objectives are to provide a vehicle for responsible and effective student participation in student life and to promote the recognition of student rights and responsibilities.

Each spring term, general campus elections are conducted to elect the President and Vice-President of the student body and the members of the three elected branches of the SGA. Student Senate members are elected to represent geographical areas of the campus. The Undergraduate Academic Council and Graduate Student Association representatives are elected from the academic colleges and graduate student programs, respectively. Offices of the SGA are located on the third floor of the University Center.

STUDENT HEALTH SERVICE

Health services provided by the University are available to any student who has paid the health fee (either through paying the full University Programs and Services Fee or, if taking fewer than 9 but at least 3 hours, paying the optional health fee). These out-patient services are available continually throughout every term.

The Health Service has a regular staff of primary care physicians, nurses, laboratory and x-ray technicians of Tennessee licensure. Outpatient services in the fields of family practice, internal medicine, pediatrics, sports medicine, and psychiatry are available on a full-time basis while specialty consultants in dermatology, surgery, and gynecology are available on campus through referral by a staff physician. Care beyond that provided by the regular staff can be arranged. Those students requiring allergy injections may arrange to receive them at the Clinic.

Students traveling abroad may receive information, health alerts, and immunizations through the Travel Clinic (974-8647).

Most all medical services at the campus clinic are provided to eligible students at no additional cost.

The primary clinic at 1818 Andy Holt Avenue maintains scheduled daytime hours Monday through Friday. While urgent-care needs may be handled on a walk-in basis, appointments should be made in most instances. (Appointment line: 974-3648). After-hours care (nights, weekends, and holidays) is available through the emergency room at the University of Tennessee Memorial Hospital; insurance reimbursement is accepted as payment in full for all services except inpatient care and specialty consultation. Transportation service for the campus is provided by the Campus Police and the Escort Van Service.

The State of Tennessee requires that all students born after January 1, 1957 must provide proof of immunization with two doses of Measles, Mumps, and Rubella vaccine for attendance to all universities and colleges.

This documentation must be provided to the Student Health Service. In addition, the University of Tennessee Student Health Service recommends that entering-college students assure immunity to Tetanus/Diphtheria, Polio, Hepatitis B, and Chicken Pox. The American College Health Association recommends that students, particularly freshmen living on campus, consider receiving meningitis immunizations.

Students requiring hospitalization are generally admitted by an appropriate specialist to The University of Tennessee Memorial Hospital unless other arrangements are desired. Since inpatient care is sometimes necessary, it is important for the student to have hospitalization insurance. Student group health insurance is available and may be purchased at the beginning of each term.

Health Service personnel will cooperate with students and family physicians in ensuring the continuity of quality health care during their university career.

STUDENT JUDICIAL AFFAIRS

The Office of Student Judicial Affairs has primary responsibility for processing allegations of student misconduct. Personnel within this office serve as advisors to, and administrators of, the student judicial system and when necessary, initiate appropriate disciplinary proceedings. The office is located in Suite 409 of the Student Services Building.

STUDENT ORGANIZATIONS

On campus there are a large number of student chapters of professional organizations, special interest clubs, and other extracurricular organizations. These organizations and clubs provide broad opportunities for student participation.

A listing of all student organizations is found in Hilltopics, the student telephone directory, and on the Dean of Students’ web site. Student organizations must be registered through the Office of the Dean of Students in the fall of each year and update their file each semester.

STUDENT ORIENTATION

This office is dedicated to helping new student adjust to the university setting. It concerns itself with general, personal, and scholastic difficulties of the student during their first year of enrollment at UT. The office is responsible for the summer orientation program, specifically designed for the fall-term new student, as well as orientation programs for freshmen and transfer students presented prior to the beginning of each term. The office is located in Suite 412 Student Services Building.

STUDENT PUBLICATIONS

Three editorially independent student publications are printed during each school year to serve as sources of information for students, to report the many events of interest to the campus community, and to record the year’s activities.

The Daily Beacon, a student newspaper, The Volunteer, yearbook of campus activities, and The Phoenix, literary/art magazine, are sponsored by The University of Tennessee Student Publications Board.

STUDENT RIGHTS AND RESPONSIBILITIES

By registering at the University, the student neither loses the rights nor escapes the duties of a citizen. Enjoying greater opportunities than the average citizen, the University student has greater responsibilities. Each student’s personal life should be conducted in a context of mutual regard for the rights and privileges of others. It is further expected that students will demonstrate respect for the law and for the necessity of orderly conduct in the affairs of the community.

Students are responsible for being fully acquainted with the University catalog, handbook, and other regulations pertaining to students and for complying with them in the interest of an orderly and productive community. The student handbook, Hilltopics, is published and distributed annually and is also available on-line at the Dean of Students’ web site (http://www.utk.edu). Information on student rights and responsibilities is published and distributed annually and is also available on-line at the Dean of Students’ web site (http://www.utk.edu). Information on student rights and responsibilities is published and distributed annually and is also available on-line at the Dean of Students’ web site (http://www.utk.edu).

Since conduct and actions will be measured on an adult standard, students should understand that they assume full responsibility for the consequences of their actions and behavior. The academic community will be judged in large measure by the actions of its members. Therefore, it is incumbent upon students to include the implications for their community in their criteria for determining appropriate behavior. Failure or refusal to comply with the rules and policies established by the University may subject the offender to disciplinary action up to and including permanent dismissal from the University.

SUMMER SCHOOL SESSION

The summer school session offers current and visiting undergraduate and graduate students the opportunity to take a variety of courses offered by 11 colleges and schools. Information on summer courses and registration can be found at Circle Park on line www.cpo.utk.edu or the summer school web site www.outreach.utk.edu/summer. For a Summer School timetable call 1-800-676-8657 or (865) 974-5361.

Summer catalogs with additional information are available after March 1 from the Summer Sessions Office located in 451 Communication Building.

WOMEN’S CENTER

The Women’s Center provides essential information and referral services to UT students, staff and faculty as well as the Knoxville community. The library’s specialized collection provides books, journals, and brochures about issues and concerns of women from both a current and a historical perspective. Information is available on a variety of topics ranging from racism, violence against women, cross-cultural studies, feminist theory, gay studies, local/statewide activism to poetry and health. The Women’s Center is the location of the UT’s Women’s Coordinating Council, as well as the Knoxville Chapter of the National Organization for Women. The Center is located in 301 University Center.
WRITING CENTER
The Writing Center offers free, one-to-one assistance to all writers on the UT campus. Students, faculty, and staff may drop by at any time to get feedback during every stage of the writing process. The up-to-date facility and trained tutors provide a supportive environment where writers can ask questions about their written texts. A variety of reference and writing instruction materials are available for use, as well as Macintosh and IBM-compatible computers for those who are working with the Writing Center tutors.

Students enrolled in English 101 or 102 may enroll in English 103 or 104, writing workshop courses that meet two hours per week in the Writing Center, for one hour of credit.

The Writing Center is located in Room 211 of the Humanities and Social Sciences Building.

UNIVERSITY FEES

University fees and other charges are determined by the Board of Trustees and are subject to change without notice. All student fees are due in advance.

All tuition, maintenance, and course related charges and refunds will be made to the nearest even dollar. All charges are subject to subsequent audit and verification. The University reserves the right to correct any error by appropriate additional charges or refunds.

All students must confirm their attendance by 1) making the minimum payment or 2) signing a Confirmation of Attendance form if no fees are due by the student. If the student does not owe fees due to a waiver (staff, GA, GTA, GRA, etc.), financial aid including scholarships, or fees are paid by another source, a signed Confirmation Form must be received by the Bursar’s Office on or before the due date published in the Timetable of Classes each semester. The schedule will be canceled if one of the above is not accomplished each term on or before the published due date. This includes graduate assistants, teaching assistants, teaching associates, research assistants, staff and others whose fees may be billed, prepaid, or waived. Late registration fees are applicable to students who register during Final Registration.

The University is authorized by statute to withhold diplomas, grades, transcripts, and registration privileges from any student until all debts and obligations owed to the University are satisfied.

The general fees in effect at the time of publication are as follows:

APPLICATION FEE .................................. $25

Each first-time undergraduate for admission must be accompanied by a non-refundable fee of $25 before it will be processed. This fee is not required for transfers within the University system.

VOLXpress is a convenient method for students to take care of business from home. Students who register and pay early will receive the greatest benefit if the payment deadlines are observed.

Each student must submit any change of address to the Enrollment Data Services Office to ensure timely receipt of a VOLXpress Statement. Each Timetable of Classes lists the dates of registration and when and if statements will be mailed.

MAINTENANCE FEES (IN-STATE FEES)

Undergraduate Students—

Per Semester ..................................... $1,406

TUTION (OUT-OF-STATE FEES)

Undergraduate and Graduate—

Full Time (12 hours or more) .............................. $7,687

Graduate Students—

Full Time (less than 12 hours) .......................... $4,667

Part-time students pay tuition computed by the semester hour credit (or audit) at the rates shown below, total charge not to exceed the regular maintenance fee for in-state students or the maintenance fee plus tuition for out-of-state students.

MAINTENANCE (IN-STATE FEES)

Undergraduate Students—

Per Hour (credit or audit) ............................. $35

Part Time (11 hours or less) .............................. $118

TUTION (OUT-OF-STATE FEES)

Undergraduate Students—

Per Hour (credit or audit) .............................. $424

Part Time (11 hours or less) .............................. $274

All students both in and out-of-state are required to pay the established maintenance fee. In addition, tuition is required of students who are classified as non-residents for fee assessment purposes.

UNIVERSITY PROGRAMS AND SERVICES FEE S

Fall and Spring Semester—

Per Credit (or Audit) Hour .............................. $470

Part Time (8 hours or less) .............................. $290

Summer Semester—

Per Credit (or Audit) Hour .............................. $450

Part Time (8 hours or less) .............................. $280

NOTE: The Program and Services Fee is Non-Refundable

The purpose of the University Programs and Services Fee is to provide non-instructional facilities and programs of an educational, cultural, social, recreational, and service nature for UT students. The student health fee is included in the full programs and services fee. Refer to Student Health Insurance and Student Health Services for additional information.

All students enrolled in excess of eight semester hours per term are assessed a Program and Services Fee of $150 per semester. Part-time students taking fewer than nine semester hours will be assessed at the rate of $10 per semester hour, or a fraction thereof; minimum charge $10.

Graduate, teaching, and research assistants, teaching associates and fellowship students who may have a waiver of fees (tuition and/or maintenance) must pay the appropriate University Programs and Services Fee and late payment fee, if applicable.

Knoxville campus students taking a course load of 6-8 hours may elect to pay the full Programs and Services Fee.

Knoxville campus students taking 5-3 hours may elect to pay the student health fee ($48 for fall and spring, $36 for summer) plus the appropriate part-time programs and services fee. Students taking 6 to 8 hours may also elect to pay the student health fee ($48 for fall and spring, $36 for summer) plus the appropriate part-time Programs and Services Fee up to the maximum of $150.

TECHNOLOGY FEE

Full Time (9 hours or more) ......................... $100

Part Time (8 hours or less) .......................... $12

The purpose of the Technology Fee is to provide all students with improved access to the technological infrastructure, resources, and services at UTK.

Graduate, teaching, and research assistants, teaching associates, and fellowship students, who may have a waiver of fees (tuition and/or maintenance), must pay the appropriate Technology Fee.

The Technology Fee is mandatory and may be refunded on the same percentage scale as maintenance and tuition charges.

FACILITIES FEES

The Facilities Fee is a mandatory fee assessed to all students enrolled in credit and audit courses. The fee will be used to provide students with upgraded classroom facilities, expand information technology into the classroom, and fund campus infrastructure improvements. These revenues will be targeted to assist in funding a backlog of campus and classroom projects that will enhance the University’s facilities.

The fee is $25 per semester for full-time, in-state and $150 per semester for part-time, out-of-state students. The fee will be pro-rated for part-time students.

MUSIC FEE

One half-hour lesson per week, per semester ......... $60

One hour lesson per week, per semester ............ $120

Payable by students receiving individual instruction in music. Refunds are determined by the Music Department.

SPECIAL COURSE FEES

Departments such as Art, Chemistry, Biology, Engineering, Bowling, and Golf (for example) charge fees per specific course sections.

If Refunds on these fees are determined by the department or on the same percentage as maintenance and tuition.

PROFICIENCY FEES

Fees for proficiency examinations are $5 per hour credit for undergraduates and $7 per hour credit for graduates. See Proficiency Examinations for additional information.

FEES FOR COURSES NOT TAKEN FOR CREDIT

Fees for courses audited are the same as for courses taken for credit. For fee purposes, courses listed for 0 credit hours are considered as one-hour courses.
DEFERRED PAYMENT PLAN
SERVICE FEE ........................................ $20

A Deferred Payment Fee is assessed when payment of any part of a student’s account is deferred.

It is the student’s responsibility to pay all obligations promptly.

Students are responsible for charges and fees which are to be paid by a third party. Non-Person Entity (NPE) accounts which include government sponsored agencies and private organizations are automatically assessed a $10.00 billing fee when an authorization is presented to the Bursar’s Office. Late authorizations and payments are subject to late payment fees and University schedule cancellation policies and procedures.

PRIORITY REGISTRATION

For a priority registered student, minimum payment or a Confirmation of Attendance Form is due by the published due date, whether or not the student has received a statement, or the student’s schedule will be canceled. The due date will be published in the Timetable available from the Registration Office.

FINAL REGISTRATION LATE FEE

For a student who registers during Final Registration (including those who were canceled during Priority Registration) payment of fees or a Confirmation of Attendance Form must be turned in to one of the Bursar’s Office locations by the Final Registration due date. This due date will be published in the Timetable available from the Registration Office. The Final Registration Late Fee is non-refundable.

Students who register during Final Registration will be assessed a late fee based on the following:

- Beginning of Final Registration through 1st full week of classes .............................................. $20
- 2nd week of classes .............................................. $40
- 3rd week of classes .............................................. $60
- 4th week of classes .............................................. $80
- After 4th week of classes .................................... $100

Doctoral students who must register retroactively for dissertation credit will be charged a late fee of $35 for each semester of retroactive registration.

REINSTATEMENT FEE ................................. $45

VolXpress accounts which have a balance mid-semester to the end of a term will be assessed a reinstatement fee of $45, and grades will be withheld.

RETURNED CHECK SERVICE FEE

All checks are deposited the day they are received. A $20.00 service charge will be assessed when checks fail to clear the bank on the first try to clear. Returned checks will not be redepósited. Cash or certified funds are required for payment of the returned check and service charges.

Any student who does not respond within two weeks from the date of the first notice may be assessed an additional $10 Service Charge. Failure to clear returned checks will result in the forfeiture of all university services, including the receipt of grades, transcripts, schedule of classes and check cashing/writing services. Failure to pay may also result in additional late fees, collection costs, and reasonable attorney fees.

RETURNED CHECK POLICY

Payments made by checks which are returned by the bank adhere to the following returned check guidelines:

First Returned Check—Check writing/check cashing privileges are suspended until the returned check and service charges are paid/cleared.

Second Returned Check—if the second returned check is not within one calendar year of the first, check writing/check cashing privileges are suspended until the returned check and service charges are paid/cleared.

Third Returned Check—Check writing/check cashing privileges are suspended for one year from the date of the third check.

Fourth Returned Check—Check writing/check cashing privileges are permanently suspended.

TUITION PAYMENT PLANS

All student fees are due in advance and should be paid in full by the due date shown on the VolXpress statement and listed in the Timetable of classes. Failure to receive a statement does not relieve the student of their obligation to pay on or before the due date.

DEFERRED PAYMENT POLICY

Students in good financial standing will be offered a deferment of up to 50% of the total charges on their VolXpress statement. The remaining balance for the term is due approximately 45 days after the first due date. All financial aid must be applied toward fees before a deferment will be considered. A deferred payment service fee of $20 is assessed when any portion of tuition, fees, and other charges are deferred with the approval of the Bursar’s Office. An additional $35 late payment fee will be assessed if the second installment is not paid on or before the due date. An additional $45 reinstatement fee will be assessed if fees are not paid by mid-semester.

ROOM PLAN

Semester room charges may be paid in monthly installments. The first month’s rent, plus a deposit of one month’s rent is due at the beginning of the semester. The remaining installments are due every four weeks.

REFUNDS

Refunds are defined as the portion of maintenance and/or tuition and University housing/meal charges due as a rebate when a student withdraws or drops a portion of class hours. Refunds are also processed as a rebate on some fines/penalties paid such as parking fines, library fines, etc. Once a refund is determined to be appropriate, all amounts will be applied toward other outstanding fines/fees owed to the University at the time the refund is issued, including outstanding fees due on the Deferred Payment Plan. Any remaining refund balance will be mailed to the student’s billing address.

Refunds on payments made by credit card will be applied back to the credit card.

REFUND/CHARGE OF FEES FOR WITHDRAWAL (DROP ALL CLASSES)

After payment of fees and/or a Confirmation of Attendance Form has been submitted by the student, withdrawal for the semester must be by official notification to the Withdrawal Office, 201 Student Services Building if an undergraduate student or The Graduate Admissions and Records Office, 218 Student Services Building if a graduate student. Failure to attend class does not automatically withdraw or drop a student from college or class.

The effective date of the withdrawal is the date the appropriate Withdrawal Office is notified by completion of the official withdrawal request form. The appropriate percentage of fees (maintenance and tuition and technology fees only) will be charged unless this action is completed by the close of the day before the first official day of classes for the semester.

Failure to notify the Withdrawal Office promptly when withdrawing could result in a larger fee assessment. Withdrawal does not cancel fees and charges already incurred. All charges and refunds will be made to the nearest even dollar. The drop/add procedure cannot be used to withdraw from school for the semester.

For a regular academic semester, withdrawal within 5 business days beginning with the first class start date of the semester permits a 90% refund/10% charge. Specific dates will be printed in the Timetable of classes. Withdrawal between 6 and 10 business days beginning with the first class start date of the semester permits an 80% refund/20% charge.

NOTE: the "first class start date" is the date on which all classes begin. Withdrawal between 11 and 15 business days beginning with the first class start date of the semester permits a 60% refund/40% charge. Withdrawal between 16 and 20 business days beginning with the first class start date of the semester permits a 40% refund/60% charge. A 100% charge is assessed for courses dropped after 20 business days following the day before the first class start date. Refunds, in accordance with the withdrawal refund policy, will be made after the drop deadline.

FINANCIAL AID WITHDRAWALS (REPAYMENTS)

Refunds and repayment to the Title IV programs are determined according to the formula published in the current “Federal Student Financial Aid Handbook.” The Financial Aid Office is responsible for calculating the amount of the refund and/or repayment and distributing the correct amount back to the financial aid program(s) according to the Refund/Repayment Allocation Policy.

REFUND/REPAYMENT EXAMPLES:

Dependent Student

Withdrawn three weeks into the semester

Initial Stafford loan balance (as of 1/1/10) ....................... $1,697.50
(a) (actual loan amount $1,750.00)
(b) Lived in dorm housing
(c) Enrolled on food plan

Total institutional costs were ........................................ $1,680.00
Non-institutional costs (i.e., book/supplies, transportation, personal living expenses) totaling ........................................ $4,697.00
Refund to Title IV program is ................................. $1,444.57

The University
Independent with No Dependents
Withdraw after six weeks into the semester
Received Stafford loan of ......................... $1,940.00
(actual loan amount $2,000.00)
Tuition charge totaled ................................ $1,681.00
Art fee of ........................................... $15.00
Institutional charge totaled ........................ $1,696.00
Non-institutional (i.e., room/board, book/supplies, transportation, personal living expenses) totaled .............. $4,697.00
Refund to Title IV program is .................... $1,293.98

Dependent Student
Withdraw after nine weeks into the semester
Received Stafford loan of ......................... $1,697.50
(actual loan amount $1,750.00)
Lived in dorm housing ................................ $750.00
Total institutional costs were ....................... $1,701.00
Non-institutional costs (i.e., board, book/supplies, transportation, personal living expenses) totaled .............. $4,697.00
Refund to Title IV program is .................... $0.00

Graduate Student
Withdraw after nine weeks into the semester
Received Stafford loan of ......................... $4,122.50
(actual loan amount $4,250.00)
Institutional charge totaled ........................ $2,002.00
Non-institutional (i.e., room/board, book/supplies, transportation, personal living expenses) totaled .............. $5,758.00
Refund to Title IV program is .................... $2,061.25

NOTE: The above are examples of the current award year and are subject to change.

REFUND/CHARGE OF FEES FOR DROPPED COURSES (Continue With a Reduced Course Load)

Students pay fees computed at the appropriate semester-hour rate as indicated in the fee section. No charge is made for courses dropped during the first 8 business days following the first day of the fall semester class begins. An 80% refund/20% charge is made for courses dropped between 9 and 10 business days following the day before the first class begins. A 60% refund/40% charge is assessed for courses dropped between 11 and 15 business days following the day before the first class begins. A 40% refund/60% charge is assessed for courses dropped 16 and 20 business days following the day before the first class begins.

Students who drop courses and continue with a reduced load are eligible for a refund only if the sum of charges computed at the semester-hour rate for the hours continued, plus the percentage assessed for the hours dropped, results in an amount less than that paid. A course on a student’s schedule is officially dropped, and the drop becomes effective, on the date the change of registration form is processed or the date the drop was entered on the Registration telephone system. Any refund due for dropped courses will be made after the drop deadline.

SUMMER TERM FEES AND EXPENSES

Fees and expenses for the summer semester are the same as for other semesters during the academic year, except for University Programs and Services Fees as previously mentioned.

Although the summer term is divided into sessions of varying lengths, tuition and fees are assessed at the regular summer-semester-hour rate up to the maximum charge for a complete regular semester.

The refund policy covering withdrawal and dropped courses for the summer semester is based on the length of the term for the course(s) dropped. Percentages of refunds are based on the date of withdrawal/drop. See Timetable of classes for specific dates.

WAIVER OF FEES

Graduate assistants, teaching assistants and associates, research assistants, staff and others whose fees are billed, prepaid, waived, or partially waived must Confirm Their Attendance by making payment or signing a Confirmation of Attendance Form by the due date as published in the Timetable of classes or their schedule will be canceled. If an appointment terminates during the term, the student owes the appropriate fees from the termination date until the end of the term.

Graduate students are not eligible for UT employee spouse/dependent discounts.

ARRANGEMENT FOR BANKING WHILE AT UT KNOXVILLE

Banking arrangements can be made with Knoxville banks. Some Knoxville banks require a waiting period before honoring out-of-town checks, if the deposit is a personal check.

New students who wish to open a local checking account are encouraged to deposit a certified check or cashier’s check unless they can pay initial college expenses by a personal check on a bank account already fully established.

STUDENT FINANCIAL AID

The University of Tennessee offers a comprehensive program of financial aid to students who would not otherwise be able to afford to attend. Through these federal, state, and university programs, an eligible student may receive one or more types of assistance.

Families applying for financial assistance based upon financial need (grants, scholarships, loans and employment) must complete a Free Application for Federal Student Aid (FAFSA). An expected family contribution (EFC) is calculated from the information provided on the FAFSA. The EFC is the amount a family is expected to contribute toward students’ educational costs. Federal financial need is defined as the difference between the cost of attendance and a family’s contribution towards these educational expenses.

Cost of Educational Expenses Minus
Expected Family Contribution = Financial Need

When applying for financial aid the Free Application for Federal Financial Aid (FAFSA) must be completed. This information is used in a formula, established by the U.S. Congress, that calculates the Expected Family Contribution (EFC), an amount you and your family are expected to contribute towards your educational costs. Financial need is defined as the difference between the cost of attendance and a family’s contribution towards these educational expenses.

PRIORITY DATE FOR APPLICATIONS

Priority in awarding financial aid will be reserved for processed application data received on, before the priority application deadline of March 1. UT is unable to meet full financial need for all applicants, therefore, requests for financial aid are processed on both a date priority and financial need basis.

SCHOLARSHIPS AND GRANTS

SCHOLARSHIPS

The UT scholarship program is made possible through the generosity of funds provided to the university from individuals, alumni, outside foundations, private business, and civic organizations. The majority of the scholarship programs are coordinated by the Office of Financial Aid and Scholarships and are awarded based on demonstrated strong academic achievement and financial need. Some undergraduate scholarships for currently enrolled students are administered by individual colleges or departments and may require a separate application.

Scholarship Application Dates. The Early Action Priority Filing Date of November 1 is intended for freshmen who desire early notification of their admissions and wish to be considered for UT’s most competitive scholarships which include the Oldham Scholars, Whittle Scholars, Manning Scholars, Neyland Scholars, Bonham Scholars, Roddy Scholars, Holt Scholars, and McClanahan Scholars. Applicants who complete the admissions application process and submit the Entering Freshman Academic Scholarship Application, with all the supporting documentation, by November 1 will be considered for the competitive scholarships. All October ACT/SAT scores received at UT by December 1 will be considered in the scholarship selection process.

The Regular Admissions Application Priority Filing Date of February 1 is intended for freshmen who desire to be considered for Guaranteed Scholarships (Bicentennial, African-American Achievers, Trustees, and Presidential), General University and Alumni Scholarships (except Holt Scholars), and College and Departmental Scholarships (except McClanahan Scholars).

Consideration for Guaranteed Scholarships will be automatically granted for all students who apply for admission and meet the criteria...
for Guaranteed Scholarships. Submission of the Entering Freshman Academic Scholarship Application is not required. Students meeting the criteria for the Guaranteed Scholarships will be automatically awarded. Students may submit additional grades and ACT/SAT scores until August 1 for academic standing for Guaranteed Scholarship consideration. All scholarships are highly competitive and there are not sufficient funds to assist all qualified students. Most scholarships are awarded for one year, with the recipients competing for scholarships each year of enrollment.

**Federal Pell Grant**. Pell Grants are awarded only to undergraduate students who have not earned a bachelor’s or professional degree. A Federal Pell Grant does not have to be repaid. All undergraduates applying for need based financial assistance from the university must apply for a Federal Pell Grant.

**Federal Supplemental Educational Opportunity Grants**. This federal grant is for undergraduate students with exceptional need and priority is given to students who receive a Federal Pell Grant. Students who are full or part-time may apply for a federal SEOG funds are limited, and do not require repayment.

**The Tennessee Student Assistance Award** is designed to further the educational opportunities to residents of the state who display financial need. Awards cover approximately one-half of the maintenance fees for Fall and Spring terms.

More information may be obtained by writing to the Tennessee Student Assistance Corporation, 404 James Robertson Parkway, Suite 1950, Parkway Towers, Nashville, Tennessee 37243.

**STUDENT LOANS**

**Federal Perkins Loan**. A low interest loan (currently 5%) for students with exceptional financial need, as determined by the school. For undergraduate students, priority is given to Federal Pell Grant eligible students. The loan will be issued through the Financial Aid Office, disbursed and co-payed to the Student Loans Department in the University of Tennessee, Knoxville Bursar’s Office.

Eligibility for the Federal Perkins Loan is determined when the student applies for federal aid using the Free Application for Federal Student Aid. The student must be in good standing with the University and must be enrolled or admitted in at least a half-time degree program. Federal Stafford loans are available to students on need based eligibility and non-need based circumstances. Students determined eligible for the Subsidized, or need-based, Stafford loan program will have interest subsidies paid by the federal government to the lending institution while the borrower is in school. Unsubsidized (non-need based) Stafford loans are available to students regardless of need. Interest will accrue while the borrower of an unsubsidized Stafford loan is in school. The student has the option to pay this interest on a monthly or quarterly basis, or allow it to accrue and capitalize.

Two disbursements of the loan will be made to the borrower at the time of enrollment and middle of the loan period. Some first year undergraduate students who are first time Stafford Loan borrowers will not receive the first loan disbursement until 30 days after the day the program of study begins.

Some first time borrowers must receive Entrance Interview Loan Counseling at the Financial Aid Office before receiving the first disbursement of loan funds. Charges of up to 3% will be deducted from the loan disbursements for federal government and bank loan costs. A student may borrow up to a total outstanding debt of $23,000 as a dependent undergraduate and $46,000 as independent undergraduate. For graduate or professional studies a student may borrow up to a total debt of $138,500 ($65,500 in subsidized Federal Stafford Loan and $73,000 in Unsubsidized Federal Stafford Loan).

Loan repayment amounts will be determined by the lending institution, and will begin no earlier than 6 months after graduation, withdrawal, or less than half-time attendance. Certain circumstances may allow a borrower to defer payment or cancel a portion of a loan if requested by the borrower through the lending institution. The above regulations and provisions of the Stafford Loan Program are correct as of March 2001 and are subject to change by federal legislation or regulation.

**PLUS Program**. Federal PLUS loans are available to parents of dependent students enrolled at least half-time in a degree seeking program. This low interest loan program is available to students in good standing with the University. A PLUS disbursed on or after July 1, 1993 will have a variable interest rate which is determined each June (check with your lending institution for the current interest rate). Charges of up to 3% will also be deducted from the loan disbursements for federal government and bank loan costs.

A Federal PLUS may be requested by the parent borrower for up to the student’s cost of education minus any estimated financial aid received. Funds will be disbursed to the school, made co-payable to the parent borrower and the school. PLUS loans are subject to credit checks at the lending institution. Repayment of principal and interest begins sixty (60) days after the final loan disbursement. Certain circumstances may allow the lending institution to defer payment or cancel a portion of a loan if requested by the borrower. The above regulations and provisions of the PLUS program is correct as of March 2001 and are subject to change by federal legislation or regulation.

**STUDENT EMPLOYMENT**

Many students are employed part-time during their student years in order to supplement financial aid or other sources of support while at the University. Such employment offers valuable aid and develops good working skills. However, the more time spent in employment the less there is available for preparing for classes and involvement in campus life, two of the most important factors contributing to academic success. For those who find employment while classes are in session to be necessary, the Financial Aid Office administers the Federal Work Study. Career Services administers the Student Employment Service.

**Federal Work-Study**. The federal work study program provides jobs for students who have financial need and who must earn a part of their educational expenses. Eligible students are placed in jobs on campus where they can work a maximum of 20 hours per week. Jobs are available in a wide variety of academic departments and other campus units. The rate of pay is above federal minimum wage.

**Student Employment Service** operates as a central referral agency for all UT students who are eligible U.S. residents. It coordinates listings of part-time employment from both University and private employers with the requests of students seeking employment. Part-time jobs average from 15 to 20 hours per week.
ADMISSION TO THE UNIVERSITY OF TENNESSEE

As the state’s largest and most comprehensive university, the University of Tennessee seeks to provide high quality educational programs for all students who have the academic ability and motivation to adapt to and profit from a baccalaureate education. Similar opportunities are available at the graduate level, see the Graduate Catalog. While the majority of students at UT are residents of the State of Tennessee, the university welcomes qualified students from other states and from outside the United States. Students from a variety of cultures add richness and diversity to the total educational experience for all.

The curricula, supporting programs, and administrative structure at UT are designed to serve students bringing with them a variety of academic backgrounds and experience. Honors courses and sections and special programs challenge a student who previously has demonstrated outstanding overall academic attainment or skills in a particular subject area. However, experience has shown that other students can achieve a high level of attainment. This achievement is of vital importance to the student, the University, and the State. The student’s motivation must be sufficiently strong and the University must provide the necessary attention of concerned teachers and advisors. UT encourages persons whose academic backgrounds and experience.

The University of Tennessee seeks to enact a freshman class that reflects its mission as the state’s leading public teaching and research university; represents the diversity of the state of Tennessee; and incorporates enrollment guidelines established by the Board of Trustees.

Each fall, UT enrolls a freshman class of approximately 3,800. The Fall 2000 entrance class had a middle 50th percentile of an ACT range of 21 to 26 and a high school GPA range of 3.0 to 3.7.

REQUIREMENTS FOR UNDERGRADUATE ADMISSION

Anyone interested in attending UT as an undergraduate student should contact the Admissions Office. Return of a complete application form and transcripts to the Admissions Office results in the formation of an admissions file for each applicant. When a file is complete, an admissions decision is made, and the applicant is notified by mail.

DEADLINES FOR APPLICATIONS

Fall Semester: For freshman applicants, all application materials, the official high school transcript complete through six semesters (junior year), and official test scores must be postmarked by January 15. Priority admissions decisions are given to applicants’ files completed by November 1 of the high school senior year. Any applicant who wishes to be considered for scholarships must have the admissions application and all supporting materials postmarked by January 15. Transfer and readmission applicants for Fall semester must submit an application and supporting documentation by January 15.

Spring Semester/Summer Term: Completed application materials and supporting credentials for first time freshmen, transfer, and readmission students must be received in the Office of Admissions by the following dates: November 1 for Spring semester freshman transfers; January 15 for Summer term freshmen; and April 1 for Summer term transfers.

FRESHMAN ADMISSION

The University of Tennessee seeks to admit a freshman class that reflects its mission as the state’s leading public teaching and research university; represents the diversity of the state of Tennessee; and incorporates enrollment guidelines established by the Board of Trustees.

Each fall, UT enrolls a freshman class of approximately 3,800. The Fall 2000 entering class had a middle 50th percentile of an ACT range of 21 to 26 and a high school GPA range of 3.0 to 3.7.

Freshman decisions are based on the following elements:
1. Completion of core academic subjects comprising the 14 units required or admission:
   • 4 units of English;
   • 2 units of algebra;
   • 1 unit of geometry, trigonometry, advanced math, or calculus;
   • 2 units natural science, including at least 1 unit of biology, chemistry, or physics;
   • 1 unit of American History;
   • 1 unit of European history, world history, or world geography;
   • 2 units of a single foreign language; and
   • 1 unit of visual or performing arts.
2. GPA in these core academic subjects, weighted by UT to reflect honors, Advanced Placement (AP), International Baccalaureate (IB), and college dual enrollment.
3. Standardized test score (SAT or ACT).
4. Other relevant factors, including a student statement, extracurricular or leadership activities, background, and rank in class.

Anyone interested in attending UT as a freshman student should contact the Undergraduate Admissions Office at (865) 974-2184 to receive an official application or go to the web, www.utk.edu, and click on admissions.

Items Necessary for an Admission Decision
1. Completed application;
2. High school transcript on file in the Undergraduate Admissions Office;
3. Official ACT or SAT score (UT’s ACT code = 4026; UT’s SAT code = 1843);
4. Payment of a $25.00 nonrefundable application fee.

FRESHMAN APPLICATION PRIORITY FILING DATES

Completed application and necessary documents should be postmarked by the following dates:

FALL SEMESTER

Early Action Priority Filing Date is November 1, 2001. This date is intended for freshmen who desire early notification of their admissions; and wish to be considered for our most competitive scholarships which include...
McClanahan Scholars, Oldham Scholars, Whittle Scholars, Manning Scholars, Bonham Scholars, Holt Scholars, Neyland Scholars, Roddy Scholars, and Tennessee Scholars. Students who apply by the Early Action priority filing date will be notified by mid-January of an admission decision. Students not offered admission in the Early Action pool will be automatically considered for admission in the February 1 applicant pool.

October ACT/SAT scores will be considered for admission and scholarships if received by December 1, 2002, provided an application and necessary documents postmarked by November 1 are on file. To ensure receipt, students should request at the time of testing that official scores be sent to the University of Tennessee. UT’s ACT code number is 4026; UT’s SAT scores should be sent to the University of Tennessee.

Students not offered admission in the Early Action pool will be automatically considered for admission in the February 1 applicant pool. October ACT/SAT scores will be considered for admission and scholarships if received by December 1, 2002, provided an application and necessary documents postmarked by November 1 are on file. To ensure receipt, students should request at the time of testing that official scores be sent to the University of Tennessee. UT’s ACT code number is 4026; UT’s SAT scores should be sent to the University of Tennessee.

Early Action does not require an early commitment from the applicant; however, competitive scholarship recipients must respond to offers of scholarships by April 1. An extension may be granted upon written request and such requests will not jeopardize a student’s status for admission or financial aid.

Regular Admissions Application Priority Filing Date is February 1, 2002. Students who apply and submit all necessary items by this date will be notified of an admission decision no later than April 1.

All students who meet the February 1 admissions deadline will be considered for the following academic scholarships provided they submit the Entering Freshman Academic Scholarship Application:

- Guaranteed Scholarships (Bicentennial, African-Americans, Trustees, President’s) Students who meet the criteria for guaranteed scholarships do not need to submit the scholarship application. Students who meet the criteria will be automatically awarded the guaranteed scholarships. Students may submit additional grades, ACT and/or SAT scores until August 1 to improve their academic standing for guarantee scholarship consideration.
- General and Alumni Scholarships except the Holt.
- College and Departmental Scholarships except McClanahan Scholars.

In addition to the Application form, a freshman applicant must:

1. Submit an initial transcript of credits earned through the junior year. Transcripts carried or mailed by the student are acceptable only if contained in a sealed envelope with an official school signature. Unofficial transcripts may be used for admission evaluation purposes. Once accepted, a student must have an official final transcript with documentation of graduation mailed to the Office of Undergraduate Admissions.
2. Have the score report of the American College Testing program (ACT) or the Scholastic Aptitude Test (SAT) sent to the Admissions Office directly from the high school or testing agency.
3. Pay a nonrefundable application fee of $25.00.
4. Submit any additional items and information requested in the application materials or by the Office of Admissions.

Graduates of Non-Approved High Schools and Home-Schooled Students

Graduates of non-approved high schools or home schools who apply for admission as first-time freshmen at UT must provide an official high school transcript and, if requested, course syllabi; and submit items mentioned in points 2-4 above.

General Education Development (GED)

Students who have achieved a high school diploma through the General Education Development (GED) Test also must have the GED scores sent directly from the testing center to the University. The GED score is evaluated with other factors, but applicants must have total average GED scores of at least 50 to be considered for admission. Applicants with GED scores are expected to meet high school unit requirements unless they graduated from high school prior to 1989 or unless they qualify as re-entry student applicants who are otherwise academically well-prepared.

Advanced Placement Examinations

Freshmen admitted to UT may receive credit on the basis of performance on one or more of the Advanced Placement Examinations offered each May by the College Entrance Examination Board in 16 subject areas. The tests are usually taken by high school students during their junior or senior year.

Departments at UT which grant advanced placement credit for satisfactory test scores include: Biology, Chemistry, Computer Science, Economics, English, French, German, History, Latin, Mathematics, Music, Physics, Political Science, Psychology, Spanish and Statistics. The CEEB sends scores and test books on request to the Director of Admissions at UT sometime in June or July. Each participating department decides the acceptable score for credit. Information can be obtained from the Admissions Office or from the Arts and Sciences Advising Center.

ADMISSION TO THE SCHOOL OF ARCHITECTURE

The School of Architecture grants and encourages provisional admission at the time of admission to the University. The program of the School is carefully designed by stages, and students who are not ready for admission at the time of university admission should consult with an Architecture advisor to plan a program that will include coursework. Specific requirements for admission and progression are listed under the School of Architecture.

TRANSFER ADMISSION REQUIREMENTS

Transfer students with fewer than 30 earned transferable college-level hours will be considered on the same basis as new freshman applicants. Transfer applicants who have completed all required high school units and 30 or more hours of earned transferable college-level work with a minimum 2.0 GPA, will be admitted.

Anyone interested in attending UT as a transfer student should contact the Office of Undergraduate Admissions to receive an official application or go the web, www.utk.edu, and click on admissions.

Items Necessary for an Admission Decision

1. Completed application.
2. An official transcript of all work from each college or university attended.
3. Official high school transcript or GED if applicable.
4. Official ACT or SAT score (required only for students with less than 30 hours of transferable work completed).

5. Payment of a $25.00 nonrefundable application fee.

After review of the competed application, an admissions decision is made and the applicant notified by mail.

GRADES

Only those courses in which at least a C was earned shall be eligible for transfer credit. Grades earned at other institutions are used only for admission, course placement and other academic decisions. In order to be considered for admission to UT, a transfer applicant must have a minimum of a 2.00 grade point average (on a 4-point scale) overall in college-credit courses considered for transfer credit, and over all courses attempted. Transfer grade averages are calculated by UT and include both original and repeated coursework, regardless of the grade. The UT transfer grade point average may differ from averages calculated by other institutions. Following enrollment at the University, only grades earned in course work at UT will be used in determining continuation standards, graduation requirements and grade point average.

COURSE EVALUATION

Following the applicant's admission to the University, a transcript evaluation will be initiated by the Office of Admissions to determine (1) which courses from other institutions are equivalent to courses at UT, (2) which will transfer as general elective credit, and (3) which courses, if any, will not transfer. Upon admission, a student may be classified as a freshman, sophomore, junior, or senior, according to the number of hours approved for transfer credit.

The faculty, through the deans and directors of the colleges and schools at UT, has the responsibility for determining guidelines for which courses are accepted for transfer credit. Certain transferable courses are not equivalent to specific UT courses. These courses may be used to meet specific curriculum requirements only with approval of the UT college in which the student’s program is located. Appeals concerning transfer of course credit, whether by institutions or individuals, should be addressed to the dean of the appropriate UT college.

Prospective transfers to UT are encouraged to complete a sequence of related courses rather than transferring a single course from a series. Students at community or junior colleges, particularly within the State of Tennessee, are encouraged to complete the associate degree requirements prior to transferring to UT.

HIGH SCHOOL UNITS

Transfer students who graduated from high school prior to 1989 or with 60 or more semester hours of transferable credit are exempt from high school course unit requirements. Other transfer applicants with more than one deficiency (outside of Art unit) in high school course unit requirements are not typically admitted to the University. Transfer students with a deficiency who graduated from high school in 1989 or later and who have earned less than 60 semester hours are required to complete the high school unit requirements within the first 30 semester hours at UT.
ARTICULATION AGREEMENTS

In addition, the University has special transfer articulation agreements with some Tennessee community colleges, leading to admission with junior standing in particular majors at UT. These transfer programs lead to the awarding of the associate degree by the specified community college and a baccalaureate degree by UT, provided the student successfully completes all the courses required in a particular program and meets the grade point average requirements for that agreement. All other academic regulations of the degree-granting institutions must also be satisfied. Details on specific programs and requirements are available from the Office of Undergraduate Admissions at UT, or from the specified community college.

INTERNATIONAL STUDENT APPLICANTS

All foreign nationals on non-immigrant visas are classified as international students whether they are applying for a bachelor's degree or transfer students. In addition to the information below, additional information for international students is available from the Admissions Office or the Center for International Education.

To apply for admission as an undergraduate student, each international student is required to provide the following:
1. A completed application for undergraduate admission;
2. Authenticated copies of all academic records. These records should describe the courses of instruction in terms of years spent in school and type of subject matter covered, with grades earned in each subject;
3. Evidence of English proficiency according to the following requirements for students whose first language is not English.
   a. Any applicant to the undergraduate program whose first language is not English—with the exception of some transfers from regionally accredited colleges or universities in the United States (see c below)—must present a "Test of English as a Foreign Language (TOEFL)" score of at least 193 (computer based) or 523 (paper based), earned within two years prior to application, before being admitted; final consideration cannot be granted until test results are received by the Director of Admissions from the TOEFL test agency.
   b. The University of Tennessee English Placement Test must be taken prior to registration; this test will determine whether the student needs to take more English and, if so, at what level. The English Placement Test grants no credit. Students assigned to special English courses must enroll the first semester of attendance, stay continuously enrolled in the assigned courses until completion of all requirements, and should complete the requirements within the first year of continued enrollment at the University of Tennessee.
4. An undergraduate student whose first language is not English is exempted from taking the UT English Placement Test and from presenting a TOEFL score of 523 (or 193 on the computer-based TOEFL) provided that the student has satisfied all requirements for freshman composition with a grade of C or better at an accredited college or university in the United States. Freshmen English for Foreign Students does not exempt a student from presenting a TOEFL score of at least 523.
   d. A United States citizen or permanent may demonstrate English proficiency by submitting a minimum ACT English score of 21 (SAT verbal 510; 430 if taken prior to April, 1995) or TOEFL 193 (computer based) or 523 (paper based).
   e. Applicants from certain countries are required to present a TOEFL score of 523 or 21 (SAT verbal 510; 430 if taken prior to April, 1995) or TOEFL 193 (computer based) or 523 (paper based).
   f. International students must be enrolled in a health and accident insurance plan provided by UT.
   g. For international students, completion of application forms and all required supporting documents and fees must be received in the Office of Admissions no later than the following dates:
      - Fall Semester: September 1
      - Spring Semester: March 1
   h. International students are subject to various enrollment limitation regulations comparable to those affecting U.S. citizens. The Admissions Office will notify any applicant of any applicable regulations in effect at the time of application.

FEES FOR SPONSORED INTERNATIONAL STUDENTS

An administrative management fee will be charged to sponsoring agencies of international students whose programs require special administrative or management services beyond those normally provided. Fees are $250 per semester and $100 per summer session.

VISITING STUDENT APPLICANTS

A college visiting student is one who is actively enrolled in a program at another accredited institution of higher learning but who desires to enroll temporarily at UT because of the availability of certain courses of work or because of temporary residence in the Knoxville area.

Visiting students are admitted for one semester only. Students desiring to transfer to UT must file an application for admission as a transfer student. Students desiring to attend UT on an interim basis for one semester only must submit a completed application and $25.00 non-refundable application fee and have an official letter of good standing sent directly to UT Admissions. Applications are subject to review and admission is not guaranteed.

Since records from other institutions attended) may be used by a non-degree student in any subsequent degree program at UT.

SENIOR AND DISABLED STUDENTS

Persons 65 years of age or older or totally disabled persons who are residents of Tennessee may audit courses without payment of fees if space is available in the individual class. Persons 65 years of age or older or totally disabled persons who are residents of Tennessee may enroll in courses for credit at reduced fees. Inquire at The University of Tennessee Evening School, 451 Communications Building, during regular working hours.

ACADEMICALLY TALENTED HIGH SCHOOL STUDENTS

Academically talented high school students enrolled in grades 9, 10, 11, and 12 in public or private school in Tennessee may apply to enroll and receive regular college credit from a Tennessee postsecondary institution if: (1) they receive the recommendation and approval of the high school principal and appropriate higher education institution personnel; (2) they have a grade point average equivalent to 3.2 or higher on a 4.00 scale; and (3) such placement is a part of the student's planned Individual Educational Placement (IEP) as established by the multidisciplinary team process. Students are encouraged to submit standardized test scores (ACT or SAT). Applications are subject to review and admission is not guaranteed.

NON-DEGREE STUDENT APPLICANTS

Persons desiring to take courses for credit, but who do not intend to pursue a degree, should apply for non-degree status. The Admissions Office processes all applications, regardless of intended registration location. Non-degree students must show evidence of satisfactory preparation for the courses they wish to take, generally through prior completion of a Bachelor's degree. Ordinarily the high school class of a non-degree student must have graduated. Former UT students and most other students may not be admitted in this category prior to the receipt of a bachelor's degree. Non-degree students whose native language is not English may be required to submit proof of English language competency as outlined in 3 under International Student Applicants. If there is a change in educational goals leading to interest in a degree program, a non-degree student must meet all previously indicated transfer, admission, or college association requirements for admission to degree seeking status. Non more than 60 semester hours of accumulated college credit (from all institutions attended) may be used by a non-degree student in any subsequent degree program at UT.
FRESHMAN EARLY-ADMISSION STUDENTS

Freshman early-admission students are those who have completed the junior year of high school, have a grade point average of at least 3.50 and have an ACT composite of 29 or above or SAT I of 1280 or above (1180 if taken prior to April, 1995). Application is subject to review and approval by the Director of Admissions following an interview. For additional information and scheduling of an interview, interested students should contact the Office of Admissions, 320 Student Services Building.

OTHER CONDITIONS

The following question appears on the University of Tennessee application for undergraduate admission and readmission: “Have you ever been arrested or convicted for a crime other than a minor traffic violation? If yes, explain briefly.” Every candidate for admission or readmission is required to respond accurately and thoroughly to this question. The University reserves the right to deny admission or readmission to candidates who, in its sole discretion, pose an unreasonable risk to the University community. The University also reserves the right to deny admission or readmission to any candidate refusing to provide a thorough and accurate response to this question and all other questions on the Admissions application. Subsequent discovery of false information may result in rescission of admission or readmission.

EXCEPTIONS TO ADMISSIONS REQUIREMENTS

The University requirements for the various categories of admission are thought to be reasonable and consistent with good educational practice. Thus, these requirements are not normally waived or modified for any applicant, except as specifically noted. However, unusual circumstances sometimes exist. If a potential student thinks that some part of the requirements for the category sought should not apply as they should write to the Director of Admissions, stating clearly the specific circumstances prompting the appeal and what changes in the stated requirements are sought. The reply to this letter will indicate whether any exception to the requirements will be made, the reasons for the decision, and will describe any further action which the applicant might take. The Dean of Admissions and Records has the prerogative of making exceptions on the minimum criteria for applicants who do not show high aptitude in certain scholastic skills but show other indications of ability to progress through UT and earn a degree.

READMISSION

Submission of an application for readmission is required for a student previously seeking a degree who has withdrawn from UT, who has been absent from a term other than the summer term, or who has been academically dismissed. A readmission applicant may be asked to appear before the Committee on Readmission. A student who previously attended as a non-degree student and wants to reenter as a degree seeking student must complete an application for undergraduate admission unless they have obtained a degree from the University of Tennessee (main campus).

A student who has attended another college or university since attending UT must have an official transcript sent to the University.

Students dismissed when they last attended the University, left in Academic Review, and those who have registered at another institution of higher education since their last UT enrollment must apply well in advance, generally three to four months prior to the beginning of the term. Submitting an application for readmission does not guarantee admission.

Official transcripts of any transfer work attempted after a student’s enrollment at UT must be submitted before a decision on readmission can be made. For specific deadline dates, students should consult the Office of Admissions, 320 Student Services Building.

To register for courses in any other branch, center, or division of the University controlled by the Knoxville campus, a student must meet the readmission regulations that govern courses for credit at the Knoxville campus. However, students may register for correspondence courses (with prior permission of their college dean) without being readmitted.

FEE CLASSIFICATION FOR THE PURPOSE OF PAYING UNIVERSITY FEES AND FOR ADMISSION PURPOSES

Students are classified as in-state or out-of-state for the purpose of paying University fees. The classification is determined by the information recorded on the application for admission and may be reviewed as the result of submission of a subsequent fee classification questionnaire. Notice of classification is sent back shortly after the student applies to the University. The determination is made on the basis of the regulations established by the Board of Trustees, with the intent that all public institutions of higher education in Tennessee apply uniform classification rules. Basically, these regulations state that (1) students receiving parental support are classified according to parental domicile, and (2) an emancipated student independent of parents may establish in-state classification by producing clear and convincing evidence of Tennessee domicile with proof that the move to Tennessee was not primarily for obtaining educational opportunities for themselves, dependents, or spouse. Forms and copies of the regulations for undergraduates may be obtained from the Residence Clerk, 320 Student Services Building. Additional appeals may be directed to the Coordinator of Residency Classification, Room 320 Student Services Building.

Scholarship recipients and children of alumni are treated as in-state residents for the purpose of applying admission criteria. However, such students will be required to pay out-of-state fees unless they can meet the in-state residency requirements stated above.

An out-of-state student completing one of the University’s pre-professional programs (law, health services, veterinary medicine, etc.), does not gain preferential priority in seeking admission to a professional program that is otherwise restricted primarily to Tennessee residents.

REGULATIONS FOR CLASSIFYING STUDENTS IN-STATE AND OUT-OF-STATE FOR THE PURPOSES OF PAYING COLLEGE OR UNIVERSITY FEES AND TUITION AND FOR ADMISSION PURPOSES


Paragraph 1. INTENT

It is the intent that the public institutions of higher education in the State of Tennessee shall apply uniform rules, as described in these regulations and not otherwise, in determining whether students shall be classified “in-state” or “out-of-state” for fees and tuition purposes and for admission purposes.

Paragraph 2. DEFINITIONS. WHEREVER USED IN THESE REGULATIONS.

1. “Public higher education institution” shall mean a university or community college supported by appropriations made by the Legislature of this State.

2. “Residence” shall mean continuous physical presence and maintenance of a dwelling place within this State, provided that absence from the State for short periods of time shall not affect the establishment of a residence.

3. “Domicile” shall mean a person’s true, fixed, and permanent home and place of habitation; it is the place where he intends to remain, and to which he or she expects to return when he or she leaves without intending to establish a new domicile elsewhere.

4. “Emancipated person” shall mean a person who is no longer in the care, custody and control of his or her parent.

5. “Parent” shall mean a person’s father or mother. If there is a non-parental guardian or legal custodian or an unemancipated person, then “parent” shall mean such guardian or legal custodian; provided, that there are not circumstances indicating that such guardianship or custodianship was created primarily for the purpose of conferring the status of an in-state student on such unemancipated person.

6. “Continuous enrollment” shall mean enrollment at a public higher educational institution or institutions of this State as a full-time student, as such term is defined by the governing body of said public higher educational institution or institutions, for a normal academic year or years or the appropriate portion or portions thereof since the beginning of the period for which continuous enrollment is claimed. Such person need not enroll in summer sessions or other such intersessions beyond the normal academic year in order that his or her enrollment be deemed continuous. Enrollment shall be deemed continuous notwithstanding lapses in enrollment occasioned solely by the scheduling of the commencement and/or termination of the academic years, or appropriate portion thereof, of the public higher educational institutions in which such person enrolls.

Paragraph 3. RULES FOR DETERMINATION OF STATUS

1. Every person having his or her domicile in this State shall be classified “in-state” for fee and tuition purposes and for admission purposes.

2. Every person not having his or her domicile in this State shall be classified “out-of-state” for said purposes.
3. The domicile of an unemancipated person is that of his or her parent. Unemancipated students of divorced parents shall be classified "in-state" when one parent, regardless of custodial status, is domiciled in Tennessee.

Paragraph 4. OUT-OF-STATE STUDENTS WHO ARE NOT REQUIRED TO PAY OUT-OF-STATE TUITION.

1. An unemancipated, currently enrolled student shall be reclassified out-of-state should his or her parent, having theretofore been domiciled in the State, remove from the State. However, such student shall not be required to pay out-of-state tuition nor be treated as an out-of-state student for admission purposes so long as his or her enrollment at a public higher educational institution or institutions shall be continuous.

2. An unemancipated person whose parent is not domiciled in this State but is a member of the armed forces and stationed in this State or at Fort Campbell pursuant to military orders shall be classified out-of-state, but shall not be required to pay out-of-state tuition. Such a person, while in continuous attendance toward the degree for which he or she is currently enrolled, shall not be required to pay out-of-state tuition if his or her parent thereafter is transferred on military orders.

3. A person whose domicile is in a county or another state lying immediately adjacent to Montgomery County, or whose place of residence is within thirty (30) miles of Austin Peay State University, shall be classified out-of-state but shall not be required to pay out-of-state tuition at Austin Peay State University. Provided, however, that there be no teacher college or normal school within the non-resident's own state, or for an individual who has a bona fide residence in the State of Tennessee but who qualifies and is selected to participate in specified institutional undergraduate Honors Programs who shall be classified out-of-state but shall not be required to pay out-of-state tuition.

4. A person whose domicile is in Mississippi, Arkansas, or either Dunlin County or Pemiscot County, Missouri, and who is admitted to Dyersburg State Community College, shall be classified out-of-state but shall not be required to pay out-of-state tuition.

5. Military personnel and their spouses stationed to teacher education programs.

Paragraph 5. PRESUMPTION.

If a student classified out-of-state applies for reclassification to teacher education programs.

Paragraph 6. EVIDENCE TO BE CONSIDERED FOR ESTABLISHMENT OF DOMICILE.

1. An unemancipated, currently enrolled student shall be reclassified out-of-state should his or her parent, having theretofore been domiciled in the State, remove from the State. However, such student shall not be required to pay out-of-state tuition nor be treated as an out-of-state student for admission purposes so long as his or her enrollment at a public higher educational institution or institutions shall be continuous.

2. An unemancipated person whose parent is not domiciled in this State but is a member of the armed forces and stationed in this State or at Fort Campbell pursuant to military orders shall be classified out-of-state, but shall not be required to pay out-of-state tuition. Such a person, while in continuous attendance toward the degree for which he or she is currently enrolled, shall not be required to pay out-of-state tuition if his or her parent thereafter is transferred on military orders.

3. A person whose domicile is in a county or another state lying immediately adjacent to Montgomery County, or whose place of residence is within thirty (30) miles of Austin Peay State University, shall be classified out-of-state but shall not be required to pay out-of-state tuition at Austin Peay State University. Provided, however, that there be no teacher college or normal school within the non-resident's own state, or for an individual who has a bona fide residence in the State of Tennessee but who qualifies and is selected to participate in specified institutional undergraduate Honors Programs who shall be classified out-of-state but shall not be required to pay out-of-state tuition.

4. A person whose domicile is in Mississippi, Arkansas, or either Dunlin County or Pemiscot County, Missouri, and who is admitted to Dyersburg State Community College, shall be classified out-of-state but shall not be required to pay out-of-state tuition.

5. Military personnel and their spouses stationed to teacher education programs.

Paragraph 5. PRESUMPTION.

If a student classified out-of-state applies for reclassification to teacher education programs.

Paragraph 6. EVIDENCE TO BE CONSIDERED FOR ESTABLISHMENT OF DOMICILE.

1. An unemancipated, currently enrolled student shall be reclassified out-of-state should his or her parent, having theretofore been domiciled in the State, remove from the State. However, such student shall not be required to pay out-of-state tuition nor be treated as an out-of-state student for admission purposes so long as his or her enrollment at a public higher educational institution or institutions shall be continuous.

2. An unemancipated person whose parent is not domiciled in this State but is a member of the armed forces and stationed in this State or at Fort Campbell pursuant to military orders shall be classified out-of-state, but shall not be required to pay out-of-state tuition. Such a person, while in continuous attendance toward the degree for which he or she is currently enrolled, shall not be required to pay out-of-state tuition if his or her parent thereafter is transferred on military orders.

3. A person whose domicile is in a county or another state lying immediately adjacent to Montgomery County, or whose place of residence is within thirty (30) miles of Austin Peay State University, shall be classified out-of-state but shall not be required to pay out-of-state tuition at Austin Peay State University. Provided, however, that there be no teacher college or normal school within the non-resident's own state, or for an individual who has a bona fide residence in the State of Tennessee but who qualifies and is selected to participate in specified institutional undergraduate Honors Programs who shall be classified out-of-state but shall not be required to pay out-of-state tuition.

4. A person whose domicile is in Mississippi, Arkansas, or either Dunlin County or Pemiscot County, Missouri, and who is admitted to Dyersburg State Community College, shall be classified out-of-state but shall not be required to pay out-of-state tuition.

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If a student classified out-of-state applies for reclassification to teacher education programs.

Paragraph 6. EVIDENCE TO BE CONSIDERED FOR ESTABLISHMENT OF DOMICILE.

1. An unemancipated, currently enrolled student shall be reclassified out-of-state should his or her parent, having theretofore been domiciled in the State, remove from the State. However, such student shall not be required to pay out-of-state tuition nor be treated as an out-of-state student for admission purposes so long as his or her enrollment at a public higher educational institution or institutions shall be continuous.

2. An unemancipated person whose parent is not domiciled in this State but is a member of the armed forces and stationed in this State or at Fort Campbell pursuant to military orders shall be classified out-of-state, but shall not be required to pay out-of-state tuition. Such a person, while in continuous attendance toward the degree for which he or she is currently enrolled, shall not be required to pay out-of-state tuition if his or her parent thereafter is transferred on military orders.

3. A person whose domicile is in a county or another state lying immediately adjacent to Montgomery County, or whose place of residence is within thirty (30) miles of Austin Peay State University, shall be classified out-of-state but shall not be required to pay out-of-state tuition at Austin Peay State University. Provided, however, that there be no teacher college or normal school within the non-resident's own state, or for an individual who has a bona fide residence in the State of Tennessee but who qualifies and is selected to participate in specified institutional undergraduate Honors Programs who shall be classified out-of-state but shall not be required to pay out-of-state tuition.

4. A person whose domicile is in Mississippi, Arkansas, or either Dunlin County or Pemiscot County, Missouri, and who is admitted to Dyersburg State Community College, shall be classified out-of-state but shall not be required to pay out-of-state tuition.

5. Military personnel and their spouses stationed to teacher education programs.

Paragraph 5. PRESUMPTION.

If a student classified out-of-state applies for reclassification to teacher education programs.
POLICY ON A DRUG-FREE CAMPUS AND WORKPLACE
In support of the Drug-Free Workplace Act of 1988 (Public Law 100-690) and the Drug-Free Schools and Communities Act of 1989, The University of Tennessee is notifying all students, faculty, and staff of the following University policy approved by the UT Board of Trustees on 21 June 1990.

It is the policy of The University of Tennessee to maintain a safe and healthful environment for its students and employees. Therefore, University policy prohibits the unlawful use, manufacture, possession, distribution, or dispensing of drugs (“controlled substances” as defined in the Controlled Substances Act, 21 U.S. C. 812) and alcohol on University property or during University activities.

Violation of this policy is grounds for disciplinary action—up to and including immediate discharge for an employee and permanent dismissal for a student. Federal and state laws provide additional penalties for such unlawful activities, including fines and imprisonment (21 U.S. C. 841 et seq.; T.C.A. 39-6-401 et. seq.)

Local ordinances also provide various penalties for drug and alcohol-related offenses. The University is bound to take all appropriate actions against violators, which may include referral for legal prosecution or requiring the individual to participate satisfactorily in an approved drug use/alcohol abuse assistance or rehabilitation program.

Aside from any University policy considerations, the use of illicit drugs and/or the abuse of alcohol may be harmful to your health. Some of the health risks associated with such use/abuse are listed: ALCOHOL ABUSE HEALTH RISKS: liver damage—cirrhosis, alcoholic hepatitis; Heart disease—enlarged heart, congestive heart failure; Ulcers and gastritis; Malnutrition; Cancer—of the mouth, esophagus, stomach, liver; Brain damage—memory loss, hallucinations, psychosis; Damage to fetus if pregnant mother drinks; Death—50% of fatal auto accidents involve alcohol; 31% of suicides are alcoholic. DRUG USE HEALTH RISKS: overdosing—psychosis, convulsions, coma, death; Long-term use—organ damage, mental illness, malnutrition, death; Casual use—heart attack, stroke, brain damage, death; Needles—infections, hepatitis, AIDS, Death; If a pregnant mother uses drugs, her baby can be born addicted or dead.

Individuals who are paid by The University of Tennessee from federal grants or contracts must notify the University of any criminal drug statute conviction for a violation occurring in the workplace within five days after such conviction. The University is, in turn, required to inform the granting or contracting agency of such violation within ten days of the University’s receipt of notification.

Employees and their families needing treatment information should call their local Personnel Office, Employee Assistance Program, or the State of Tennessee Employee Assistance Program (800-468-8369). Students needing treatment information should contact their campus Student Affairs Office, student health center, or counseling center.

CREDIT HOURS, GRADES AND GRADE POINT AVERAGE
The basic unit of credit at the University of Tennessee is the semester hour. This normally represents one hour of lecture or recitation or two hours of laboratory work per week. Each course at the University carries a number of credit hours specified in the course description. At the completion of each course, a student will be assigned a grade reflecting the student’s performance in the course. Passing grades normally carry with them a certain number of quality points per credit hour in the course. A student’s grade point average is obtained by dividing the number of quality points the student has accumulated at UT by the number of hours the student has attempted at UT, not including hours for which grades of I, N, NG, P, S, W, and WP have been received.

UNDERGRADUATE GRADES

<table>
<thead>
<tr>
<th>Grade</th>
<th>Performance Level</th>
<th>Quality Points Per Semester</th>
<th>Hour of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Superior</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>Very Good</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>Fair</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>WF</td>
<td>Withdrawn Failing</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

GRADES OF INCOMPLETE
Under extraordinary circumstances and at the discretion of the instructor, the grade of “I” (Incomplete) may be awarded to students who cannot complete the course for reasons beyond their control. In addition, a grade of "W" may be assigned if a student cannot fulfill the requirements for a course because of an inability to communicate in writing. (See Writing Deficiency for more information about the “W” grade.) The “I” grade is awarded only when there is reasonable expectation that upon completion of the course work, a grade of “D” or better would be earned. The “I” grade is not issued in lieu of a grade “F” or “FX”. The terms for the removal of the “I,” including the time limit for removal of the “I,” is decided by the instructor. It is the responsibility of the student receiving an “I” to arrange with the instructor whatever action is needed to remove the grade at the earliest possible date, and in any event, within one year of the assignment of Incomplete. Students may not remove an “I” grade by re-enrolling in the course. The “I” grade does not carry quality points and is not computed in the grade point average. If the “I” grade is not removed within one calendar year or upon graduation, it shall be changed to an “F” and count as a failure in the computation of the grade point average. A student need not be enrolled at the University to remove a grade of incomplete.

GRADES THAT DO NOT INFLUENCE GRADE POINT AVERAGE
The following grades carry no quality points, and hours for which these grades are earned are not counted in computing a student’s grade point average.

NC (no credit) indicates failure to complete a course satisfactorily when taken on an S/NC basis.

S (satisfactory) is assigned for C or better work when a course is taken on an S/NC grading basis.

W (withdrawal) is assigned in courses when a student has officially withdrawn from the University. W is also assigned in courses when a student withdraws from a course between the eleventh and forty first calendar day of classes. Regulations concerning withdrawal from courses or from the University appear in a following section of this catalog, entitled “Changes in Registration.”

WP (withdrawn passing) is assigned in courses when a student withdraws from a course after the forty second calendar day of classes and is passing the course at the time of withdrawal.

SATISFACTORY/NO CREDIT GRADING SYSTEM
The purpose of this system is to encourage the student to venture beyond the limits of those courses in which the student usually does well and, motivated by intellectual curiosity, explore subject matter in which performance may be somewhat lesser outstanding than work in other subjects. To this end Satisfactory/No Credit (S/NC) grading has been developed for undergraduate courses (100-, 200-, 300-, and 400- level courses). Neither grade is counted in a student’s grade point average, but, like all other grades, is entered on the permanent record. S is given for C or better work on the traditional grading scale and NC is given for less than C work. The student only receives credit in the course if an S is received. A student may not repeat a course for S/NC if the student received a conventional grade (A, B+, B, C+, C, D, F).

The instructor of a conventionally graded course will not be informed which student, if any, has elected S/NC grading. If the student elects non-conventional grading, grades of A, B+, B, C+, C, D, F will be recorded on the student’s permanent academic record as S, and D or F as NC. The grade of I for incomplete work will be recorded as an SI, which will not be computed in the average. A student is permitted to change the system of grading in a course through the add deadline. The changing of an S/NC grade to a conventional letter grade or vice versa is not permitted unless an error is determined by the Registrar.

FRESHMAN ENGLISH
English 101, 102, 118, 121, 131, and 132 are offered on a system of A, B+, B, C+, C, I, NC, W grading.

All entering freshman, except international students, must enroll in English 101, 102 or 118.

REPEATING COURSES
For the first three repeated lower-division courses (100-200 level), only the last grade earned in the repeated courses will be counted in computing the grade point average. If the same course is repeated more than once, the additional repeats count as part of the three total. For all courses repeated after the first three, all grades will be included when computing the grade point average. All grades for all courses remain on the W transcript.

Unless it is otherwise specified in the course description, no course may be repeated more than twice and no course may be repeated in which a grade of C or better has already been earned. A grade of WP counts as one of two times a course may be repeated. Exceptions to the number of times a course
may be repeated will be allowed only with prior written permission of the student’s college dean. Each course is counted only once in determining credit hours presented for graduation.

GENERAL REGULATIONS

ACADEMIC ADVISING AT UT

Faculty, administrators, and professional staff on this campus consider advising both a responsibility and an opportunity for improving each student’s pattern of undergraduate education. There are many situations during an academic program when a student will find informed academic and career advice helpful. The objective of the academic advising system at UT is to help a student at each stage to define the choices that must be made and to give any needed guidance.

At the time of application for admission to UT, each student is asked to indicate whether he/she has already identified a preferred college or school. Advising centers in each college handle all freshmen and a substantial amount of sophomore advising; major advisors within the college, working closely with the advising center, guide advanced students. At all levels, campus-wide guidelines for good advising are supplemented by specific college standards, guidelines, and evaluations. Prior to advanced registration, during each main term of the academic year (i.e., during Spring and Fall), each student has the obligation to consult an advisor for a substantial conference.

Students who are admitted as university students and have not yet declared an interest in a specific college are advised by the College of Arts and Sciences Advising Center, 220 Ayres Hall, with assistance of advisors in other colleges and career planning.

New students at UT should review carefully the prescribed curricula of the respective degree-granting units and should choose courses in accordance with their college preference. An advisor assists a student in selecting subjects to ensure a well-balanced education and interprets university and college policies and requirements. However, the student, not the advisor, bears the ultimate responsibility for selecting courses, meeting course prerequisites, and adhering to policies and procedures.

Part-time students, particularly those registering through Evening School, should establish contact with an advisor in the college with which they are associated or in which they have expressed an interest.

Assistance to students with academic problems or questions is provided by course professors, advisors, department heads, and college deans or advising centers. Numerous other sources of academic, career, and personal counseling exist on the UT campus and are available to admitted students. These are described in this catalog under “Student Affairs and Services.”

ACCELERATED PROGRAM

The University operates on the semester calendar, and a majority of its courses, especially at the lower division, are offered every term. Through appropriate arrangements of courses and attendance during the summer terms, students may frequently complete their degree programs or at least one-fourth of the degree requirements in less than four years. A student’s faculty advisor should be consulted for assistance in planning an accelerated program.

ADVANCED MILITARY SERVICE AND AIR FORCE AEROSPACE STUDIES

Students who elect to enroll in the advanced military courses (junior and senior years) are obligated by written agreement with the government to complete the courses and to accept a commission if tendered.

CLASS ATTENDANCE AND ELIGIBILITY

Only students who are properly registered for a course may attend its classes on a regular basis. Any other person in the classroom for special reasons must obtain the consent of the instructor.

It is the prerogative of the individual instructor to set the attendance requirements for a particular class. This means, for example, that an instructor in Freshman English may state in a syllabus how many absences are allowed before a student receives a grade of No Credit.

CLASSIFICATION

Undergraduate students are classified according to the following chart, on the basis of semester hours passed.

To be considered a full-time undergraduate student in any semester, a student must be enrolled in 12 semester hours, including the full summer term. Six hours for each separate term of the summer session are required for full-time classification. Audit hours are not considered in the computation.

CLASSIFICATION OF STUDENTS BY SEMESTER HOURS PASSED

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Architecture Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>0-31.9</td>
</tr>
<tr>
<td>Second</td>
<td>32-63.9</td>
</tr>
<tr>
<td>Third</td>
<td>64-95.9</td>
</tr>
<tr>
<td>Fourth</td>
<td>96-127.9</td>
</tr>
<tr>
<td>Fifth</td>
<td>128-up</td>
</tr>
</tbody>
</table>

CLEP CREDIT

When approved by a given department, nationally recognized examinations, such as the examinations of the College Level Examinations Program (CLEP) of the College Entrance Examination Board, may be used as proficiency examinations in one or more courses offered by that department. The final decisions, as to specific courses for which such examinations are to be taken as evidence of acceptable proficiency, and as to the minimum score required for credit to be given, rest with the department.

The CLEP examinations may be taken at the State Testing and Evaluation Center. The Center supplies information on test dates and procedures and current departmental policies concerning the acceptance of CLEP credit.

CORRESPONDENCE WORK

A student may offer by correspondence as much as one-fourth of the total hours required for the degree sought and have this work count toward the degree. Credit for undergraduate courses in correspondence in the major subject shall be limited to one-fourth of the total credit hours required. Correspondence credits are not accepted for students enrolled in the College of Law or, except by prior permission, for students in the Center for Health Sciences.

All courses taken by correspondence for which degree credit is given must meet degree program requirements of the Knoxville campus. In addition, all currently enrolled UT students who intend to take correspondence courses must have the approval of the dean of the college in which the student is enrolled prior to registering for any college-credit correspondence course. Degree credit will not be granted for correspondence courses taken at an institution other than the University of Tennessee by a UT student if an equivalent correspondence course is available from the University of Tennessee Department of Independent Study (DIS).

Correspondence courses are open to students who have been dropped from the University for academic reasons only with the prior permission of the dean of the college or school in which they were enrolled.

A senior may take only six hours of the last year’s work (the last 30 semester hours) by correspondence, and this must be taken with the University of Tennessee. If the student is a senior transfer, no work may be taken by correspondence.

Students taking work for teacher certification purposes should consult the State Department of Education of their respective states concerning the amount of correspondence credit allowed for teacher certification.

COURSE NUMBERS AND LEVELS

Each course offered by the University is identified by the name of the department offering the course and a three-digit course number. These numbers indicate course level, as follows:

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>000-099</td>
<td>Non-credit</td>
<td>preparatory</td>
</tr>
<tr>
<td>100-299</td>
<td>Lower division</td>
<td>primarily for freshmen and sophomores</td>
</tr>
<tr>
<td>300-499</td>
<td>Upper division</td>
<td>primarily for juniors and seniors; when taken for graduate credit, the letter “G” will precede the course credit hours on the grade report</td>
</tr>
<tr>
<td>500-599G</td>
<td>Graduate</td>
<td>sometimes available for undergraduate credit; when taken for undergraduate credit, the letter “U” will precede the course credit hours on the grade report</td>
</tr>
<tr>
<td>600-699</td>
<td>Advanced graduate; open to graduate students only</td>
<td></td>
</tr>
<tr>
<td>800-899</td>
<td>Law; occasionally open to other qualified students</td>
<td>Veterinary medicine</td>
</tr>
<tr>
<td>900-999</td>
<td>Law; occasionally open to other qualified students</td>
<td>Veterinary medicine</td>
</tr>
</tbody>
</table>

Following certain course descriptions in this catalog are the designations: F, Sp, Su, A-O, A-E, E. These indicate the semesters Fall, Spring, Summer, Alternate Odd Academic Years, Alternate Even Academic Years, or Every Semester in which a course is normally offered and are intended as an aide to students planning their programs of study.

DEVIAtion FROM CATALOG RULES

The University offers a petitioning procedure through which students can occasionally gain exceptions to the general rules included in this catalog. It is the direct responsibility of the student who seeks to deviate from the rules to complete the petitioning process. In cases where this might affect the student’s eligibility
to enroll in a particular course, the student should begin the petitioning process during the previous term and must gain final approval for the petition no later than the add deadline of the term involved.

FAILURE TO MEET PROGRESSION REQUIREMENTS
Undergraduate students who are not eligible to progress in a college, school, or major with such requirements will be notified and assigned to the advisor to University Students who will advise the student and approve enrollment requests until the student is enrolled in another college or major.

FINAL EXAMS
Any final exams must be given during the final exam period at the scheduled time, although alternative uses of the scheduled exam period may be designated by the instructor.

Students are not required to take more than two written exams on any day. The instructor(s) of the last non-departmental exam(s) on that day must reschedule the student’s exam during the exam period. It is the obligation of students with such conflicts to make appropriate arrangements with the instructor at least two weeks prior to the end of classes.

No in-class, written quizzes or tests counting more than 10% of the semester grade may be given in the last five calendar days prior to the exam period. Courses that are exempt from this policy are so indicated in the catalog course description.

GRADE APPEAL PROCEDURE

APPEALS TO THE UNDERGRADUATE COUNCIL
The Undergraduate Council hears appeals concerning grades only after grievances have been duly processed, without resolution, through appropriate procedures at the department and college levels. The Council does not review grievances concerning allegations of misconduct or academic dishonesty. Procedures for concern of such matters are published in Hilltopics under “Student Rights and Responsibilities.”

In the appeals process, the Undergraduate Council has authority to deny the appeal, grant the appeal and request the instructor change the grade, or assign a grade of “pass” for the course.

Students should begin the appeal process as soon as possible. No appeal may be filed later than 90 days after the final grade has been issued.

COMPOSITION OF THE APPEALS COMMITTEE
Members of the Appeals Committee are appointed by the chairperson of the Undergraduate Council. The committee consists of at least five members, one of whom is named chairperson.

GROUNDS FOR APPEAL
Students may appeal grades on the basis of one or more of four allowable grounds:
1. A clearly unfair decision (such as lack of consideration of circumstances clearly beyond the control of the student, e.g., a death in the family, illness or accident);
2. Unacceptable instruction/evaluation procedures (such as deviation from stated policies on grading criteria, incompletes, late paper, examinations, or class attendance);
3. Inability of instructor to deal with course responsibilities; or
4. An exam setting which makes concentration extremely difficult.

THE APPEALS PROCEDURE
1. The student should first consult with the instructor and if agreement cannot be reached, the student may appeal to the department head. If the student believes the grade assignment was based on criteria other than academic, such as race, gender, religious beliefs, national origin, age or handicap, then the student should make an appeal in writing to the Office of Affirmative Action with a copy to the department head.
2. If the student appeals to the department head after attempts to resolve the matter with the instructor have failed, it is the responsibility of the department head to determine the circumstances surrounding the assignment of the grade. If the department head has reason to believe that none of the four (4) academic conditions specified above apply, then the department head should encourage the student to accept the assigned grade. If the department head has reason to believe that any of the four conditions do apply, then instructor should be encouraged by the department head to reconsider the grade. If the instructor elects not to change the grade, then the department head will appoint a committee of at least three faculty members to review the matter. Such committee will be charged with making a timely recommendation to the department head concerning the student’s appeal. The student must submit a written appeal for the committee’s consideration or for any appeal made beyond the departmental level. When the departmental committee procedure is used, if the committee’s recommendation is that the student’s grade should be higher than the one assigned and the instructor still elects not to assign the recommended higher grade, the department head will assign the grade of “pass,” or, at the student’s option, he/she may accept the existing grade. In such a case, all other restrictions to use of the grade to satisfy graduation requirements are waived.
3. If the student wishes to pursue appeal further, he or she may appeal in writing to the Dean of the college in which the department is located.

If the issue is still unresolved, the student may initiate the formal Undergraduate Council appeals procedure.
1. The student may forward to the Dean of Undergraduate Affairs and Chair of the Undergraduate Council a statement requesting a review of the student’s complaint concerning his or her grade. The appeal must be written and must be based upon one or more of the four allowable grounds, explaining in detail why the appeal is based upon these grounds.
2. The Dean of Undergraduate Academic Affairs, after consulting with the student and the college, will determine that the appeal does in fact fall under the jurisdiction of the Undergraduate Council and has been brought forward in the proper form, will, first, forward the appeal to the Appeals Committee of the Undergraduate Council for review and, second, notify the Dean, the Department Head, the course instructor, and the student that the Appeals Committee has the case under review.

3. Upon receipt of the appeal, the chairperson of the Appeals Committee will call a special meeting of the committee for purposes of hearing the appeal. The chair will invite the student, the instructor, and the department head to appear in person if they choose or to supply a written statement (in the student’s case this statement will already have been provided). The committee will maintain a recording of the hearing.
4. After hearing the appeal, the Appeals Committee will vote as to whether the grade should be overturned. A majority vote will constitute the decision of the committee. A tie vote will be decided by the chair.
5. The decision of the Appeals Committee will be relayed by the chair of the Committee in writing to the principals.
6. If the appeal has been denied by the Appeals Committee, the student may appeal to the full Undergraduate Council. If the Council denies the appeal, the grade stands.
7. If the student’s appeal is upheld by the Appeals Committee, the instructor may appeal to the full Undergraduate Council. If the Council holds for the instructor, the grade stands.
8. If the student’s appeal is upheld by the Appeals Committee and there is no appeal by the instructor to the full Undergraduate Council, or if the instructor does appeal to the full Undergraduate Council and the Council holds for the student, the instructor may either elect to change the grade to a higher grade or refuse to do so.
9. If the instructor refuses to change the grade, the Provost will instruct the Registrar to change the course grade to “Pass.”

If the appeal is upheld by the Appeals Committee, the chairperson of the Undergraduate Council will notify the student or instructor, in writing of the Council’s decision and if applicable, of the right to further appeal in accordance with Article 5, Section 7, of the University by-laws:
- Officers, faculty and staff members, students, and employees, alumni, and all other officers who feel that they may have a grievance against the University shall have the right of appeal through the Provost or Vice President to the President of the University.

An appeal to the Provost must be filed within 60 days of the Undergraduate Council decision.

GRADUATING SENIOR PRIVILEGES
A senior who fails one subject during the semester of intended graduation may, with approval, take an examination or other appropriate form of evaluation. The senior must receive the approval of the instructor and appropriate collegiate personnel who may include the department head and/or dean. The evaluation may take place at the beginning of or during the next semester and, if successful, the senior will receive the degree at the next commencement.

HONOR STATEMENT
All facets of the University community have responsibilities associated with the Honor Statement. These responsibilities are unique to each sector of the University community.
Each student is responsible for his or her own personal integrity in academic life. While there is no affirmative duty to report the academic dishonesty of another, each student, given the
dictates of his/her own conscience, may choose to act on any violation of the Honor Statement. Each student is responsible for knowing the terms and conditions of the Honor Statement and may acknowledge his/her adherence to the Honor Statement by writing “Pledged” and signing each graded class assignment and examination.

Students are also responsible for any acts of plagiarism. Plagiarism is using the intellec-
tual property of someone else without giving proper credit. The undocumented use of someone else’s words or ideas in any medium of communication (unless such information is recognized as common knowledge) is a serious offense, subject to disciplinary action that may include failure in a course and/or dismissal from the University.

Specific examples of plagiarism are:

• copying without proper documentation (quotation marks and a citation) written or spoken words, phrases, or sentences from any source;

• summarizing without proper documentation (usually a citation) ideas from another source (unless such information is recognized as common knowledge);

• borrowing facts, statistics, graphs, pictorial representations, or phrases without acknowledging the source (unless such information is recognized as common knowledge);

• collaborating on a graded assignment without instructor’s approval;

• submitting work, either in whole or part, created by a professional service and used without attribution (e.g., paper, speech, bibliography, or photograph).

Faculty members also have responsibilities which are vital to the success of the Honor Statement and the creation of a climate of academic integrity within the University community. Each faculty member is responsible for defining, in specific terms, guidelines for preserving academic integrity in a course. Included in this definition should be a discussion of the Honor Statement. Faculty members at their discretion may also encourage their students to acknowledge their adherence to the Honor Statement by “pledging” all graded class assignments and exams. The form of pledge may include writing the honor statement on the assignment, signing the printed statement, or simply writing “Pledged.” Additionally, it will be the responsibility of each faculty member, graduate teaching assistant, and staff member to act on any violation of the Honor Statement. It is also incumbent upon faculty to maintain an atmosphere conducive to academic integrity by insuring that each quiz, test, and exam is adequately proctored.

THE STATEMENT
An essential feature of the University of Ten-
nessee is the management to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropiate assistance in academic work, thus affirming my own personal commitment to honor and integrity.

HONORS COURSES
Courses specifically designated as honors courses will receive the notation “Hon.” These courses are available, but not exclusive to, those students enrolled in the University Honors Program. Students selected on the basis of ACT/SAT scores and previous academic performance may also enroll. There is no limit to the number of credits that may be earned in these courses except in the senior readings courses not requiring regular class attendance. These courses may not total more than six credit hours toward graduation. In the fields of science, the total may be eight semester hours. Letters are sent to entering freshmen who qualify for non-departmental honors courses. Students other than freshmen should consult the Director of Honors Program or individual programs.

INCLEMENT WEATHER
The University of Tennessee will remain open except in the most severe weather conditions.

The Provost may officially close or suspend selected activities of the University because of extreme weather conditions. When a decision to close is reached, campus and local radio and TV stations will be notified so that appropriate announcements may be made. If the University is officially closed, certain essential activities such as food services, physical plant, police, steam plant, and tele-
phone services will continue to operate. Some facilities such as the library and University Center will, if possible, continue to function as a service to students and faculty. When the University is officially closed, its policy of Days of Administrative Closing will apply for staff exempt and staff non-exempt employees.

In the event of inclement weather when the University remains open, all faculty, administra-
tors, and staff will be expected to make every reasonable effort to maintain their regular work schedules, but are advised to avoid undue risks in traveling. Employees who anticipate arriving late or not arriving at all should notify their immediate supervisors. Employees will have the option of charging their time off to annual leave or leave without pay; or, with approval, they may make up their lost work hours. Students will be responsible for any aca-
demic work which they may miss due to absences caused by severe weather conditions. It is the individual student’s responsibility to take the initiative to make up any missed class work, and it is the instructor’s responsibility to provide a reasonable opportunity for students to complete assignments or examinations missed due to such absences.

MINIMUM CLASS SIZE
An undergraduate course will not normally be given for fewer than fifteen students at the lower division; twelve at the upper division; and nine at the graduate level except by permission of the Provost. The University reserves the right to cancel, postpone, or combine when necessary.

PROFICIENCY EXAMINATION
A proficiency examination may be given in any academic course offered for undergradu-
ate credit. The University policy is to reserve to departments the decisions as to which courses, if any, cannot be passed by proficiency exami-
inations. Proficiency examination credit is available only to undergraduates. When applying to a department for a profi-
ciency examination, a student should present evidence of having developed the abilities, knowledge, and attitudes expected of those who have taken the course in question. The giving of the examination must be approved by the head of the department in which the course is offered. A fee must be paid in advance at the Office of Bursar.

Subject to the grading policy of the college in which the student is enrolled, and except for courses which are graded only on as S/NC basis, a student who passes a proficiency examination and who wishes to have the grade recorded may choose to take the grade on the examination (A, B+, B, C+ or C) or take an S. An S gives credit for the course but does not affect the grade point average. If a grade of D or F is made on a proficiency examination, the department is expected to note the attempt but no record of the examination is made on the student’s transcript. The maximum credits obtainable through proficiency examination and the use of proficiency examinations to remove failing grades (also the grade of I) are determined by the department offering the proficiency examination. Entering international students whose native language is not English are required to take the UT English Proficiency Examination to determine placement in the appropriate English course. No credit for any English course is awarded through this special examination.

PROGRAM ASSESSMENT AND IMPROVEMENT THROUGH STUDENT EVALUATION
In order for the University to assess and improve its academic programs, periodic measurements of student perceptions and intellectual growth must be obtained. As a requirement for graduation students shall particip-
ate in one or more evaluative procedures, which may include examinations in general education and/or the major field of study. The evaluative information obtained through testing is used solely to improve the quality of the educational experience for future generations of students.

SENIOR GENERAL EDUCATION TEST
The Tennessee Higher Education Commis-
sion requires that each public institution for higher learning evaluate the general education skills of the senior class. Each year a percent-
age of the seniors are selected to take the test. The test results enable the University of Ten-
nessee to evaluate the University’s general education program and to qualify for needed funding from the state. Students are informed in their senior year if they have been selected to take the test.

SECOND MAJORS AND MINORS
Students may pursue any available minors or second majors which will be so noted on their transcripts upon graduation. Students should understand that meeting the require-
ments of minors or second majors may lengthen their academic programs and should consult closely with advisers in both areas.

SENIORS ELIGIBLE FOR GRADUATE CREDIT
A senior at The University of Tennessee who needs 30 semester hours or less to com-
plete the requirements for a bachelor’s degree and has at least a 3.00 grade point average,
may take sufficient work for graduate credit to fill out a schedule of 15 hours of combined under-graduate and graduate work per semester, subject to the approval of each term of the Dean of the Graduate School. A maximum of 9 hours of graduate credit can be obtained in this status. Some departments do not permit se-
niors to register for graduate courses without prior permission (See Majors and Degree Programs chart for information on restricted programs).

Courses taken for graduate credit may not be used toward both the baccalaureate and a graduate degree.

SPECIAL REQUIREMENTS FOR STUDENT-ATHLETES

Student-athletes participating in intercol-
legiate sports under the provisions of the National Collegiate Athletic Association and the Southeastern Conference must fulfill the NCAA academic progress requirements in addition to the University’s academic continuation and retention policies for continuation of eligibility to participate in intercollegiate sports.

TEACHER CERTIFICATION

Teacher certification is a responsibility of the College of Education of the University of Tennessee. Students desiring certification must meet general education, professional education, and area of specialization requirements described in the College of Education section of this catalog.

UNIVERSITY STUDENTS

Many students are undecided about their major when they enter UT. All undecided stu-
dents are designated University Students and are advised by Arts and Sciences Advising Ser-
VICES. While it is proper to explore alternative choices, students should also pursue a course of study that culminates in graduation. For this reason, there is a limit to the length of time stu-
dents may remain as University Students. At the completion of 45 hours, University Students who have entered UT as freshmen must declare a major prior to the end of the next term of enrollment. Students who transfer from another college or university may enroll as Uni-
versity students. However, transfer students may remain as University Students no longer than through the completion of 15 semester hours if the total number of hours transferred is 30 or more. UT students who fail to progress in a given major, college, or school and are unde-
cided about an alternative course of study may continue at UT as University Students for a maximum of 15 semester hours.

WRITING COMPETENCE

The faculty of all colleges expect students to communicate effectively in standard written English in laboratory reports, examinations, essays, and other written assignments.

WRITING DEFICIENCY

If a student cannot fulfill the requirements for a course because of an inability to com-municate in writing, the instructor will give the student an “IW” to designate “incomplete due to writing.” Student work requiring revision shall be sent to the Writing Center Director. Any student who receives an “IW” should contact the Writing Center Director for instruction. The Writing Center will determine the appropriate requirement for remediation. Upon the Writing Center Director’s recommendation, it will be returned to the instructor who will change the student’s grade accordingly. As with other incompletes, the student will have one calendar year to make up the deficiency before the grade automatically changes to reflect failure for the course.

REGISTRATION

The Student Orientation Department send admitted freshmen and transfer students infor-mation about orientation and registration and the dates. Graduate students are instructed when to register upon receipt of their Admis-
sion Status. Former students who have been absent from UT other than the summer term and students who have withdrawn from the pre-
vious semester will receive registration information with their letter of readmission. Evening School students should contact the University Evening School for registration times.

REQUIREMENTS FOR REGISTRATION OF ADMITTED STUDENTS

Medical History. Though a physical examination is not required, a Medical History Questionnaire is sent to all admitted students and must be completed by the student, parent, or other responsible party who is familiar with the student’s medical history. Such information will facilitate University physicians in providing continuing health care. This form must be returned to the Student Health Service before enrollment.

Participation in Orientation. Beginning freshmen and transfer students are required to attend an orientation session prior to their first registration at the University. Schedules for these programs are mailed to admitted students by the Director of Student Orientation. Orientation programs are designed to help new students become acquainted with opportunities and services at the University and to provide information needed for registration. Students who wish to attend the Evening School should contact the University Evening School for information about registration and orientation.

FIRST CLASS MEETING

Students who do not attend the first class meeting may be dropped from the course unless they have made prior arrangements with the department. It is the responsibility of students to take whatever steps necessary to see if they have been officially dropped from a course.

MAXIMUM HOURS PER TERM

Undergraduate students may enroll for a maximum of 19 credit hours each semester. Enrollment in more than 19 hours must be approved by the dean of the student’s college or school. Graduate students may enroll for a maximum number of 15 credit hours each semester. Enrollment in more than 15 hours must be approved by the Dean of the Graduate School. Law and Veterinary Medicine students may enroll for the maximum number of credit hours each semester as specified by the respective college.

MAXIMUM HOURS PER TERM FOR SUMMER

Undergraduate students may enroll for a maximum of 6 credit hours for each of the first and second sessions. Students may enroll for a maximum of 12 credit hours for those courses that extend through the entire session. Stu-
dents may enroll for a maximum of 12 credit hours in any combination of summer session courses. Enrollment that exceeds the maximum must be approved by the dean of the student’s college or school.

AUDITING COURSES

Students may enter classes as auditors with the consent of the instructor. The instructor will determine the appropriate requirements or restrictions. Auditors receive no credit and the audited course will not be recorded on the transcript. The student’s name will appear on the class roll to inform the instructor that the student is properly enrolled as auditor.

Auditors are required to register and pay fees. Prior to the add deadline, a change from credit to audit or from audit to credit may be made by completing the change of credit por-
tion of the Undergraduate Change of Registration Form and having it processed. (See Timetable of Classes for appropriate location.) Between the add deadline and the drop dead-
line, the signature of the Special Services Officer or College Adjunct member (see Time-
table of Classes) is needed in order to change credit. Once the drop deadline is passed, a change will not be allowed.

PREREQUISITE AND COREQUISITE COURSES

Students must meet prerequisite and corequisite requirements for all courses with such restrictions, and no student shall be permitted to register for those courses in which the requirements have not been met.

CHANGES IN REGISTRATION

Students may add courses through the tenth calendar day counted from the beginning of classes. Because of the nature of some courses, permission of the department head may be required to add a course after classes begin. Students may also, as departmental policies permit, change section of a course through the tenth day.

Students may drop courses until the 10th calendar day from the start of classes with no notation on the academic record. From the 11th calendar day until the 42nd calendar day, students may drop courses which will receive the notation of “W” (Withdrawn). The “W” grade is not computed in the grade point average. Courses may be dropped through the telephone registration system. After the 42nd calendar day and to the 84th day of classes, courses may be dropped and will be assigned a “WP” (Withdrawn Passing) or a “WF” (With-drawn Failing). Instructor’s signature is required. The form, once signed, should be taken to the Office of the University Registrar for processing. The “WF” is calculated in the grade point average as an F. After the 84th day, no drops are permitted.

The exceptions to the add and drop dead-
lines are summer and other special sessions. Students should consult the summer term time-
table for the appropriate deadlines.
Failure to attend a course is not an official withdrawal and will result in the assignment of an F grade.

Evening School students should consult the University Evening School timetable for procedures to drop courses. Graduate students should consult the Graduate Catalog for regulations concerning dropping courses.

WITHDRAWING FROM THE UNIVERSITY

Undergraduate day students who need to leave the University before a term is finished must apply for withdrawal in the Office of the University Registrar, 209 Student Services Building. Evening School and Graduate School withdrawals are accomplished at those offices. Information on dropping a single course is provided in the section entitled “Changes in Registration.”

Requests for withdrawal are routinely approved when the student applies by the deadline listed in the Timetable of Classes. The word “withdrawn” will be posted on the transcript. It is the responsibility of a student who has registered for classes to attend them or, if that is impossible, to apply for withdrawal. A student will receive final grades unless the student follows procedures for withdrawal from the University.

A student who simply stops participating in classes, or fails to attend class, without officially withdrawing will be assigned the grade of "F" in each course. Students who do officially withdraw must seek permission for readmission in advance of their next semester of anticipated enrollment, except for withdrawal from summer term.

Enrolled students are liable for payment of fees. Any refunds that may be due upon a student’s withdrawal are issued by the Bursar’s Office.

UNDERGRADUATE RETENTION STANDARDS

TRANSFER STUDENTS

A transfer student who has been conditionally admitted must meet the regular University standards of retention during the first term, or any subsequent term before attaining good standing.

ACADEMIC SECOND OPPORTUNITY

The Academic Second Opportunity is designed to assist the student who was not successful in progressing toward a degree during a previous attendance at UT but is now performing satisfactory work. Granting it is an acknowledgment by the University that the student’s earlier work is not consistent with his or her academic potential but that the work earned since return is. This policy is not intended to allow students to progress directly into a major; exceptions to progression standards must be made at the college level.

An undergraduate student may petition for Academic Second Opportunity upon meeting the following requirements:

1. The student has re-enrolled following an absence from UT of at least three full calendar years;
2. The student’s previous academic record at the University was unsatisfactory (normally, below a C average);
3. Since readmission, the student has completed 15 or more graded hours (correspondence coursework may not be included in the 15 hours), earning a 2.5 GPA or above.

Decisions on granting Academic Second Opportunity are made by committee. If the student’s petition is approved, all previous academic work will remain on the permanent record, but the grades for such work will not be used in computing the grade point average or in determining academic standing. Previous credits earned with a grade of C or better will continue to meet major, distribution, and graduation requirements.

To graduate, a student granted Academic Second Opportunity must complete at least 30 hours at UT following readmission. To meet minimum qualifications for graduation with honors, the student must earn at least 60 semester hours of letter grades (A-F) following readmission. Academic Second Opportunity may be granted only once. If hours earned during the previous attendance have already been applied toward the completion of an awarded degree from another four-year institution, Academic Second Opportunity will not be granted. Registration at another college or university since the previous UT enrollment will not prevent a student from qualifying.

Petition must be made no later than the academic term prior to the one when the degree will be granted. Students should see the University Registrar website (http://web.utk.edu/~registra) or contact their college for deadlines for specific terms. To initiate the petitioning process, students should meet with a designated advisor in their colleges.

ACADEMIC REVIEW

The University of Tennessee expects all students who enter the University to remain in good academic standing. To accomplish this, the University has established retention standards. To graduate from UT, a student must earn a minimum cumulative GPA of 2.00. The catalog contains additional retention, progression, and graduation requirements for specific programs.

Students will be placed in Academic Review when either their cumulative grade point average falls below the minimum acceptable level of 2.00 for one semester, or when their semester grade point average falls below the minimum acceptable level of 2.00 for two consecutive semesters regardless of their cumulative GPA. During that semester, and any other semesters in review, a student must participate in a special advising program in his or her college. If, while in review, a student does not maintain a 2.00 grade point average for hours attempted each term, the student may be released from his or her college or be released and dismissed from the University. A student released from his or her college with a cumulative grade point average of 2.00 or higher may seek admission to an alternate college and major. A student with a grade point average below 2.00 who is released from the college but not dismissed from the University is classified as a University student and is advised in the College of Arts and Sciences. A student dismissed from the University may apply for readmission to the University after a minimum of two semesters (with summer considered a semester) away from the University.

GENERAL REQUIREMENTS FOR A BACHELOR’S DEGREE

To receive a bachelor’s degree from the University of Tennessee a student must complete all of the requirements listed below.

Some of the colleges and schools within the University have special requirements above and beyond those stated here, and students are advised to consult the appropriate section of this catalog for any further degree requirements. Each program presented by the candidate for a bachelor’s degree is reviewed and approved for meeting the degree requirements by the Office of the University Registrar.

1. Complete satisfactorily all requirements of the curriculum for which the student is enrolled, as described in the portion of this catalog devoted to the college or school offering the curriculum. Curriculum requirements change frequently, and students should note the caution on the second page of this catalog.

A student is allowed to satisfy requirements for a bachelor’s degree under any curriculum in effect during the student’s attendance at UT provided the curriculum has been in effect within six years of the date of graduation. This does not obligate the University to offer a discontinued course. Programs may be adjusted by the student’s faculty advisor and college dean, in consultation with the Office of the University Registrar.

2. Achieve a grade point average of at least 2.00 on all work attempted at the University of Tennessee. (Students bringing transfer work to UT before Fall 1985 must also have a combined average of at least 2.0 on all UT work and the work transferred in and posted before Fall, 1985.)

3. Complete 60 hours of credit offered for the bachelor's degree at an accredited senior college.

4. Complete the last 30 hours of credit offered for the bachelor's degree in residence at the University of Tennessee. Credit for correspondence courses taught by the faculty of the Knoxville campus may be counted as part of this requirement, with the exception of the limitation noted in the regulations concerning correspondence work. Special arrangements to allow work taken at other University of Tennessee campuses to be counted as part of this requirement must be approved by the dean of the student's major college or school and the Dean of Admissions and Records.

5. Comply with the state law that one unit of American history at the high school level or six semester hours of college work be satisfactorily completed. This requirement is effective for those graduating July 1, 1978 and thereafter. It may be satisfied by completing History 221-222 (or 227-228). History 449 may be used in lieu of hours of American history. Students should consult the catalog of enrollment to determine how the six hour’s credit for fulfillment of this requirement is to be included in individual curricula.

6. Hours completed at the university level to remove high school deficiencies may be used to meet specific curriculum requirements. However, hours earned in these courses will not count toward the total hours required for graduation, effectively adding to the total number required for graduation.

7. Satisfy all financial obligations (fees or fines) owed to the University.

8. File an application for a degree with the
Office of the University Registrar, Room 209
Student Services Building. Application deadlines are printed in the Timetable for each term. This deadline is imperative in order that all necessary processing can take place toward the degree.


10. Students who wish to participate in their graduating class Commencement Ceremony will need to place a Cap and Gown order with the University Center Book and Supply Store. Orders placed after the deadline date established by the Book and Supply Store will be subject to a late fee.

DEAN’S LIST
A public announcement is made of students passing a semester’s work Summa cum laude (3.80 through 4.00), Magna cum laude (3.65 through 3.79), and Cum laude (3.50 through 3.64). To be eligible, students must complete at least 12 hours, not counting work taken on a satisfactory/no credit basis.

The honors and awards available to students at UT are listed with donors satisfactory/no credit basis.

HONORS CATEGORIES FOR GRADUATION
Honors are conferred upon graduating students who have displayed a high level of achievement during their university career.

Recipients of honors receive their degrees with:

Cum laude 3.50 through 3.64
Magna cum laude 3.65 through 3.79
Summa cum laude 3.80 through 4.00

These honors categories are based on the student’s cumulative average at the end of the semester preceding the graduation semester.

For all students entering Fall, 1985, and thereafter, honors categories are based only on the average earned at the University of Tennessee. Students must have earned at least 60 hours at UT in order to qualify for honors categories. For those students who entered prior to Fall, 1985, the honors category is based on the average earned at UT and the transfer work brought in prior to that date, or the average earned at UT, with the lower of the two averages determining the honors category. Work transferred after Fall, 1985 is not used in computation of the GPA.

If, at graduation, a student’s grade point average would allow a higher honors category than that determined at the end of the semester preceding the graduation semester, the student may, upon written request, receive a substitute diploma indicating the higher category. Courses may not be repeated for the purpose of raising an honors category.

In addition, University Honors are conferred upon graduating students who have completed the University Honors Program.

SECOND BACHELOR’S DEGREE
A student who holds a bachelor’s degree may receive a second bachelor’s degree from the University of Tennessee by satisfying the following:

1. Meet all requirements of both degrees.
2. Complete at least 30 semester hours beyond the total hours required for the first bachelor’s degree.
3. Attend the University for at least two semesters beyond the minimum time required for the first bachelor’s degree.
4. Declare the intention to work for a second bachelor’s degree with the Office of the University Registrar.

THE UNIVERSITY REQUIREMENT
GENERAL EDUCATION

The goal of general education is to develop those basic skills, knowledges, attitudes, and judgments that are necessary for effective citizenship at all levels, from the local to the global; for responsible and fulfilling interactions with others and the environment; and for an enriched personal life. General education may also provide the basis for a major or professional concentration, but its aims are not career-specific. The following areas define the general education program for undergraduate curricula.

English Composition (2 courses)
Courses used to meet this requirement should develop the student’s ability in analytic and expository writing through the study of literature and writing applications. This requirement would normally be satisfied by completion of English 101-102 or equivalents, or by demonstration of proficiency.

Mathematical Sciences (2 courses)
Courses used to meet this requirement should develop the student’s ability to analyze and solve quantitative and logical problems.

Humanities and The Arts (2 courses)
Courses used to meet this requirement may concentrate either on critical analysis or practice of the arts. These might include the interpretation and analysis of works in one or more of the arts; consideration of significant philosophical, ethical, or religious text and issues; or participation in some area of the visual, spatial, musical, theatrical, rhetorical, or written arts.

Historical Studies (2 courses)
Courses used to meet this requirement should develop the student’s appreciation of continuity and change over time. Such courses would examine the connections and interactions between different aspects of the human experience through attention to significant political, social, economic, intellectual, and cultural developments in a chronological, balanced, and integrated framework.

Social Sciences (2 courses)
Courses used to meet this requirement should describe the structures of society, clarify the dynamics of cognitive and personal development through the life cycle, or analyze social, economic, or political issues.

Natural Sciences (2 courses)
Courses used to meet this requirement should describe the world around us using scientific methods and examine natural phenomena in terms of scientific principles. Such courses would normally contain a laboratory or field experience.

Foreign Languages (2 courses at the intermediate level)
Courses used to meet this requirement should facilitate the student’s ability to use a foreign language as a tool for oral and written communications and reading, including an understanding of the cultures for which it is the native language.

OR

Integrative Studies (2 courses)
Courses used to meet this requirement may be of three broad types:

a. Multicultural studies, which analyze international dimensions of critical issues or explore elements and values that shape a culture other than the student’s own;
b. Interdisciplinary studies, which incorporate the methods and approaches from two or more disciplines to explore major issues; or
c. Disciplinary perspective courses, which explore the potential and limits of a discipline in terms of its impact on individuals and society or examine a student’s major course of study from a value-oriented perspective.

All majors and college or school curricular requirements described in this catalog are in accordance with the University Requirement.
## MAJORS, MINORS AND CONCENTRATIONS

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1 Minor available.  
2 Minor available for students in other colleges.  
3 Minor available in Adolescent Health.  
4 Minor available in Engineering Communication and Performance.  
5 Minor available in Elementary Teaching and Secondary Teaching.  
6 Minor available in Applied Music or Music History and Literature.  
8 Minor available in Dance.  
9 Interdisciplinary Studies minor available in Gerontology.
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</tr>
<tr>
<td></td>
<td>Italian¹</td>
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</tr>
<tr>
<td></td>
<td>Russian¹</td>
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<td>Language and World Business</td>
</tr>
<tr>
<td></td>
<td>Spanish¹</td>
<td></td>
<td>Language and World Business</td>
</tr>
</tbody>
</table>

¹ Minor available.
² Minor available for students in other colleges.
³ Minor available in Adolescent Health.
⁴ Minor available in Engineering Communication and Performance.
⁵ Minor available in Elementary Teaching and Secondary Teaching.
⁶ Minor available in Applied Music or Music History and Literature.
⁸ Minor available in Dance.
⁹ Interdisciplinary Studies minor available in Gerontology.
<table>
<thead>
<tr>
<th>DEPARTMENT (UNIT)</th>
<th>MAJOR</th>
<th>CONCENTRATION WITHIN THE MAJOR</th>
<th>DEGREE</th>
</tr>
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<tbody>
<tr>
<td>Philosophy</td>
<td>Philosophy&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Bachelor of Arts</td>
</tr>
<tr>
<td>Physics and Astronomy</td>
<td>Physics&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Political Science</td>
<td>Political Science&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Honors in Political Science, Public Administration</td>
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<td>Pre-Professional Programs</td>
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<td>Pre-M.B.A.</td>
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<td></td>
<td>Pre-Professional Programs</td>
<td>Pre-Dental, Pre-Medicine, Pre-Nuclear Medicine Technology, Pre-Pharmacy, Pre-Veterinary</td>
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<td>Pre-Teaching</td>
<td>Environmental Science, Mathematics, Mathematics and Science, Science</td>
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<td>Psychology</td>
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<tr>
<td>Religious Studies</td>
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<td>Sociology</td>
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<td>Criminal Justice, Environment and Society&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Theatre</td>
<td>Theatre&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Bachelor of Arts</td>
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<td>Individualized Program</td>
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<td></td>
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<tr>
<td>College Scholars Program</td>
<td>College Scholars</td>
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<td>Bachelor of Arts</td>
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<tr>
<td>Arts and Sciences (Intercollegiate with the College of Business Administration)</td>
<td>Statistics&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Bachelor of Science</td>
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**College of Business Administration<sup>2</sup>**

| Accounting and Business Law | Accounting | Bachelor of Science in Business Administration |
| Business Administration (Interdepartmental Unit) | General Business | Bachelor of Science in Business Administration |
| Public Administration | | Bachelor of Science in Business Administration |
| Economics | Economics | Bachelor of Science in Business Administration |
| Finance | Finance | Bachelor of Science in Business Administration |
| Management | Management | General Management, Human Resources Management, International Management, Operations Management | Bachelor of Science in Business Administration |
| Marketing and Transportation | Logistics and Transportation | | Bachelor of Science in Business Administration |
| | Marketing | | Bachelor of Science in Business Administration |
| Statistics | Statistics | | Bachelor of Science in Business Administration |

**College of Communications**

| Advertising | Advertising | Bachelor of Science in Communications |
| Broadcasting | Broadcasting<sup>1</sup> | Bachelor of Science in Communications |
| School of Journalism | Journalism<sup>1</sup> | Journalism, Public Relations | Bachelor of Science in Communications |
| Speech Communication | Speech Communication<sup>1</sup> | Honors | Bachelor of Arts in Communications |

**College of Education**

| Counseling, Deafness, and Human Services<sup>4</sup> | Special Education | Education of the Deaf and Hard of Hearing | Bachelor of Science in Education |
| Human Services | Human Services | Bachelor of Science in Education |
| Educational Interpreting | Bachelor of Science in Education |
| Modified and Comprehensive | Bachelor of Science in Education |

<sup>1</sup> Minor available.<br>
<sup>2</sup> Minor available for students in other colleges.<br>
<sup>3</sup> Minor available in Adolescent Health.<br>
<sup>4</sup> Minor available in Engineering Communication and Performance.<br>
<sup>5</sup> Minor available in Elementary Teaching and Secondary Teaching.<br>
<sup>6</sup> Minor available in Applied Music or Music History and Literature.<br>
<sup>7</sup> Minor available in Chinese, Japanese, and Portuguese.<br>
<sup>8</sup> Minor available in Dance.<br>
<sup>9</sup> Interdisciplinary Studies minor available in Gerontology.
<table>
<thead>
<tr>
<th>DEPARTMENT (UNIT)</th>
<th>MAJOR</th>
<th>CONCENTRATION WITHIN THE MAJOR</th>
<th>DEGREE</th>
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<tr>
<td>Educational Administration and Cultural Studies</td>
<td>Educational Psychology</td>
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<td></td>
<td>Exercise Science and Sport Management⁶</td>
<td>Exercise Science</td>
<td>Bachelor of Science in Education</td>
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<td>Sport Management</td>
<td>Bachelor of Science in Education</td>
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<td>Instructional Technology, Curriculum, and Evaluation</td>
<td>Theory and Practice in Teacher Education⁷</td>
<td>Art Education (Intercollegiate)</td>
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<td>College of Engineering</td>
<td>Engineering Fundamentals</td>
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<td>Civil and Environmental Engineering¹</td>
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<td>Electrical and Computer Engineering</td>
<td>Electrical Engineering</td>
<td>Bachelor of Science in Electrical Engineering</td>
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<td>Computer Engineering</td>
<td>Bachelor of Science in Computer Engineering</td>
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<tr>
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<td>Engineering Physics</td>
<td>Engineering Physics</td>
<td>Bachelor of Science in Engineering Physics</td>
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<td>Industrial Engineering</td>
<td>Industrial Engineering</td>
<td>Bachelor of Science in Industrial Engineering</td>
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<td>Materials Science and Engineering</td>
<td>Materials Science and Engineering¹</td>
<td>Bachelor of Science in Materials Science and Engineering</td>
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<td></td>
<td>Mechanical and Aerospace Engineering and Engineering Science</td>
<td>Aerospace Engineering¹</td>
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<td>Mechanical Engineering</td>
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<td>Biomedical Engineering</td>
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<td></td>
<td>Nuclear Engineering</td>
<td>Nuclear Engineering</td>
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<td>College of Human Ecology⁸</td>
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<td></td>
<td>Child and Family Studies</td>
<td>Child Development¹</td>
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<td>Early Childhood Administration</td>
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<td>Early Childhood Development</td>
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<td>Early Childhood Education/Early Childhood Special Education</td>
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<td>Family Studies¹</td>
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<td>Consumer and Industry Services Management</td>
<td>Hotel and Restaurant Administration</td>
<td>Bachelor of Science in Service Management</td>
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<td>Hotel and Tourism Management</td>
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<td>Restaurant and Foodservice Management</td>
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<td>Recreation and Tourism Management</td>
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<td>Therapeutic Recreation</td>
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<td></td>
<td>Retail and Consumer Sciences¹</td>
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<td>Health and Safety Sciences³</td>
<td>Community Health Education¹</td>
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<td>Teacher Education Training and Development</td>
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<td>Nutrition</td>
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<td>Bachelor of Science in Human Ecology</td>
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<tr>
<td>College of Nursing</td>
<td>Nursing</td>
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<td>Bachelor of Science in Nursing</td>
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<td>College of Social Work</td>
<td>Social Work</td>
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<td>School of Information Sciences</td>
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<tr>
<td>University Studies</td>
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</tbody>
</table>

CURRICULA IN AGRICULTURE AND NATURAL RESOURCES

The College offers a broad range of curricula leading to the degrees of:

- Bachelor of Science in Agriculture (with majors in agricultural economics and business, agricultural education, animal science, and food science and technology),
- Bachelor of Science in Biosystems Engineering (with concentrations in agricultural engineering, biological engineering and food engineering),
- Bachelor of Science in Forestry (with concentrations in forest resources management and wildland recreation),
- Bachelor of Science in Ornamental Horticulture and Landscape Design (with concentrations in horticulture science and management, business, landscape design, and public horticulture),
- Bachelor of Science in Plant and Soil Sciences (with concentrations in science/technology, management/consulting, and environmental sciences and natural resources) and
- Bachelor of Science in Wildlife Fisheries Science.

The professional degree program in Biosystems Engineering receives strong support from the College of Engineering and is fully accredited by the Accreditation Board of Engineering and Technology. The forest resources management and wildland recreation concentrations are fully accredited by the Society of American Foresters. The Food Science and Technology and the Plant and Soil Sciences programs maintain the standards as established by their professional societies. Agricultural education meets state of Tennessee teacher education standards.

A pre-veterinary medicine curriculum is offered in the College. This program is designed to prepare students for admission to the College of Veterinary Medicine located on the Knoxville campus. The preprofessional program in Food Science and Technology allows students to be awarded a B.S. degree in agriculture with a major in Food Science after three years and the successful completion of the first year at UT-Memphis dental, medical or pharmacy programs, or at the UT College of Veterinary Medicine.

Specific courses required for each baccalaureate degree program are given under the departmental headings in this section of the catalog. A student must complete the curriculum outlined by the department in which he/she is majoring in order to receive a degree. In all areas of specialization, particular emphasis is placed upon the sciences as a background for agricultural and natural resources instruction; other courses are included to provide a university liberal education. In all curricula, there is the opportunity to select elective courses appropriate to the educational objectives of the individual students. The choice of electives in each curriculum should be made with the guidance of the faculty advisor.

All academic and general requirements of the University as stated in the front section of this catalog must be met by students enrolled in CASNR programs, and they must complete the requirements in one of the organized curricula. Students transferring into the College of Agricultural Sciences and Natural Resources from other than the UT Knoxville campus must have a grade point average of 2.0.

The use of transfer credit in subject matter areas appropriate to each organized curriculum will be considered and approved by the advisor of that curriculum and the Dean of the College of Agricultural Sciences and Natural Resources, following university guidelines. When desirable, validating or proficiency examinations may be requested to determine competence in an area and to avoid unnecessary repetition. Such examinations should be taken during the first semester in residence and must be conducted under the supervision of the head of the department in which the course is offered.

A minimum of 18 semester hours of upper division agriculture and natural resources coursework appropriate to a specified major requirement, and approved by the major advisor, must be completed in residence to fulfill the requirements of baccalaureate degrees offered in the college.

A minimum grade point average of 2.0 for all courses taken in the department offering the major/concentration is required.
SATISFACTORY/NO CREDIT COURSES
Students may include a maximum of 21 hours in non-directed electives taken on a satisfactory/no credit basis in the total hours required for graduation.

GRADUATE STUDY IN AGRICULTURE AND NATURAL RESOURCES

MASTER OF SCIENCE PROGRAMS
Programs of graduate study leading to the Master of Science degree are offered in all departments in the College of Agricultural Sciences and Natural Resources.

DOCTORAL PROGRAMS
Graduate study programs lead to the Doctor of Philosophy degree in animal sciences, biosystems engineering, food technology and science, and plant and soil science.

General requirements and policies of the Graduate School of The University of Tennessee relating to admission to the Graduate School, residence, language, research, examination, and admission to candidacy shall apply to these programs and are described in the Graduate Catalog.

SELECTION OF CURRICULUM
Students who have decided upon their area of study may choose the curriculum most adaptable to their needs when they register as freshmen. An advisor from the department will be assigned for their counseling. It is not necessary, however, that freshman students select their curriculum until the end of the first year. Undecided students will be assigned a special advisor to assist them in exploring CASNR programs and to guide them in the planning of appropriate courses of study for the freshman year. When they choose a curriculum, an advisor will be assigned from the appropriate department.

A foundation for advanced study beyond the baccalaureate degree may be established in any curriculum if appropriate electives are included. Courses may be elected in any of the curricula leading to the degree of Bachelor of Science in Agriculture, in preparation for employment with the Agricultural Extension Service. Contact the Office of the Dean, Agricultural Extension Service, for recommended coursework.

A very careful choice of electives enables a student with an excellent academic record to complete a double or triple major by satisfying all the requirements in each curriculum. For this purpose, the advisors of each curriculum should be consulted, the dean of the College of Agricultural Sciences and Natural Resources should be informed, and the advisor should maintain a complete record of the student’s progress. The multiple major will normally require more than 132 hours credit for graduation. It is the student’s responsibility to keep advisors informed about each major and/or minor they are pursuing.

OPTIONAL MINORS
Students may have a single or multiple minors in any of the UT colleges recorded on their transcripts without regard to course overlap among majors and minors. A minor in a department of the CASNR requires a minimum of 16 credit hours in courses numbered 200 and above with the majority of credit hours at the 300 and 400 level. At least 9 of the credit hours required for the minor must be completed at the UT campus in Knoxville. Specific requirements are listed by each department offering a minor. Minors offered in the CASNR are open to any students of other colleges who have the approval of their advisor and department.

MINIMUM REQUIREMENTS FOR BACCALAUREATE DEGREE PROGRAMS
All B.S. degree programs offered in the College have the following minimum requirements:

1. Perspectives in Agriculture and Associated Natural Resources (3) (counts towards the University’s general education requirement for 6 hours of integrative studies)
2. Biological Sciences (College of Agricultural Sciences and Natural Resources courses included) (8)
3. Computer Science (3) (Or equivalent experience. See specific departmental requirements.)
4. English and Communications to include English Composition (6), Speech (3), and an additional communications elective (3) for a total of 12 (the communications elective may overlap to fulfill one course for the University’s humanities electives)
5. Mathematics (6)
6. Physical Sciences (Chemistry, Physics, Geology) (8)
7. Social Sciences and Humanities to include Economics (4) and other electives (8) for a total of 12. (Economics (4) may overlap to fulfill one course for the University’s social science electives)
8. Directed Electives (6)
9. General Electives (24)
10. College of Agricultural Sciences and Natural Resources courses (outside of the major department) designated by the department and/or electives (12)
11. Other courses designated by the department and/or electives (38)
For a total of 132 hours.

ACHIEVEMENTS PROGRAM
The CASNR Honors Research and Creative Achievements Program is designed to allow students to expand and improve their critical thinking and analytical skills while pursuing the baccalaureate degree in the college. Students in this program will complete an honors project, related to research, teaching or extension, under the guidance of a faculty member, and report that work in both written and oral format in a one-hour course, ANR 498. The Program Objectives are:

1. To increase the scope of educational attainment by providing a program with greater breadth and depth.
2. To provide special recognition for outstanding scholastic achievement, and
3. To foster a sustained interest in advanced education, research and creative achievement.

To be eligible, a student must be a junior, senior or second semester junior transfer student with a minimum grade point average of 3.25. Additionally, once a student is admitted to the program, they must maintain a GPA of 3.25 or above. The eligible student will be invited by the College to participate in the program the first semester they are eligible, and once per academic year thereafter. The student must apply for the program, and be approved by a College Honors Committee. This application includes details of the proposed research, teaching or extension project. Upon admission, the student can enroll in ANR 497, Honors Project (repeatable for a maximum of 6 hours) or departmental independent study credit. The student would enroll during the semester(s) that he/she is actively working on the project. Some departments may elect to allow some or all of this credit to count toward graduation requirements. Upon completion of their work, the student must enroll in ANR 498, Honors Presentations (1). The student will prepare a written report and give an oral presentation to the Committee and whomever else is interested.

More detailed information is available from the CASNR Dean’s office.

COURSE LOAD
Students desiring to take more than 19 hours per semester must have the approval of the dean of the college.

TRANSFER STUDENTS
Students who transfer to the CASNR from another institution or from another college at UT should contact the specific department of the curriculum they wish to follow and for assignment to an appropriate advisor. If the student is unsure of the specific curriculum, he/she should contact the Dean’s office. Requests for substitutions or special examinations should be submitted for consideration during the first semester of study in the selected curriculum.
AGRICULTURAL ECONOMICS

Professors:
D.L. McLemore (Head), Ph.D.; Clemson; M.B. Badenhop (Emeritus), Ph.D.; Purdue; J.R. Brooker, Ph.D.; Florida; C.L. Cleland (Emeritus), Ph.D.; Wisconsin; D.B. Eastwood, Ph.D.; Tufts; B.C. English, Ph.D.; Iowa State; K.L. Jensen, Ph.D.; Oklahoma State; L.H. Keller (Emeritus), Ph.D.; Kentucky; T.H. Klindt (Associate Dean), Ph.D.; Kentucky; F.O. Leuthold, Ph.D.; Wisconsin; J.A. Martin (Emeritus), Ph.D.; Minnesota; B.R. McManus (Emeritus), Ph.D.; Purdue; S.D. Mundy, Ph.D.; Tennessee; R.H. Orr, Ph.D.; Illinois; W.M. Park, Ph.D.; Virginia Tech; D.E. Ray, Ph.D.; Iowa State; J.B. Riley, Ph.D.; Oklahoma State University; R.K. Roberts, Ph.D.; Iowa State; T.J. Whatley (Emeritus), Ph.D.; Purdue; H. Williamson, Ph.D.; Missouri.

Associate Professor:
P.M. Jakus, Ph.D.; North Carolina State; J.A. Larson, Ph.D.; Oklahoma State.

Assistant Professor:
D.G. De La Torre Ugarte, Ph.D.; Oklahoma State; E.C. Jaenike, Ph.D.; Maryland; K.H. Tiller, Ph.D.; Tennessee.

AGRICULTURAL ECONOMICS AND BUSINESS CURRICULUM

Advisors:
Professors Brooker, McLemore, and Riley.

This curriculum is designed to provide students with training in the social sciences as well as in the physical and biological sciences and technical agriculture. Through course selection, students may prepare for employment in the rapidly expanding field of agricultural business or in the field of farm production and related areas. The business oriented student will be prepared for the management phases of agricultural business. Employment opportunities include work in marketing of agricultural products, agribusiness firm management, agricultural credit agencies and banks, farm real estate and appraisal services, public and private market analysis, and farm information services utilizing mass communications.

Farm management oriented students will be prepared for positions such as farm managers, county agricultural agents, managers of farm supply and purchasing firms, agricultural journalists, and farm loan agents. The curriculum also provides the necessary background for graduate work in agricultural economics.

Minor consists of 16 credit hours including Economics 201, Agricultural Economics 342, 350, 412, and a 3-hour elective in Agricultural Economics.

Speech 210 or 240 ............................................... 3
Accounting 201, 202 .............................................. 3
Animal Science 260 or 381 ..................................... 3
Plant and Soil Sciences 210 or 230 ............................ 3
Statistics 201 ........................................... 3

Junior
Rural Sociology 380 ............................................. 3
Economics 313 .................................................. 3
Statistics 320 .................................................... 3
Nondepartmental Agricultural Electives ..................... 6
Agricultural Economics 320, 342, 350, 412 ............... 12
Humanities Elective .............................................. 3
English 290 ....................................................... 3

Senior
Agricultural Economics 410 .................................... 1
Agricultural Business Electives ................................. 3
Rural Sociology Electives ..................................... 12
Business Electives ................................................ 6
Integrative Studies Elective .................................... 3
Electives ......................................................... 11

Total: 132 hours

AGRICULTURAL ECONOMICS AND BUSINESS:
CONCENTRATION IN AGRICULTURAL EQUIPMENT SYSTEMS MANAGEMENT

Technology is changing rapidly in agricultural equipment and the industry is in need of professionals who have developed a high degree of technical expertise in addition to having the ability to apply sound business and economic principles to the management of a business. The Agricultural Equipment Systems Management Concentration is a unique interdisciplinary program that combines courses from the Agricultural Economics and Business Program and the Biosystems Engineering Technology Program. Graduates will find career opportunities in the agricultural machinery industry as dealership managers as well as with agribusiness firms in operations management.

Students enrolling in the Agricultural Equipment Systems Management Concentration may apply for participation in the John Deere Dealership Management Program. This unique program represents a partnership between John Deere and the University of Tennessee for the southern region of the United States. Students participating in the John Deere Dealership Management Program will have a dealership manager as a mentor, spend two summer internships in a dealership, and will be considered for additional scholarship assistance.

AGRICULTURAL EXTENSION EDUCATION

Professors:

Assistant Professor:
J.A. Delnero, Ph.D.; Oklahoma State.

The Department of Agricultural and Extension Education has two educational areas of emphasis: namely, Agricultural Extension Education and Agricultural Education.

AGRICULTURAL EXTENSION EDUCATION

Although no formal undergraduate curriculum is offered in Agricultural Extension Education, undergraduate courses are available as electives in each formal curriculum. These courses are designed to develop an understanding of the functions, responsibilities, and techniques of the Agricultural Extension Service; and to provide prospective Extension employees with work experience in selected training counties.

AGRICULTURAL EDUCATION

Students who complete the requirements for graduation in Agricultural Education receive a Bachelor of Science Degree in Agriculture with a Major in Agricultural Education. The curriculum is designed to prepare persons to assume educational and leadership roles in many phases of the agricultural industry, including agribusiness, schools, agencies, and farming and ranching. Emphasis is on preparing students to teach agricultural education or serve as an educator with the Agricultural Extension Service. Students may choose to concentrate either in the teacher education (certification) option or the professional services option.
The teacher education option is designed to prepare students to meet teacher certification requirements for agricultural education. Teacher Certification is given through the College of Education. Students must file for admission to Teacher Education in the College of Education. (See Admission to Teacher Education and Student Teaching section.)

Students who choose the professional services option may substitute additional technical agriculture and/or internship hours equivalent to the number of hours of student teaching required in the teacher education option. With advisor approval additional hours, required specifically for certification, may also be substituted with courses in the humanities, social sciences or technical agriculture areas. This option provides a broad-based curriculum designed for those students who wish to prepare for careers with the Agricultural Extension Service, agribusiness, government agencies, and farming and ranching. This option does not prepare a student to meet teacher certification requirements.

<table>
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<th>Agriculture and Natural Resources 101</th>
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<td>Biology 101, 102</td>
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<td>English 101, 102</td>
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<td>Mathematics 119, 123</td>
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<td></td>
<td>Animal Science 260 or 280</td>
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<td>Agriculture and Natural Resources 290</td>
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**Sophomore**

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<td>Agriculture Economics 212</td>
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<td></td>
<td>Plant and Soil Sciences 210</td>
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<tr>
<td></td>
<td>Plant and Soil Sciences 230</td>
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<td></td>
<td>Biosystems Engineering Technology 202</td>
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<td></td>
<td>Food Science and Technology 269</td>
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<tr>
<td></td>
<td>Agricultural and Extension Education 211</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Agricultural and Extension Education 201</td>
<td>1</td>
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</table>

**Junior**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Entomology and Plant Pathology 321</th>
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</tr>
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<tbody>
<tr>
<td></td>
<td>Animal Science 330</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Ornamental Horticulture and Landscape</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Design 430</td>
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<tr>
<td></td>
<td>Agricultural and Extension Education 345, 346</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Agricultural Economics 400</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Educational Psychology 210</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Agriculture and Extension Education 420</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Animal Science 381</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Agricultural Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Agricultural and Extension Education 435, 436</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Biosystems Engineering Technology 452</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Animal Science 381</td>
<td>3</td>
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<tr>
<td></td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Agricultural Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

Total: 132 hours

1. The course should contain a writing component.
2. Lists of appropriate electives are available and should be selected in conference with academic advisor.
3. Equivalent hours may be substituted for students not desiring teacher certification.

### AGRICULTURAL AND BIOSYSTEMS ENGINEERING

**Professors:**

- C.R. Mote (Assistant Dean, Tennessee Agricultural Experiment Station), Ph.D. Ohio State, P.E.; B.L. Bledsoe (Emeritus), Ph.D. Oklahoma State, P.E.; Z.A. Henry (Emeritus), Ph.D.
- D. North Carolina State, P.E.; D.H. Luttrell (Emeritus), Ph.D. Iowa State; J.J. McDow (Emeritus), Ph.D. Michigan State, P.E.; J.I. Sewell (Emeritus), Ph.D.
- D. North Carolina State, P.E.; C.H. Shelton (Emeritus), M.S.
- Virginia Polytechnic Institute, F.D. Tompkins (Associate Dean, College of Engineering).
- Ph.D. Tennessee, P.E.; L.R. Wilhelm, Ph.D.
- Tennesse, P.E.; R.E. Yoder, Ph.D. Colorado State, P.E.; R.E. Yoder (Head), Ph.D.
- Colorado State, P.E.

**Associate Professors:**

- R.S. Freeland, Ph.D. Tennessee, P.E.; W.E. Hart, Ph.D. Purdue; L.D. Pordesimo, Ph.D.
- Pennsylvania State; D.R. Raman, Ph.D.
- Cornell, P.E.; J.B. Wilkerson, Ph.D. Purdue; A.R. Womac, Ph.D.
- Tennessee, P.E.; D.C. Yoder, Ph.D. Purdue.

**Advisors:**


The College of Agricultural Sciences and Natural Resources, with the cooperation of the College of Engineering, offers a four-year curriculum leading to the degree of Bachelor of Science in Biosystems Engineering. The curriculum is accredited as per the Engineering Commission of the Accreditation Board for Engineering and Technology (ABET). Employment opportunities are available in industry, government agencies, research and testing organizations, and educational and non-profit institutions.

The math requirement for freshman admission to the Biosystems Engineering program is 3.5 units, including trigonometry and geometry. Otherwise, the general admission requirements of the University apply.

### VISION

The Biosystems Engineering Program at the University of Tennessee is committed to linking engineering sciences and mathematics to real-world problems involving natural and man-made biologically-based systems. We strive to educate students to become engineers with the ability to serve humanity by applying engineering knowledge to solve problems facing society. This education is accomplished by providing a strong grounding in engineering fundamentals and incorporating hands-on, real-world design scenarios throughout the curriculum.

Our graduates are technically competent in engineering design. They

- understand the steps in the engineering process;
- can define a problem;
- can gather the information required to solve a problem;
- can critically evaluate information from various sources;

- are creative and can synthesize solutions to a problem;
- can perform engineering analyses;
- can design components, machines, or systems to solve a problem;
- understand the importance of social, environmental, economic, and safety issues;
- and appreciate the role of uncertainty and risk in engineering analyses.

Our graduates have the skills needed by professional engineers. Our program strives to instill

- an understanding of the engineering profession;
- the thrill of rewarding engineering accomplishments;
- a knowledge of the responsibilities of a practicing engineer;
- an ability to work effectively in teams of diverse makeup;
- an understanding of the importance of ethical conduct in a professional practice;
- effective oral, written, and graphical communications skills;
- the importance of taking initiative on projects;
- confidence in technical capabilities;
- strong personal time management skills;
- strong project management skills.

The curriculum provides instruction in the analytical and design skills needed to solve engineering problems related to biological and agricultural systems. Comprehensive design of systems and their components is emphasized in the senior year. Three concentrations are available: Agricultural Engineering, Biological Engineering, and Food Engineering. A concentration should be selected early in the academic program since there are differences as early as the sophomore year. Each concentration in the curriculum has provisions for elective courses to be taken in specified subject areas. Students must consult with their advisors each semester regarding the selection of courses and should outline a plan for all such electives not later than their second year of study.

Graduates may pursue careers in design and development of: management practices that minimize soil erosion and conserve water resources; biological waste treatment systems; safer agricultural machinery with lower environmental impact; and improved food and agricultural processing systems.

Students majoring in biosystems engineering are eligible to participate in the Engineering Cooperative Scholarship Program and other student activities in the College of Engineering. Biosystems Engineering majors interested in the Cooperative Engineering Scholarship program should consult with their faculty advisor or the head of the Agricultural and Biosystems Engineering Department (phone (865) 974-7266, e-mail: abed@utk.edu).

### BIOSYSTEMS ENGINEERING:

**CONCENTRATION IN AGRICULTURAL ENGINEERING**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
<th>Engineering Fundamentals 101, 102</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Biosystems Engineering 103, 104</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemistry 120</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

1. English 101, 102
2. Mathematics 141, 142
Sophomore

- Biosystems Engineering 201 ........................................ 1
- Life Sciences Elective ................................................ 4
- Engineering Science 231, 321 ........................................ 6
- General Education Elective (Contemporary Issues Cluster) ................................................ 3
- General Education Elective (Humanities or Arts Clusters) ................................................ 3
- General Education Elective (Engineering Practice in Global Societal Context Cluster) ........... 3
- Chemistry 130 ......................................................... 4
- Mathematics 200, 231, 241 ........................................ 8
- Physics 231 .............................................................. 3

Junior

- Biosystems Engineering 303, 451 .................................... 7
- Biosystems Engineering Core Electives ................................ 6
- Electrical Engineering 301 ........................................... 3
- Fluid Science Elective ................................................... 4
- General Education Elective (Humanities or Arts Clusters) ................................................ 3
- Industrial Engineering 405 ............................................ 3
- Thermodynamics Elective ............................................. 3
- Technical Electives ..................................................... 6

Senior

- Biosystems Engineering 401, 402 ..................................... 9
- Biosystems Engineering 403, 423, or 430 or 433 ................................................................. 3
- Bioscience Elective ..................................................... 4
- Speech 210 or 240 ...................................................... 3
- English 360 ............................................................... 3
- Economics 201 ......................................................... 4
- General Education Electives (Multicultural Studies Cluster) ................................................ 3
- Technical Elective ....................................................... 3

Total: 134 hours

1. Or equivalent honors course.
2. If Mathematics placement test score is unsatisfactory, take Mathematics 130 prior to 141 (See advisor for alternate course schedule).
3. Mathematics 130 will count as additional hours toward graduation.
4. Select from the appropriate cluster in the College of Engineering listing of General Education Electives. In some instances a single course may meet requirements of more than one cluster. When this occurs, a course from another cluster may be used to meet the total hour requirement. These electives must be approved in advance by advisor to insure that they meet university and ABET criteria.
5. Select from CE 390 Hydraulics or ES 341 Fluid Mechanics.
6. Typically upper division courses in engineering or related areas. May also include Physics 232. Must be approved in advance by advisor.
7. Select from the appropriate cluster in the College of Engineering listing of General Education Electives. In some instances a single course may meet requirements of more than one cluster. When this occurs, a course from another cluster may be used to meet the total hour requirement. These electives must be approved in advance by advisor to insure that they meet university and ABET criteria.

**BIOSYSTEMS ENGINEERING: CONCENTRATION IN BIOLOGICAL ENGINEERING**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
<th>Engineering Fundamentals 101, 102 ........................................ 12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Biosystems Engineering 103, 104 .................................... 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemistry 120 ........................................................... 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. English 101, 102 .................................................... 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Mathematics 141, 142 .............................................. 8</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
<td>Biosystems Engineering 201, 243 .................................... 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basic Biology Electives I and II .................................... 8</td>
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<tr>
<td></td>
<td></td>
<td>General Education Elective (Contemporary Issues Cluster) .... 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering Science 231, 321 ....................................... 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemistry 130 ........................................................... 4</td>
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</table>

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Junior</th>
<th>Biosystems Engineering 303, 451 .................................... 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Electrical Engineering 301 ........................................... 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fluid Science Elective ................................................ 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>General Education Elective (Multicultural Studies Cluster) .... 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thermodynamics Elective ............................................... 3</td>
</tr>
</tbody>
</table>

**BIOSYSTEMS ENGINEERING TECHNOLOGY**


No baccalaureate degree program is offered in biosystems engineering technology; however, seven undergraduate courses are offered to prepare students in other disciplines to apply elementary principles, techniques and systems of engineering to the broad industry of agriculture.

A Minor in Biosystems Engineering Technology requires a minimum of 18 semester hours as follows: Biosystems Engineering Technology 202, 212, 432, 442 and two of the three courses 422, 452, 462.

A program leading to the Master of Science degree with a major in biosystems engineering technology is available (see the Graduate Catalog). The graduate program is open to qualifying BS graduates from other disciplines who earned a minor in biosystems engineering technology or who completed courses equivalent to those required for the minor in biosystems engineering technology.

**ANIMAL SCIENCE**

Professors: K.R. Robbins (Head), Ph.D. Illinois; K.M. Barth (Emeritus), Ph.D. Rutgers; M.C. Bell (Emeritus), Ph.D. Oklahoma State; J.K. Bletter (Emeritus), Ph.D. Ohio State; C.C. Chamberlain (Emeritus), Ph.D. Iowa State; G.E. Conaster, M.S. Kentucky; B.H. Erickson (Emeritus), Ph.D. Kansas State; J.D. Godkin, Ph.D. Massachusetts; W.M. Graves, Ph.D. Kentucky; O.G. Hall (Dean Emeritus, College of Agricultural Sciences and Natural Resources), Ph.D. Iowa State; Frederick Harper, Ph.D. Rutgers; P.D. Kirkpatrick, Ph.D. Tennessee; C.D. Lane, Ph.D. Tennessee; R.F. Lidvall (Emeritus), M.S. Tennessee; F.B. Masincupp, Ph.D. Kansas State; J.B. McLaren (Emeritus), Ph.D. Auburn;
D.G. Meadows, Ph.D. Texas A&M; M.J. Montgomery, Ph.D. Wisconsin; J.B. Neel, Ph.D. Tennessee; J.K. Miller, Ph.D. Georgia; S.P. Oliver, Ph.D. Ohio State; D.O. Richardson, (Dean, Agricultural Experiment Station.), Ph.D. Ohio State; A.L. Summer, A.D. North Carolina State; H.V. Shively (Emeritus), Ph.D. Illinois; M.H. Sims, Ph.D. Auburn; R.L. Tugwell (Emeritus), Ph.D. Kansas State.

Associate Professors: W.R. Backus, Ph.D. Tennessee; B.R. Bell, Ph.D. North Carolina State; J.M. Grizzle, Ph.D. Florida; R.N. Heitlmann, Ph.D. Maine; H.G. Kattess, Ph.D. Virginia Polytechnic Institute; A.F. Mathew, Ph.D. Purdue; F.N. Schrick, Ph.D. Clemson; M.O. Smith, Ph.D. Oklahoma State; J.C. Walker, Ph.D. Nebraska.

Assistant Professors: J.L. Edwards, Ph.D. Florida; C.J. Richards, Ph.D. Kentucky; J.D. Smalling (Emeritus), Ph.D. Texas A&M; K.J. Staider, Ph.D. Iowa State.

Instructor: W.G. Upchurch, M.S. Tennessee.

Advisors: Professors Godkin, Masincupp, and Oliver. Associate Professors Backus, Bell, Grizzle, Heitlmann, Kattess, Mathew, Schrick, Smith, and Walker. Assistant Professor Richards.

The curriculum is designed to prepare students for leadership careers in livestock production and related industries. Courses in horse, swine, poultry, sheep, dairy and beef cattle production and management may be elected, providing the opportunity for special or additional training in the dynamic livestock and husbandry technology (production) areas. Through course selection, students may prepare for general or livestock farming, management, business, or science, or elect the pre-veterinary courses preparatory for specialization. Elective selection permits special training for work with feed companies, meat animal, milk, egg, or poultry production, managerial or marketing groups, other educational agencies, supply and equipment business, agricultural extension (agricultural communication, public relations, and various organizations associated with agriculture.

A Minor in Animal Science consists of 3 credits from 260 (Animal Industry and Market Evaluation) or 280 (Farm Animal Management Practices); 4 credits from 330 (Animal Nutrition, Feeds, and Ration Formulation); 3 credits from 381 (Animal Production Systems) or one of the 480 series plus 8 credits from the following list: 220, 320, 340, 380, no more than one of the 360 series, 420, 430, 440, the 480 series, and no more than 3 credits from 493.

**ANIMAL SCIENCE: CONCENTRATION IN SCIENCE/TECHNOLOGY**

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
</tr>
<tr>
<td>Agriculture and Natural Resources 101</td>
</tr>
<tr>
<td>Biology 130-140 or 101-102</td>
</tr>
<tr>
<td>English 101-102</td>
</tr>
<tr>
<td>Mathematics 123-125 or 141-142 or 151-152</td>
</tr>
<tr>
<td>Chemistry 100-110 or 120-130</td>
</tr>
<tr>
<td>Animal Science 101</td>
</tr>
<tr>
<td>Social Science elective</td>
</tr>
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</table>

| Sophomore |
|  |
| Animal Science 220, 260 | 6 |
| Plant and Soil Science 210, 211 | 4 |
| Agriculture and Natural Resources 290 | 3 |
| Speech 210 or 240 | 3 |
| Writing Elective | 3 |
| Economics 201 | 4 |
| Humanities Elective | 3 |
| Business Elective | 3 |
| Non-Animal Science Agriculture Elective | 3 |

| Junior |
|  |
| Biological Science Restricted Elective | 3 |
| Historical Studies | 6 |
| Animal Science 320, 330, 340; one course from 361, 362, 363 or 364; 380 | 15 |
| Non-Animal Science Agriculture Electives | 6 |
| Free Electives | 7-9 |
| 1Production Agriculture Electives | 9 |
| 2Business Elective | 6 |

Total: 132 hours

1. May be chosen from approved list of courses meeting University requirements as Social Sciences.
2. May be chosen from approved list of courses meeting University requirements as Humanities and described as writing intensive.
3. May be chosen from approved list of courses meeting University requirements as Biological Science.
4. May be chosen from approved list of courses meeting departmental requirements as Histories.
5. May be chosen from approved list of courses meeting departmental requirements as Humanities.
6. May be chosen from approved list of courses meeting departmental requirements as Business.
7. May be chosen from approved list of courses meeting departmental requirements as Production Agriculture.

**ANIMAL SCIENCE: CONCENTRATION IN PRODUCTION/MANAGEMENT**

<table>
<thead>
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<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
</tr>
<tr>
<td>Agriculture and Natural Resources 101</td>
</tr>
<tr>
<td>Biology 130-140 or 101-102</td>
</tr>
<tr>
<td>English 101-102</td>
</tr>
<tr>
<td>Mathematics 123-125 or 141-142 or 151-152</td>
</tr>
<tr>
<td>Speech 210 or 240</td>
</tr>
<tr>
<td>Writing Elective</td>
</tr>
<tr>
<td>Economics 201</td>
</tr>
<tr>
<td>Physical Science and Math Restricted Elective</td>
</tr>
<tr>
<td>Biological Science Restricted Elective</td>
</tr>
<tr>
<td>Non-Animal Science Agriculture Elective</td>
</tr>
<tr>
<td>History</td>
</tr>
<tr>
<td>Animal Science 320, 330, 340, 380</td>
</tr>
</tbody>
</table>

| Senior |
|  |
| Humanities Elective | 3 |
| Biological Science Restricted Elective | 3 |
| Animal Science 495, and one course from 481, 482, 483, 484, 485, 486, 489, 493, 498 | 4 |
| Agricultural Economics Elective | 3 |

Total: 132 hours

1. May be chosen from approved list of courses meeting University requirements as Social Sciences.
2. May be chosen from approved list of courses meeting University requirements as Humanities.
3. May be chosen from approved list of courses meeting departmental requirements as physical science.
4. May be chosen from approved list of courses meeting departmental requirements for biological science.
5. May be chosen from approved list of courses meeting departmental requirements as History.
6. May be chosen from approved list of courses meeting University requirements as Humanities.
7. May be chosen from approved list of courses meeting University requirements as Biological Science.

**PRE-VETERINARY MEDICINE PROGRAM**

This program allows students to be awarded a B.S. degree in Agriculture with a major in Animal Science, after the successful completion of the first two semesters in the College of Veterinary Medicine (CVM). Students must begin this program early in the pre-veterinary curriculum. The specific requirements are:

1. Completion of all pre-veterinary requirements:
   a. English Composition 101-102 (3,3)—6 hours
   b. Humanities and Social Sciences—18 hours
   c. Elements of Physics 221-222 (4,4)—8 hours
   d. General Chemistry 120-130 (4,4) —8 hours
   e. Organic Chemistry 350-360 and Laboratory 369 (3,3,2)—8 hours
   f. Cellular and Comparative Biology 410 (4)—4 hours
   g. General Biology 130-140 (4,4) —8 hours
   h. Biology 240—4 hours or Animal Science 340—4 hours
   i. Biology Elective—2 or 3 hours
   j. The last 30 hours of the three-year pre-veterinary curriculum must have been taken at UT.
   k. At least 12 hours of upper division (300 and 400 level courses) technical agriculture courses must be taken at UT.
   l. In addition to all the required pre-veterinary medical courses, the following (or approved equivalents) must be completed before entering the College of Veterinary Medicine:
      a. Mathematics 123-125 or 141-142 or 151-152—8 hours
      b. Animal Science 101—1 hour
      c. Agriculture and Natural Resources 101—3 hours
      d. Animal Science 220—3 hours
      e. Animal Science 260—3 hours
      f. Animal Science 320—3 hours
      g. Animal Science 330—4 hours
      h. Animal Science 340—3 hours
      i. Animal Science 380—3 hours
      j. One course from Animal Science 481, 482, 483, 484, 485, 486, or 489—3 hours
      k. Agriculture and Natural Resources 290—3 hours

College of Agricultural Sciences and Natural Resources
Biochemistry 410 ...................................................... 4
Junior
by the end of the first year in the CVM.

1. Economics 201—4 hours.
m. Speech 210 or 240—3 hours
n. Non-Animal Science Agriculture—3 hours

NOTE: Agriculture and Natural Resources 101, Economics 201 and Speech 210 or 240 will be accepted by the CVM as meeting requirements in the Humanities/Social Science category. The remainder must be a Social Science elective, a Humanities elective, and a Humanities elective described as writing intensive. Writing intensive History courses may also be used.

5. Satisfactory completion of the first two semesters in the CVM professional program.
6. No later than December 31 of the student’s first year in the CVM (s)he should contact the Animal Science Department in order to check on graduation procedures for this program.
7. A total of 132 hours must be completed by the end of the first year in the CVM.

Hours Credit
Freshman

Agriculture and Natural Resources 101 ................................. 3
Animal Science 101 ....................................................... 3
Biology 130-140 ................................................................ 1
English 101-102 ................................................................ 6
Math 123-125 or 1410142 or 151-152 .............................. 6-8
Chemistry 120-130 .......................................................... 8

Sophomore

Animal Science ................................................................. 3
Biology Elective ............................................................... 4
Agriculture and Natural Resources 290 .............................. 3
Speech 210 or 240 ........................................................... 3
Chemistry 350, 360-369 .................................................... 8
Physics 221-222 .............................................................. 8

Animal Science 260 .......................................................... 3

1,2Humanities Elective ....................................................... 3

Junior

Biochemistry 410 ............................................................ 4

1Writing elective
2Economics 201 ................................................................ 4

Animal Science 320, 330, 340, 380 .................................. 13
One course from Animal Science 481, 482, 483, 484, 485, 489 .............................................................. 3
Non-Animal Science Agriculture ..................................... 3

3Humanities Elective ....................................................... 3

Total: 100-102 hours

1Chosen from approved list of courses meeting University requirements as Social Sciences.
2Will count toward the 18 credits required in the Humanities/Social Science for entrance into the CVM.
3Chosen from approved list of courses meeting University requirements as Humanities.

This curriculum meets the requirements for entrance to the CVM and after the first successful year in the CVM, the student will be awarded a B.S. in Agriculture with a major in Animal Science. Should the student not gain admittance to the CVM after the Junior year, the student could complete the requirements for a major in Animal Science during the Senior year.

ENTOMOLOGY AND PLANT PATHOLOGY

Professors:

Associate Professors:

Assistant Professor:
Roberto Pereira, Ph.D. Florida.

Advisors:
Gerhardt, Lambdin, and Pleiss.

No undergraduate curriculum exists in the Department of Entomology and Plant Pathology, but a program leading to the Master of Science degree with a major in entomology and plant pathology is available (see Graduate Catalog). Courses in economic entomology, diseases and insects of ornamental plants, forest protection, plant pathology, and veterinary entomology are available to undergraduate students.

Instruction and training is provided in those disciplines which deal with the natural hazards that are major causes of losses in agricultural production, namely, insects and plant diseases. Courses of study in entomology or plant pathology should give the student an appreciation of insects and microorganisms, their ecology, population dynamics, potential damage to plants and their products, and various considerations in control alternatives.

FOOD SCIENCE AND TECHNOLOGY

Professors:
C.J. Brekke (Head), Ph.D. Wisconsin; J.L. Collins (Emeritus), Ph.D. Maryland; R.M. Davidson, Ph.D. Washington State; F.A. Draughon, Ph.D. Georgia; H.O. Jaynes (Emeritus), Ph.D. Illinois; C.C. Melton, Ph.D. Kansas State; S.L. Melton, Ph.D. Tennessee; J.T. Miles (Emeritus), Ph.D. Wisconsin; W.C. Morris, Ph.D. Iowa State; W.W. Overcast (Emeritus), Ph.D. Iowa State; M.P. Penfield, Ph.D. Tennessee.

Associate Professors:
D.A. Golden, Ph.D. Georgia; H.D. Loveday, Ph.D. Kansas State; J.R. Mount, Ph.D. Ohio State.

Assistant Professors:
G. Hulbert, Ph.D. Illinois; R.L. van Laack, Ph.D. Utrecht; J. Weiss, Ph.D. Massachusetts.

Advisors:
Collins, Draughon, Golden, Loveday, Melton, Mount and Penfield.

The curriculum concentrations in Food Science and Technology include a science concentration, a business/technology concentration, and a pre-professional concentration. They prepare students to apply basic scientific and business principles to manufacturing, processing, distribution, and utilization of food products that meet the needs and desires of consumers. Coursework emphasizes the basic principles of converting raw food materials into safe acceptable consumer products. Selected commodity courses detail processing of specific types of food materials. Students entering the program should have an interest in the sciences, such as chemistry, microbiology, and biology.

Career opportunities include positions in the food industry in quality assurance, production management, marketing, governmental inspection, etc. The science concentration of coursework conforms to the guidelines in the model curriculum of the Institute of Food Technologists. The business/technology concentration allows students to obtain an agri business or business minor. A special problems course provides opportunity for practical training in food processing plants and laboratories or federal and state laboratories.

The Minor in Food Science and Technology requires a minimum of 17 hours as follows: 140, 310, 320-329, 340, and one elective course in Food Science and Technology.

FOOD SCIENCE AND TECHNOLOGY:
CONCENTRATION IN SCIENCE

Hours Credit
Freshman

English 101-102 .......................................................... 6
Math 125 and 130 or 123 and 125 .............................. 6-8

2Biological Science ......................................................... 4
3Food Science and Technology 140 .............................. 3
Chemistry 120-130 ....................................................... 8
Agriculture and Natural Resources 101 .......................... 3
Elective ....................................................................... 3

Sophomore

Chemistry 350, 360-369 .................................................... 8
Physics 101 or 221 .......................................................... 3-4
Microbiology 210 .......................................................... 3
Food Science and Technology 340 .............................. 3
Agriculture and Natural Resources 290 .......................... 3
Nutrition 100 or 300 ....................................................... 3

1Social Science Elective .................................................... 3
2Ethics Elective ............................................................. 3
3Humanities Elective ....................................................... 3

Junior

Food Science and Technology 410 .................................. 4

1Food Science and Technology 420-429 .......................... 5
BCMB 310 or 410 ........................................................ 5
Economics 201 ............................................................. 4

1History Electives ............................................................ 6
2Food Science and Technology Elective .......................... 3
Speech 210, 220 or 240 .............................................. 3
Plant and Soil Science 471 or Statistics 2012 .......................... 3

Senior

Food Science and Technology 401 ................................ 2
Food Science and Technology 430 .............................. 3
Food Science and Technology 495 .............................. 3
Food Science and Technology Elective .......................... 9
Nutrition 420 .............................................................. 3

1Biosystems Engineering Technology 422 2 Electives ............................................................ 3
Electives ....................................................................... 8-11

Total: 132 hours

1May be chosen from Biology 101, 130 or Botany 110.
2May be chosen from approved list of courses meeting University requirements as Social Sciences.
3May be chosen from Philosophy 110, 240, 342, 344, 345, 346 or Business 301.
4May be chosen from approved list of courses meeting University requirements as Humanities.
5May be chosen from approved list of courses meeting Departmental requirements for FST elective.

College of Agricultural Sciences and Natural Resources 43
FOOD SCIENCE AND TECHNOLOGY:
CONCENTRATION IN
BUSINESS TECHNOLOGY

<table>
<thead>
<tr>
<th>Hours Credit</th>
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**Sophomore**

Chemistry 110 .......................... 4
Microbiology 210 .......................... 3
Food Science and Technology 340 .......................... 3
Food Science and Technology 240 .......................... 2
Agriculture and Natural Resources 290 .......................... 3
Nutrition 100 or Animal Science 330 .......................... 3
Statistics 201 .................................................. 3
Economics 201 .................................................. 4

**Junior**

Food Science and Technology 410 .......................... 4
Food Science and Technology 420-429 .......................... 5
1Directed Technology/Business Electives .......................... 6
5Directed Technology/Business Electives .......................... 6
5History Electives .......................... 6
5Food Science and Technology Electives .......................... 5
470 and/or 480 .................................................. 3
Speech 210, 220 or 240 .................................................. 3
Statistics 365 .................................................. 3
Electives .................................................. 5

**Senior**

Food Science and Technology 401 .......................... 2
Food Science and Technology 430 .......................... 3
Food Science and Technology 452, 460, 470 .......................... 3
and/or 480 .................................................. 3
Food Science and Technology 490 .......................... 3
Food Science and Technology 495 .......................... 3
1Directed Technology/Business Electives .......................... 7
Electives .................................................. 9

Total: 132 hours

1May be chosen from Biology 101, 130 or Botany 110.
2May be chosen from approved list of courses meeting University requirements as Social Sciences.
3May be chosen from approved list of courses meeting University requirements as Humanities.
4May be chosen from University requirements as Economics.
5May be chosen from approved list of courses meeting University requirements as Social Sciences.
6May be chosen from approved list of courses meeting University requirements as Humanities.
7May be chosen from approved list of courses meeting University requirements as History.
8One of these electives (3 hrs) must be described as writing intensive.

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FOOD SCIENCE AND TECHNOLOGY: PREPROFESSIONAL CONCENTRATIONS

These programs in Pre-Dental, Pre-Medicine, Pre-Pharmacy and Pre-Veterinary Medicine allow students to be awarded a B.S. degree in Agriculture with a major in Food Science and Technology, after three years and the successful completion of the first year (two semesters) in UT-Memphis dental, medical or pharmacy programs or UT Knoxville College of Veterinary Medicine. The last 30 hours of the three-year curriculum must have been taken at UT Knoxville. A total of 132 hours must be completed by the end of the first year in professional school. No later than December 31 of the student’s first year in professional school(s) he she should contact the Dept Food Science and Technology in order to check on graduation procedures for this program.

Although a B.S. degree is not required for admission to the Colleges of Dentistry or Medicine, most of the students accepted into these programs have the baccalaureate degree before admission. Therefore students are encouraged to plan to complete all requirements for B.S. degree before enrolling in either of these colleges. A B.S. degree can be obtained before enrolling in the Doctor of Pharmacy (Pharm.D.) program.

Should the student not gain admittance after the Junior year, the student could complete the requirements for a major in Food Science and Technology during the Senior year.

**Junior**

English 101-102 .................................................. 6
Math 119 or 123 or 130 and 125 .................................................. 6
1Biological Sciences .................................................. 4
Food Science and Technology 140 .................................................. 3
Chemistry 120-130 .................................................. 8
1Agriculture and Natural Resources 101 .................................................. 3
Social Science Elective .................................................. 3
3Humanities Elective .................................................. 3

**Senior**

Food Science and Technology 420-429 .......................... 5
BCMB 230, 310 or 410 .................................................. 4-5
5Directed Technology/Business Electives .......................... 7
Speech 210 or 240 .................................................. 3
Economics 201 .................................................. 4
5History Electives .......................... 6
Plant and Soil Science 471 or Statistics 201 .................................................. 3

Total: 100-103 hours

1Physics 222 required for Pre-Med, Pre-Pharmacy and Pre-Vet. FST elective required for Pre-Dental.
2May be chosen from approved list of courses meeting University requirements as Social Sciences. (Psychology 110 is suggested for Pre-pharmacy)3May be chosen from approved list of courses meeting University requirements as History.
4One of these electives (3 ours) must be described as writing intensive.
5May be chosen from approved list of courses meeting University requirements as Social Sciences.
6May be chosen from approved list of courses meeting University requirements as Humanities.
7May be chosen from approved list of courses meeting University requirements as History.
8One of these electives (3 ours) must be described as writing intensive.
9May be chosen from approved list of courses meeting University requirements as Social Sciences.

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ENROLLMENT MANAGEMENT PLAN

All majors in the Department of Forestry, Wildlife and Fisheries must submit an application for progression with relevant career goals, names of three references, work experience (both volunteer and paid positions) related to natural resources, and service and professional activities, and a transcript, before registering for Junior classes.

To be considered for progression into the upper division of the program, applicants must have submitted all required documents (application form, resume, and transcript) by a December deadline late in the Fall Semester.

Those students who have met all preliminary requirements for progression, including having relevant career goals and letters of reference for progression, will be ranked based on the combined score of their cumulative grade point average (GPA) and GPA in core courses. The combined score will be 50% cumulative GPA (minimum 2.2) and 50%
cumulative GPA (minimum 2.2) in core courses. Applicants with the highest scores will be accepted into the programs. The number of applicants accepted into each program will be set based on resources available. Applicants will be notified of their acceptance by the start of registration for Spring Semester.

Applicants who are not accepted into the program and who believe that extenuating circumstances prevented their acceptance into the program may appeal the decision to a faculty committee (i.e., S.A.C.). A written statement in which the case is made for acceptance is required for all applicants. It would have to be submitted within one week of the rejection notice.

Appellants receiving a positive response from the appeals committee will be accepted into programs on a provisional basis through the first semester of their Junior year. The progress of provisional students will be reviewed at the end of the Fall Semester; at that time they will either be fully admitted or released from the program.

CORE COURSES
Forestry Majors: two courses in English composition (English 101 and 102 or equivalent); college algebra and calculus (Math 119 and 125 or equivalent); general chemistry (Chemistry 100 or equivalent); two courses in general biology (Botany 110 and 120 or equivalent); general economics (Economics 201 or equivalent); public speaking (Speech 210 or 240 or equivalent); and statistics (Statistics 201 or equivalent); soils science (PSS 210 or equivalent); Introduction to microcomputers (Ag 290 or equivalent); general ecology (Biological Science 230 or equivalent).

Wildlife and Fisheries Science Majors: two courses in English composition (English 101 and 102 or equivalent); college algebra and calculus (Math 119 and 125 or equivalent); two courses in chemistry (Chemistry 120 and 130 or equivalent); two courses in general biology (Biology 130 and 140 or equivalent); general economics (Economics 201 or equivalent); public speaking (Speech 210 or 240 or equivalent); and statistics (Statistics 201 or equivalent); soils science (PSS 210 or equivalent); Introduction to microcomputers (Ag 290 or equivalent); general ecology (Biological Science 230 or equivalent).

Students must have completed all but three core courses by the end of the semester in which they apply for acceptance into upper division courses. They must complete all core courses before entering upper division courses. They will also need the prerequisites to the individual upper division courses.

FORESTRY
The profession of forestry is the science, the art, and the practice of managing and using for human benefit the natural resources which occur on and in association with forest lands. Benefits are derived from the multiple resources of the forest: wood, water, wildlife, recreation, and environmental amenities. Foresters are managers of these resources. Thus, our principal instructional objective is to provide the broad education needed to deal effectively with the complex of forest resources.

A Minor in Forestry consists of 16 credit hours as follows: FWF 211 or FWF 250, FWF 311 and 10 hours from FWF 300, 312, 313, 412 and 416 and Forestry designated courses. Prerequisites will not be waived.

FOREST RESOURCES MANAGEMENT CONCENTRATION
The Forest Resources Management Concentration provides an opportunity to obtain an education related to the management of the broad spectrum of wildland resources. In addition to the core of required courses, there are about 18 elective credit hours for broad studies or specialized training in one or more areas of forestry. These areas and examples of related fields of study are: Forest Biology including plant physiology and morphology, ecology, genetics, tree nutrition, forest soils; Forest Business Management including economics, accounting, finance, marketing, management science; Forest Economics including economics, business administration, social science; Forest Inventory including mathematics, statistics, forest science, photogrammetry; Forest Recreation including natural and social sciences; and Wildlife Management including ecology and botany.

The University has over 21,000 acres of forest land available for teaching, research and demonstration. The Tennessee Valley Authority, Great Smoky Mountains National Park, and Cherokee National Forest provide additional land and facilities available to the teaching program. Contained within these areas is a wide variety of forest types ranging from elements of the boreal forest to southern pines and hardwoods. Lumber, pulp and paper, and other wood-processing industries cooperate in conducting tours and demonstrating industrial processes.

WILDLAND RECREATION CONCENTRATION
The Wildland Recreation Concentration is an interdisciplinary degree that prepares students to work in natural resource based recreation settings on private and public lands, including local, state, and national parks, and other state and federal agencies and private or non-profit organizations providing outdoor recreational opportunities.

Students prepare for professional positions in the planning, development, interpretation, and management of private and public lands for recreational purposes. Students also learn the basic philosophy and principles associated with the use of leisure time and the relationship of natural resources to the constructive use of leisure time.

Elective credits may be used to obtain specializations in complementary areas such as education, cultural and natural history interpretation, forestry, wildlife, fisheries, communication and public relations, agricultural extension education, ornamental horticulture and landscape design, business and public administration, and the natural sciences, including ecology, botany, zoology, and geology as well as recreation and leisure studies, such as private/commercial and therapeutic recreation.

Ten weeks of professional internship experience (6 credits) is required during the final 45 hours of credit in the program. The internship is a highly structured field experience guided by specific learning objectives pre-approved by the instructor and the field supervisor. The student receives one credit per two weeks of full-time field experience. Preparations for the internship should be made well in advance of actual placement. Summer employment or volunteer work in a related field prior to the internship is highly encouraged.
WILDLIFE AND FISHERIES SCIENCE

Wildlife and fisheries management is the science and art of maintaining populations of wild animals at levels consistent with the best interests of wild species and of the public. Management goals may be aesthetic, economic, or ecological. Success depends upon wildlife and fisheries biologists providing assistance: scholarly application of scientific information and methods to these goals; ecological perspective; and execution of programs to maintain past successes, to prevent repetition of past failures, and to prepare for future needs.


1Electives are chosen in conference with advisor.
2Students will choose one course from Philosophy 110, 130, 240, 342, 346 or Zoology 310.
3Lists of appropriate courses in Humanities and History are available at the Department of Forestry, Wildlife and Fisheries Office.

 Total: 135 hours

ORNAMENTAL HORTICULTURE AND LANDSCAPE DESIGN

Professors:
R.N. Trigiano (Interim Head), Ph.D. North Carolina State; M.L. Albrecht (Associate Dean, College of Agricultural Sciences and Natural Resources), Ph.D. Ohio State; R.M. Augé, Ph.D. Washington State; L.M. Callahan (Emeritus), Ph.D. Rutgers; E.T. Graham (Emeritus), Ph.D. Pennsylvania State; G.L. McDaniel, Ph.D. Iowa State; D.B. Williams (Emeritus), Ph.D. Pennsylvania State.

Associate Professor:

Assistant Professors:

U.T. Agricultural Extension Service Faculty:
G.D. Crater (Emeritus), Ph.D. Ohio State, Professor; S. Garton, Ph.D. Minnesota, Assistant Professor; T.J. Samples, Ph.D., Oklahoma State, Professor.

Advisors:
McDaniel, Mendez, Rogers, and Hamilton.

The Department of Ornamental Horticulture and Landscape Design (OHL) of the University of Tennessee provides both university academic instruction to undergraduate and graduate students. The department is staffed by experienced instructors who are committed to the success of their students. OHL advisors give students sound advice in the selection of career specialties, elective courses, and provide students the best education possible. Professors want their students to be successful and enjoy positive student-teacher relationships. They keep track of job openings and assist students during the job selection process. Since most OHL teachers are also research scientists, undergraduate students interested in advanced studies are directed into appropriate courses necessary for admission to graduate school. Students are also encouraged to work with faculty researchers in a variety of laboratory, greenhouse or field experiments.

The OHL curriculum is organized into four different concentrations. Each concentration offers a different academic approach to address the breadth of opportunities available to OHL undergraduate students. A minimum of 123 credit hours including internship is required for undergraduate and other departmental programs, please contact our web site at: http://ohlhgt.uky.edu

OHL CAREER SPECIALTIES

The four concentrations reflect the various career paths open to graduates. Opportunities exist within floriculture (the field of growing, marketing and designing with flowers and plants), turfgrass management (growing and managing turfgrasses used for golf courses, parks, athletic fields, and residential and commercial lawns), wholesale nursery production (the production of trees, shrubs and other woody ornamental plants used by the landscape industry or sold through retail outlets), landscape construction and maintenance (installation and maintenance of residential and commercial landscapes), landscape design (creation of aesthetic concepts and practical plans for improved outdoor areas), public horticulture (the promotion of horticulture to enhance people’s education and enjoyment of plants), and retail horticulture (the marketing, merchandising and sale of ornamental plants and gardening accessories directed to the consumer).

Students select courses to meet the challenges of the different areas of ornamental horticulture by working closely with their academic advisors. Internships at various horticultural enterprises provide students the opportunity to put theory into practice and screen possible job opportunities.

Positions that OHL graduates hold are numerous and include the following: owner, manager, salesperson or employee of garden centers or other retail outlets; golf course superintendents and assistant superintendents; sales positions with turfgrass equipment firms, supply firms, chemical companies and flower shops; owners, supervisors or growers of turfgrass sod, nursery or floral crop operations; owners, supervisors and employees of landscape and/or lawn construction, design and/or maintenance businesses for residential, recreational and commercial properties; owners, designers, salespersons or managers with interiorscapes firms; directors, curators, public relations managers, education program directors, high school or college teachers and employees of botanical gardens and arboreta; federal, state, county, city and municipal horticulturists; county extension workers in horticulture; estate manager; arborists and employees of tree care firms; garden writers; and employees of golf course construction firms. A small percentage of undergraduate students go on to graduate studies.

Minor in Ornamental Horticulture and Landscape Design

The Minor in Ornamental Horticulture and Landscape Design shall consist of 18 hours of courses in Ornamental Horticulture and Landscape Design: OHL 110, Introduction to Ornamental Horticulture and one additional lower division course, and a minimum of 12 credit hours at the upper division. Prerequisites, if any, to these courses will not be waived, but must be included in addition to the total of 18 hours.

ENROLLMENT MANAGEMENT PLAN

All majors in the Department of Ornamental Horticulture and Landscape Design must meet certain minimum requirements before registering for upper division OHL classes. Admittance to each of the departmental concentrations will be determined by completion of core courses for an individual concentration, completion of a minimum of 65 credit hours toward the degree, and a minimum cumulative grade point average (GPA) of 2.25. To be considered for progression into the upper division of the program, majors must submit an application for progression prior to class registration for the next semester. Their transcript will be reviewed by faculty members for completion of all core courses and
meeting the minimum GPA. Students must have completed all but 3 core courses for their concentration by the end of the semester in which they apply for acceptance into upper division courses. They must complete all core courses before entering upper division courses. They will also need the prerequisites to these individual upper division courses.

Once admitted for progression to upper division programs, students must maintain a cumulative GPA of 2.25. Junior and Senior majors in OHLD whose cumulative GPA falls below the minimum of 2.25 will not be allowed to register in OHLD upper division classes until they again meet the required GPA for progression. This enrollment management plan becomes effective for all students enrolling in OHLD on or after Fall semester 2001.

CORE COURSES
Majors must have completed the core courses for their respective OHLD concentration. Students must declare a concentration early in their undergraduate program and strictly follow the curriculum described for it. Students who transfer into OHLD from other colleges or programs must meet the same requirements as those entering the department as freshmen. The core courses for the OHLD concentrations are:

**Horticultural Science and Management Majors:** two courses in English composition (English 101 and 102 or equivalent); college algebra and finite math or calculus (Math 119 and 123 or equivalent); general chemistry (Chemistry 100-110 or 120-130 or equivalent); general botany (Botany 110 and 120 or equivalent); soil sciences (PSS 210 or equivalent); basic landscape plants (OHLD 220 or equivalent); microcomputer applications (ANR 290 or equivalent).

**Business Concentration Majors:** two courses in English composition (English 101 and 102 or equivalent); college algebra and calculus (Math 119 and 123 or equivalent); general chemistry (Chemistry 100-110 or 120-130 or equivalent); general botany (Botany 110 and 120 or equivalent); general accounting (Accounting 201 and 202 or equivalent); soil sciences (PSS 210 or equivalent).

**Public Horticulture Majors:** two courses in English composition (English 101 and 102 or equivalent); college algebra and finite math or calculus (Math 119 and 123 or equivalent); general chemistry (Chemistry 100-110 or 120-130 or equivalent); general botany (Botany 110 and 120 or equivalent); soil sciences (PSS 210 or equivalent); general ecology (Biology 250 or equivalent); basic landscape plants (OHLD 220 or equivalent).

**Landscape Design Majors:** two courses in English composition (English 101 and 102 or equivalent); college algebra and finite math or calculus (Math 119 and 123 or equivalent); general chemistry (Chemistry 100-110 or 120-130 or equivalent); general botany (Botany 110 and 120 or equivalent); soil sciences (PSS 210 or equivalent); basic landscape plants (OHLD 220 or equivalent); landscape design (OHLD 280 or equivalent).

**Horticultural Science and Management Concentration**

The Horticultural Science and Management Concentration is designed for the student desiring to pursue areas such as turfgrass management, floriculture, nursery production, landscape contracting and construction, or desire a general ornamental horticulture curriculm. Those students interested in attending graduate school should follow this concentration. Careful selection of OHLD courses and other electives in consultation with your academic advisor will prepare graduates for the career of their choice.

**Hours Credit**

| Freshman | OHLD 220 | 3 |
| Botany 110-120 | 3 |
| Chemistry 100-110 or 120-130 | 3 |
| English 101-102 | 3 |
| Math 119 and 123 or 125 | 3 |
| Social Science Elective | 3 |

**Sophomore**

| Select 2 from OHLD 110, 230, 231, or 280 | 6 |
| Agriculture and Natural Resources 290 | 3 |
| Accounting 201-202 | 3 |
| Economics 201 | 3 |
| Plant and Soil Sciences 200 and 210 | 6 |
| Speech 210 or 240 | 3 |
| Statistics 201 | 3 |

**Select 1 from**

- **Agricultural Economics Elective**
- **Biosystems Engineering Technology 452 or 462**
- Botany 321
- Humanities Elective
- Unrestricted Electives

**Total: 132 hours**

1 Lists of appropriate electives are available and should be selected in conference with academic advisor.

**BUSINESS CONCENTRATION**

The Business Concentration is fundamental to those interested in starting their own companies. Students receive a minor in business administration allowing easier access to management positions as well as graduate programs such as the Masters of Business Administration (MBA) should they want to continue their education in the future.

**Hours Credit**

| Freshman | OHLD 220 | 3 |
| Botany 110-120 | 3 |
| Chemistry 100-110 or 120-130 | 3 |
| English 101-102 | 3 |
| Math 119 and 123 or 125 | 3 |
| Social Science Elective | 3 |

**Sophomore**

| Select 2 from OHLD 110, 230, 231, or 280 | 6 |
| Agriculture and Natural Resources 290 | 3 |
| Accounting 201-202 | 3 |
| Economics 201 | 3 |
| Plant and Soil Sciences 200 and 210 | 6 |
| Speech 210 or 240 | 3 |
| Statistics 201 | 3 |

**Select 1 from**

- **Psychology 110 or Sociology 110**
- **Integrative Studies Elective**

**Junior**

| Select 4 from OHLD 330, 340, 350, 360, 370, 380, 390, or 391 | 10-12 |
| OHLD 492 | 3 |
| Business Electives | 6 |

| Select 2 from Botany 330, Entomology and Plant Pathology 313, 321, 410; Plant and Soil Sciences 311, 334 or 433 | 6 |
| Historical Studies Elective | 3 |
| Integrative Studies Elective | 3 |

**Senior**

| Select 3 from OHLD 410, 421, 426, 429, 430, 431, 440, 450, 451, 460, 480, 485, 493, 494 | 6-11 |
| OHLD 490 | 1 |
| Business Electives | 5 |
| Writing or Speech Elective | 3 |
| Historical Studies Elective | 3 |
| Social Science Elective | 3 |
| Unrestricted Electives | 2-9 |

**Total: 132 hours**

**PUBLIC HORTICULTURE CONCENTRATION**

The public horticulture concentration is intended for students interested in professional careers which promote horticulture and emphasize people and their education and enjoyment of plants. Such careers include director of a botanical garden or park; city or urban horticulturist; extension agent, teacher, educational director, or program coordinator; professional garden writer/editor or publication manager; horticulture therapist; public garden curator; and plant collections manager. Directed technical electives allow the student to concentrate in an area of their interest while encouraging the development of good people skills. Students are required internship training in the area of their interest.

**Hours Credit**

| Freshman | OHLD 220 | 3 |
| Botany 110-120 | 3 |
| Chemistry 100-110 or 120-130 | 3 |
| English 101-102 | 3 |
| Math 119 and 123 or 125 | 3 |
| Humanities Elective | 3 |

| Select 2 from OHLD 110, 230, 231, or 280 | 6 |
| Agriculture and Natural Resources 290 | 3 |
| Select 1 from Educational Psychology 210; Biological Sciences 211, 221, 231, 241, 251, 261, 271, 281, 291; Economics 210, 220 | 3 |
| Plant and Soil Sciences 210 | 3 |
| Speech 210 or 240 | 3 |
| Historical Studies Elective | 3 |
| Integrated Study Elective | 3 |

**Junior**

| Select 4 from OHLD 330, 340, 350, 360, 370, 380, 390, or 391 | 10-12 |
| OHLD 492 | 3 |
| Select 1 from Philosophy 342; Agricultural and Extension Education 346; Journalism 310 | 3 |
| Select 2 from Botany 330,330; Entomology and Plant Pathology 313, 321, 410; Plant and Soil Sciences 334 | 6 |
| Social Science Elective | 3 |
| Writing or Speech Elective | 3 |
| Humanities Elective | 3 |
null
SCIENCE/TECHNOLOGY CONCENTRATION

The science and technology concentration is especially designed to qualify students for professional certification and to prepare students for graduate study in the plant science and soil science disciplines. Through the appropriate selection of technical electives, students can qualify for certification as a soil scientist, crop scientist, agronomist, or horticulturist. Students can also prepare themselves for graduate study in crop ecology and physiology, crop breeding and genetics, weed science, soil genesis and classification, soil management and conservation, soil nutrient management and fertility, environmental sciences, soil chemistry and mineralogy, soil hydrology and physics, and soil microbiology and biochemistry.

Hours Credit

Freshman English 101, 102 .............................................. 6
Agriculture and Natural Resources 101, 290 .......................... 6
Botany 110, 120 ....................................................... 8
Chemistry 120, 130 .................................................... 8
Math 152 or 141, 142 ............................................ 6-8

Sophomore

Plant and Soil Sciences 210 ........................................ 3
Biology 240 ................................................................ 3
Physics 221 ................................................................ 3
Geology 101 .............................................................. 4
Chemistry 350 ........................................................... 4
Microbiology 210 ....................................................... 3
Economics 201 ........................................................ 3
Speech 210 or 240 ..................................................... 3
2Humanities Elective ............................................... 3
2History Elective ........................................................ 3

Junior

Plant and Soil Sciences 310, 334, 353, 471 .......................... 12
Botany 321 ................................................................ 3
2Integrated Studies Elective ......................................... 3
2History Elective ........................................................ 3
2Plant and Soil Sciences Electives ................................. 6
2Technical Electives ................................................... 6

Senior

Plant and Soil Sciences 401, 412, 413, 431, 471 13
2Non-department Agricultural Electives .......................... 3
English 295, 360 or Journalism 414, 450, or 451 3
2Humanities Elective ............................................... 3
2Social Sciences Elective .............................................. 3
2Electives ................................................................ 6-6

Total: 132 hours

ENVIRONMENTAL SCIENCE AND NATURAL RESOURCES CONCENTRATION

The Environmental Science and Natural Resources concentration is a science oriented curriculum that provides a strong, broad background in the natural sciences. The plan of study emphasizes land use problems and their impacts on long-term use and productivity as well as on surface and sub-surface water resources. To facilitate this, the student is directed into a core of courses that emphasize the soil and plant sciences. Directed technical electives allow the student to concentrate in an area of their interest. This concentration will introduce students to natural resource problems and their management, including soil and water conservation issues, land use problems, waste disposal, and reclamation of disturbed lands. Other areas of interest can be addressed through the appropriate selection of technical electives in the program. Students in this program will gain the practical knowledge necessary to compete for career opportunities in government, environmental consulting firms, public health services, environmental research laboratories, and agricultural production, while also gaining the theoretical training necessary for continuing on for advanced degrees in a number of environmentally related fields.

ELECTIVES LIST: SCIENCE/TECHNOLOGY CONCENTRATION

INTEGRATED STUDIES ELECTIVES:

American Studies 310
Anthropology 130, 310, 311, 312, 313, 314, 315, 319, 320, 360, 361
Biology 305
Botany 305
Geography 320, 323, 340, 361
Rural Sociology 380
Sociology 343, 345, 462, 464
University Studies 310, 311, 320, 321, 322, 410, 420

NON-DEPARTMENT AGRICULTURE ELECTIVES:

Agricultural Economics 210, 342, 350
Biosystems Engineering Technology 212, 432, 442, 462
Biosystems Engineering 423
Animal Science 330, 381
Entomology and Plant Pathology 313, 321, 325
Forestry, Wildlife and Fisheries 211, 250, 313, 317
Ornamental Horticulture and Landscape Design 310, 330, 340
Wildlife and Fisheries Science 443, 444
### PLANT AND SOIL SCIENCES ELECTIVES:
- Plant and Soil Sciences 230, 311, 315, 413, 414, 415, 431, 432, 433, 435, 453

### DIRECTED TECHNICAL ELECTIVES:
- **Biological Sciences**
  - Biology 130, 140, 250
  - Biochemistry 310, 410, 419
  - Botany 305, 330, 403, 404, 412, 431, 451
  - Ecology and Evolutionary Biology 380, 403, 431, 446, 460, 470, 474, 484
  - Entomology and Plant Pathology 313, 321, 325, 410
  - Microbiology 310, 319, 440, 449, 470
  - Public Health 310

- **Physical Sciences/Math/Data Management**
  - Biochemistry and Cellular and Molecular Biology 471, 481
  - Chemistry 310, 319, 320, 360, 369, 471, 481
  - Geography 310, 334, 411, 412, 413, 434
  - Geology 310, 370, 450, 460, 485
  - Math 231, 241, 251, 405
  - Physics 222
  - Statistics 251, 252, 261, 302, 321, 411

### ELECTIVES LIST: MANAGEMENT/CONSULTING CONCENTRATION

- **INTEGRATED STUDIES ELECTIVES:**
  - American Studies 310
  - Anthropology 130, 310, 311, 312, 313, 314, 315, 319, 320, 360, 361
  - Geography 320, 323, 340, 361
  - Rural Sociology 380
  - Sociology 340, 343, 345, 462, 464
  - University Studies 310, 311, 320, 321, 322, 410, 420

- **SOCIAL SCIENCE ELECTIVES:**
  - Sociology 220
  - Speech 220, 230, 270, 300, 420

- **BUSINESS ELECTIVES:**
  - Business Law 301
  - Finance 301
  - Logistics 301
  - Management 301, 321, 341, 431
  - Business Electives: Business Law 301
  - Finance 301
  - Logistics 301
  - Management 301, 321, 341, 431
  - Marketing 301, 310, 320, 420

- **NON-DEPARTMENTAL AGRICULTURE ELECTIVES:**
  - Biosystems Engineering Technology 442, 462
  - Animal Science 330
  - Entomology and Plant Pathology 313, 321
  - Ornamental Horticulture and Landscape Design 310, 340

- **PLANT AND SOIL SCIENCES ELECTIVES:**
  - Plant and Soil Sciences 230, 412, 413, 414, 415, 431, 432, 433, 435, 453

### WRITING ELECTIVES:
- English 295, 355, 360, 455
- Journalism 201, 310, 414, 450, 451

### ELECTIVES LIST: ENVIRONMENTAL SCIENCE AND NATURAL RESOURCES CONCENTRATION:

- **INTEGRATED TECHNICAL ELECTIVES:**
  - American Studies 310
  - Anthropology 130, 310, 311, 312, 313, 314, 315, 319, 320, 360, 361
  - Geography 320, 323, 340, 361
  - Rural Sociology 380
  - Sociology 340, 343, 345, 462, 464
  - University Studies 310, 311, 320, 321, 322, 410, 420

- **DIRECTED TECHNICAL ELECTIVES:**
  - **Soil (Land) Resources Group**
    - Biosystems Engineering 315
  - Biosystems Engineering Technology 212, 442
  - Botany 330, 431
  - Chemistry 310, 319, 320, 360, 369, 471, 481
  - Geography 310, 412, 414, 415, 432, 433
  - Geography 310, 411, 412, 413, 434
  - Geology 102, 103, 202, 310, 450, 455
  - Lower Division Physics

- **Biological Resources Group**
  - Biochemistry 310, 410, 419
  - Biology 140, 240
  - Botany 310, 321, 330, 403, 404, 412, 431, 451
  - Chemistry 310, 319, 320, 360, 369, 471, 481
  - Ecology and Evolutionary Biology 380, 403, 431, 484
  - Entomology and Plant Pathology 313, 321
  - Forestry, Wildlife and Fisheries 211, 250, 311
  - Geography 439
  - Microbiology 310, 319, 440, 449, 470
  - Plant and Soil Sciences 331, 334, 353, 431, 433, 435, 453
  - Lower Division Physics

- **Water Resources Group**
  - Biosystems Engineering 315
  - Biosystems Engineering Technology 442
  - Chemistry 310, 319, 320, 360, 369, 471, 481
  - Geography 310, 334, 411, 412, 413, 434, 436
  - Geology 485
  - Ecology and Evolutionary Biology 470, 474
  - Plant and Soil Sciences 315, 415
  - Lower Division Physics

### ENGINEERING ELECTIVES:
- Biosystems Engineering 243, 315
- Biosystems Engineering Technology 212, 442, 462
- Civil and Environmental Engineering 486
  (prerequisites are Biosystems Engineering 243 and Math 142)
The year course of study is described in the professional degree program of study. This three-year bachelor's degree program of study. The study of the physical environment includes many inter-disciplinary connections which the college tries to promote. Within the University of Tennessee, all students in the College of Architecture and Design are part of a smaller academic community that prides itself on a faculty dedicated to teaching.

The College of Architecture and Design includes three basic programs of study, at the undergraduate and graduate level:

**Bachelor of Architecture**: A professionally accredited five-year undergraduate first professional degree program of study.

**Bachelor of Science in Interior Design**: A professionally accredited four-year undergraduate program of study.

**Master of Architecture**: A professionally accredited first professional degree for students from any academic background. This three year course of study is described in the Graduate Catalog.

**FACILITIES**

The award-winning Art and Architecture Building, completed in 1981, provides one of the finest facilities in the country for architecture students. The building is home to art, architecture, and interior design students who occupy extensive studio space surrounding an open Commons space, filled with natural light. A café, supply store, and three auditoriums open onto the Commons as well. Changing art and architecture exhibits are installed in the Ewing Gallery, the Exhibition Wall, the Commons, and the Sculpture Garden. Students in the College have an extensive woodshop and modelmaking shop, darkrooms, experimental construction platform, and presentation spaces. Students also use a digital classroom, a 24/7 computer lab, and an Image Center with extensive printing capabilities.

Throughout the design studios, over 100 computer ports are provided for students’ laptop computers. The building itself is a model of how architectural space can promote a sense of community among the artists, architects, and interior designers within the larger University community.

Interior Design students work together in design studios, located in the Art and Architecture Building. In their studies, students take advantage of the program’s computing facilities, the Resource Library with extensive material samples and product information, and the well-equipped woodshop for furniture construction and model building.

**FRESHMAN ADMISSION REQUIREMENTS**

Due to the limited size of the design studios and College resources, admission to the College of Architecture and Design is selective, based on test scores, high school record, student application, and portfolio. The College will typically accept applicants with a total of 60 or above using the formula of the high school grade point average times 10, plus the ACT composite score (or the ACT equivalent of the SAT). The College normally refuses applications with less than a high school GPA of 2.7 or with ACT scores below 23 (or SAT equivalent). In making its decisions, the College also requires a portfolio from applicants (see information below). Applicants will be informed of their status by April 15 of each year.

**REQUIRED PORTFOLIO**

All applicants must submit a portfolio of personally produced graphic or visual work. The purpose of the portfolio is to demonstrate visual talent and abilities.

Aim for quality rather than quantity in selecting work: An ideal number would be eight to ten examples of personal work. All work shall be neatly assembled in an 8 1/2" x 11" portfolio or organized folder/notebook. Submittals not adhering to this size requirement will not be reviewed. As a general recommendation, use high quality (100% rag) paper and high quality drawing pencils (HB or F) or other media. The portfolio must include at least three items:

- a freehand drawing of a stair,
- a freehand drawing of a collection of leaves, and
- a freehand drawing of a bicycle.

The following guidelines have been established to assist applicants in selecting additional samples of personal work for the portfolio:

- Include other examples of drawings, artwork, photography, or anything else which may demonstrate visual abilities. Graphic, architectural or industrial design work may also be included.
- Include work for course assignments (if any) as well as work completed independently.
- Avoid extensive submissions of mechanically drafted drawings or computer drawings, unless these are illustrative of a design project. These must be submitted in an 8 1/2 x 11" format.
- Include work for course assignments.
- No slides or disks.
- Label all work with name, date when work was executed, and any other relevant information. If the item was a course assignment, identify the course and summarize the assignment.
- The cover or cover page of the portfolio should include the student name, address, phone number, and the program to which the application is made (Architecture or Interior Design).
- The 8 1/2 x 11" portfolio should be sent, with the application, to the Office of Admissions. It will be reviewed by members of the College Admissions Committee. In addition, include a self-addressed stamped mailer for the return of the portfolio. Otherwise, portfolios will not be held nor returned.
FOR NON-PROFESSIONAL MAJORS
In order to promote interdisciplinary involvement, students from other disciplines are welcome to take many classes in the College. Arch 111, "Architecture and the Built Environment", is recommended as a good general introduction. Non-architecture students are also welcome in the architectural history sequence of Arch 211, 212, and 213. Most of the 400 level electives do not have prerequisites and are open to upper level students with an interest in the course topic. Arch 425 “Special Topics” varies by semester, but it is often of interest to a broad cross section of the University student population. Non-architecture majors should meet with the Director of Student Services in order to register for these upper-level courses. Due to space limitations, design studio courses are open only to architecture students.

ACADEMIC POLICIES

ADVISING
Students must plan their schedule in consultation with an assigned faculty advisor. In addition, entering Architecture students will be assigned to an upper-class student who will serve as a peer advisor. The Director of Student Services is available to answer additional questions and to oversee questions related to admissions, advising, and career placement.

All academic policies of the College of Architecture and Design are summarized in the Student Handbook, published each year by the College.

COURSE LOAD
The average course load in any semester is 17 credit hours. The minimum which may be taken by full-time students is 12 hours. The maximum which may be taken without approval of the Dean is 19 hours.

SATISFACTORY/NO CREDIT COURSES
Courses that are a part of the specific requirements of the College cannot be taken as Satisfactory/No Credit.

Credit hours over and above the specific graduation requirements may be taken S/NC. A student who desires to take a course S/NC should indicate this at the start of registration. Courses evaluated as “Satisfactory” will count as hours toward graduation but will not be calculated in the student’s GPA.

SCHOOL OF ARCHITECTURE
Professors:

Associate Professors:

Assistant Professors:
M. DeKay, M.Arch. University of Oregon; G. Dodds, M. Arch. University of Pennsylvania; B. Klinkhammer, M. Arch. RWTH; E. Stach, M. Arch. RWTH (Aadren); A. Thurlow, M.S. Arch. Columbia; S.M. Ware, M.F.A. Tennessee.

THE STUDY OF ARCHITECTURE
Architecture involves the study and transformation of the built environment, from the scale of furniture to the scale of the city. The goal of an architectural education is to develop a synthetic thought process of critical thinking and creative problem solving. Creative thinkers must address all aspects of the built environment, in its cultural, social, and ethical context.

As a professional discipline, architecture spans both the arts and the sciences. Students must have an understanding of the arts and humanities, as well as a technical understanding of structures and construction. Skills in communication, both visual and verbal, are essential. While knowledge and skills must be developed, the School strongly emphasizes a process of critical thinking and creative activity.

PROFESSIONAL ACCREDITATION
In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Masters degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree. The University of Tennessee offers both the five year Bachelor of Architecture and a three year Master of Architecture for students with an unrelated bachelor's degree.

The four year pre-professional degree, where offered, or other “architectural technology” degrees are not accredited by NAAB. The pre-professional degree is useful for those wishing a foundation in the field of architecture, as preparation for either continued education in a professional degree program or for employment options in architecturally related areas.
Students may advance to second year with a GPA of 2.3. Students must maintain an overall 2.3 grade point average to advance to second year. Students may submit a portfolio of design work to the faculty advisor. The School of Architecture and the student's advisor should refer to the Student Handbook for additional specialized requirements. The student advisor can provide guidance on the curriculum, course selection, and academic performance. Students who do not meet the GPA requirement may be eligible for probationary status, subject to consultation with the student advisor. Students who fail to meet academic standards may be advised to consider transferring to another program or institution. The School of Architecture offers a range of academic support services, including tutoring, peer mentoring, and academic advising. Students are encouraged to take advantage of these resources to enhance their academic success.
their Comprehensive Design Project with practicing architects.

Architecture is a broad field of study, with many diverse ways for individuals to become involved in the profession. The profession itself is diversifying and changing rapidly, due to changing financial structures, increasing specialization, expanding liability, and evolving electronic technology. Students are strongly urged to visit and work in different architectural offices, in order to acquire a better sense of the profession and career commitment.

**INTERIOR DESIGN**

**Professors:**

**Assistant Professor:**
D. Harris, Ph.D. Texas A&M.

In 1986, the Interior Design Program moved from the College of Human Ecology to the College of Architecture and Design. The University of Tennessee has a unique opportunity to offer a complementary course of study for both architecture and interior design students. After a unified first year of study, both architecture and interior design students pursue separate professional programs. However, students in both interior design and architecture can pursue electives of mutual interest, as well as participate in an upper level joint studio. In some cases, graduates from the Interior Design program may receive advanced standing in the Master of Architecture program.

**THE STUDY OF INTERIOR DESIGN**

Students interested in Interior Design are encouraged to learn about the fundamental differences between licensed Interior Designers and interior decorators. Interior Designers are qualified to deal with complex design challenges involving extensive interior construction and technical considerations related to design issues. Interior Designers are liable to meet code issues involving fire, electricity, structure, occupancy and materials. Interior Designers are educated to understand how the design of furnishings and interior space can affect a general sense of well being. On the other hand, interior decorators are primarily concerned with finishes and furniture within pre-existing interior spaces. Interior decorators typically work as consultants in the retail environment. Interior Designers may have their own design practice, may work as a part of a design team within an architecture practice, or may work as a design consultant for product manufacturers.

**PROFESSIONAL ACCREDITATION**

Most states require that an individual intending to become a licensed Interior Designer hold a professionally accredited degree. The University of Tennessee offers a four year Bachelor of Science in Interior Design. This is a professionally (FIDER) accredited interior design degree.

**CURRICULUM**

The Interior Design curriculum is a rigorous course of study which combines technical courses, design studio courses, humanities, and a wide choice of electives. Through course work and field study experiences, students develop specialized problem solving skills and knowledge for the analysis, planning and design of interior architectural environments. They apply the use of lighting, color, mechanical systems, and furnishings as they design spaces for both residential and commercial settings. Beyond the professional core, students are encouraged to pursue interests related to horticulture, theater design, historic preservation, business, or other personal interests.

**First Year**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture 101, 121, 122</td>
<td>7</td>
</tr>
<tr>
<td>Architecture 171, 172</td>
<td>7</td>
</tr>
<tr>
<td>Interior Design 141, 171</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics 119</td>
<td>3</td>
</tr>
<tr>
<td>English 101, 102</td>
<td>6-7</td>
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<tr>
<td>Social Science Elective</td>
<td></td>
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<tr>
<td><strong>Second Year</strong></td>
<td></td>
</tr>
<tr>
<td>Interior Design 271, 272, 231, 261, 200</td>
<td>20</td>
</tr>
<tr>
<td>Interior Design 221</td>
<td>2</td>
</tr>
<tr>
<td>Art 172, 173</td>
<td>6</td>
</tr>
<tr>
<td>Physics 161 and one other</td>
<td></td>
</tr>
<tr>
<td>Natural Science Elective</td>
<td></td>
</tr>
<tr>
<td><strong>Third Year</strong></td>
<td></td>
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<tr>
<td>Interior Design 371, 372, 311, 312, 431, 360</td>
<td>24</td>
</tr>
<tr>
<td>Architecture 342</td>
<td>4</td>
</tr>
<tr>
<td>TS 220</td>
<td>3</td>
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<tr>
<td>Social Science Elective</td>
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<tr>
<td><strong>Summer (ID 420)</strong></td>
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<tr>
<td><strong>Fourth Year</strong></td>
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<tr>
<td>Interior Design 400, 471, 472, 480</td>
<td>16</td>
</tr>
<tr>
<td>Elective (Art)</td>
<td>3</td>
</tr>
<tr>
<td>History Elective</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>5</td>
</tr>
<tr>
<td>Electives (Business, Ornamental Horticulture, Theatre, and Urban Studies)</td>
<td>3</td>
</tr>
<tr>
<td>Elective (Professional Elective)</td>
<td></td>
</tr>
<tr>
<td><strong>Total: 135-136 hours</strong></td>
<td></td>
</tr>
</tbody>
</table>

1 Select 3 hours from Psychology, Sociology, Anthropology, or Economics 201 (if you plan to take Business as an elective). Suggested courses: Anthropology 110, 130; Sociology 110, 120; Psychology 110, 210, 370; Economics 201.
2 Select Physics 161 (required) and one other science, such as Astronomy 151, Botany 110, Biology 101, Chemistry 120, Geology 101.
3 Select any Art, Art Ceramics, Art Design/Graphic, Art Drawing, Art Media/Photography, Art Painting, Art Printmaking, or Art Sculpture.
4 Select any History course.
6 Select from Interior Design or approved Architecture courses.

1. Cumulative grade point average of 3.0 or greater in the following ID courses: 141, 171, 200, 221, 271, 272, 231, 261, with no grade below a C.
2. Portfolio Review accepted by faculty.
3. Successful interview following completion of ID 272.
4. For progression into third year, students must meet the following criteria:
   1. Before enrolling in any ID course, a grade of C or better must be made in each prerequisite required ID course.
   2. Cumulative grade point average of 2.3 or greater.
   3. Grade of I must be removed before registration for next ID course.

**SPECIAL PROGRAMS**

**REQUIRED SUMMER INTERNSHIP**

All interior design students are required to have a professionally based summer internship. The faculty will help students find appropriate placement, as well as monitor the student's progress in the internship.

**PROFESSIONAL COMMUNITY'S INVOLVEMENT**

As the oldest accredited interior design program in the state, the Interior Design program tries to maintain a close relationship with the interior design community of the city, state, and region. Professionals regularly come to the school to attend and respond to student presentations, to conduct workshops, to participate in school events, and to interview graduating students.

**FIELD TRIPS**

All Interior Design students regularly participate in a variety of field trips to important works of design as well as to Interior Design conventions and product shows.
The College of Arts and Sciences is home to a wide array of academic disciplines and inter-disciplinary programs. Such diverse areas of study as Computer Science and Classics, Anthropology, Women’s Studies and Latin American Studies are represented among the twenty-six departments and twelve special programs that compose the College.

The faculty of the College are committed to providing both comprehensive general education and concentrated study in a particular field to all students enrolled at the University of Tennessee. General education offers opportunities to master the basic learning skills necessary to understand a specialized area of study and is essential for the continuation of learning throughout life. Arts and Sciences faculty are also committed to educating students in a discipline. Education with a disciplinary focus prepares students for further study at the graduate level and for careers in business, public service, or any other endeavor. As our world becomes both more specialized and more changeable, the need to find the right balance between general and specialized knowledge becomes essential.

The central purposes of a liberal education include the encouragement of intellectual tolerance, a dedication to the quest for knowledge as a worthwhile goal in and of itself, and the cultivation of a responsible, creative, individual mind. These qualities enable one to develop an ability to reason and to express oneself clearly, an incentive to absorb emerging knowledge, and a competence to confront the uncertainties of human experience. For the student whose interests and talents lead into research, these disciplines and a dozen or more inter-disciplinary programs. The College’s faculty help their students prepare for any and all careers. Faculty research and creative activity are the foundations on which education in this College is built. As a result of that faculty endeavor the lives of students are enriched and the world’s body of knowledge grows. That is the basic mission of the College of Arts and Sciences faculty in a research University.

PROGRAMS OF STUDY

Seeking the broad, general goals of a liberal education, students come into the college also with a wide variety of specific educational and vocational objectives. Recognizing this diversity, the college offers a number of different programs of study leading to the baccalaureate degree and also several pre-professional curricula which prepare the student for advanced study but do not lead to a degree from this college.

COURSE LOAD

The average course load in the college for any semester is 15-16 credit hours. The University defines full-time undergraduate students as those who register for a minimum of 12 hours. The maximum number of hours which may be taken by Arts and Sciences students is 19, exclusive of elective work in ensemble music and physical education. Exceptions to this rule will require approval by the Director of Student Academic Affairs (220 Ayres).

LOWER DIVISION—UPPER DIVISION

Courses numbered at the 100 and 200 levels are considered lower division and are normally taken by students in the freshman and sophomore years. Courses numbered 300 and above are upper division and are designed for students at the junior and senior levels.

SATISFACTORY/NO CREDIT

A few courses in the college are offered only on a Satisfactory/No Credit (S/NC) basis and students may elect to take others on this basis, except in areas where the option is specifically prohibited. Such courses, if successfully completed, will count as hours for graduation although neither S nor NC grades will be calculated in the student’s grade point average. Satisfactory is defined as C or better work on the traditional grading scale and No Credit is defined as less than C. The following regulations apply:

1. S/NC courses, except those offered only on this basis, may not count for Basic Skills or Distribution requirements or major and minor requirements unless specifically permitted by petition. This restriction applies also to major or minor prerequisites or corequisites.
2. The maximum number of S/NC elective hours which may be counted toward graduation is 20, exclusive of courses offered only S/NC, physical education courses, and/or satisfactory hours earned by examination, military service, etc.
3. A student who desires to take a course S/NC should indicate that intention at the time of registration. A change from S/NC grading to regular grading or from regular grading to S/NC will not be permitted beyond the add deadline in each semester. (Exception: Students who register for a course S/NC in a restricted area will be required to change to regular grading when the error is discovered.)
4. A transfer student who has more than 20 S/NC or equivalent hours earned prior to
admission to the University of Tennessee may count all of these hours toward graduation but may not elect additional S/NC hours.

5. A transfer student with S/NC or equivalent credit earned prior to admission to the University of Tennessee in a course which satisfies a Basic Skills or distribution requirement may count it for that purpose. In the case of a course which satisfies a major or minor requirement, statement (1) applies.

The option of taking courses on a S/NC basis is provided to encourage the able student to venture beyond the limits of those courses in which the student does well and, motivated by intellectual curiosity, to explore subject matter in which performance may be somewhat less outstanding that work in preferred subject fields.

Note: Students planning to seek admission to graduate or professional schools (especially in the health sciences) should discuss with their advisors possible limitations on exercise of the S/NC option before registering for courses on this basis.

OFF-CAMPUS STUDY

Recognizing that learning is not restricted to formal classroom situations, the college provides for students to earn credit toward graduation for approved off-campus study. Such study must be done with prior approval of the faculty member and the department concerned. It may include certain kinds of work experiences, community involvements, working in political campaigns, etc. Credit per semester will vary from 1-15 hours. Up to 21 hours of credit earned in this way may be applied toward a degree in the college, although individual departments may limit the number of hours which may be applied toward a specific major.

INDEPENDENT STUDY

Certain educational goals may best be met through independent study done by an individual under the direction of a faculty member. Students who wish to do such independent work should obtain the approval of the faculty members and the departments concerned prior to embarking upon their study. Credit per semester will vary from 1-15 hours. Up to 21 hours of credit earned in this way may be applied toward a degree in the college, although individual departments may limit the number of hours which may be applied toward a specific major.

STUDY ABROAD AND FOREIGN STUDY COURSES

Several opportunities for study abroad are available to students in the college. One avenue is through group programs arranged and supervised by departments of the college on a full-semester or summer term basis. A second is through group programs conducted abroad by other academic institutions in which UT students with approval may enroll for credit. Assistance in identification of and registration in such programs may be obtained through the Programs Abroad Office located in the University's Center for International Education. A third opportunity is through individualized programs that are subject to approval by the department number 491. The nature of this work as well as credit for it should be negotiated by students prior to departure with the appropriate Arts and Sciences departments. Credit will be awarded only after completion of all agreed upon requirements, and may vary from 1-15 hours in any one department. Up to 21 hours of such credit, exclusive of that earned in group programs offered by departments, could apply toward a degree in the college. Departments may in any of the above forms, however, limit the hours of credit which can be applied toward a given major.

DEGREES OFFERED

1. BACHELOR OF ARTS

The Bachelor of Arts represents the attainment of a broad knowledge of the arts and sciences as well as a comprehensive understanding of one or more areas of special interest. Four programs leading to this degree are open to the student.

Basic Program The program appropriate for most B.A. students is developed around the basic skills and distribution requirements plus intensive study in one or more of the specified departmental or interdepartmental major fields described below.

Individualized Program Designed for students whose educational goals are best met by a program tailored to their particular needs, it is the same as the Basic program in broad area requirements but permits the student to develop an individual concentration incorporating work in two or more departments.

College Scholars Program Intended for a limited number of students who are especially qualified and motivated and who have been selected to undertake this honors program, the College Scholars Program permits the students maximum freedom to design a curriculum to meet particular interests and goals.

Pre-Professional Program The Pre-Professional Program is offered for those who wish to participate in the cooperative plus programs in business and Arts and Sciences or the elementary and secondary pre-teaching programs. Students in the 3+2 business and Arts and Sciences program take three years of coursework leading to a B.A. in Arts and Sciences, followed by two years of study in the College of Business leading to the M.B.A.

2. BACHELOR OF SCIENCE

The Bachelor of Science degree, offered in selected departments and programs, is designed for students who wish to pursue a more scientifically or professionally oriented program of study. Three programs leading to this degree are offered:

Basic Program The Basic Program for the B.S. degree contains basic skills and distribution requirements similar to the Basic Program for the B.A. as well as a unique set of requirements for the major including additional study in mathematics, statistics, or laboratory sciences.

Pre-Professional Program The Pre-Professional Program is offered for those who wish to participate in the cooperative 3+1 curricula in health sciences (medicine, dentistry, pharmacy, veterinary medicine, or medical technology). Students taking one of the health sciences curricula proceed directly to specialized training in the chosen area after the third year of Arts and Sciences study and complete the first year of professional study in line with satisfying the requirements for the B.S. degree with a major concentration in the college.

Bachelor of Science in Chemistry (See Department of Chemistry.)

3. BACHELOR OF FINE ARTS

(See School of Art.)

4. BACHELOR OF MUSIC

(See School of Music.)

REQUIREMENTS FOR DEGREES

To earn a Bachelor of Arts or Bachelor of Science degree these requirements must be completed:

1. All University degree requirements as described in the section on "Academic Policies and Regulations; General Requirements for a Bachelor's Degree;"
2. A minimum of 124 credit hours;
3. At least 42 credit hours in courses numbered 300 or above;
4. Appropriate work to satisfy basic skill and distribution requirements, counting no course in more than one area. (This is not a requirement in the College Scholars Program);
5. Completion of at least one major (24-40 credits at 200 level or above for B.S. major and 24-37 credits at 200 level or above for B.A. majors); up to 6 hours in the major may be used, where listed, to satisfy basic skills or distributional distribution requirements. Courses used for the major may not be used to satisfy upper level distribution requirements.

Students may choose to develop one or more minors (minimum 15 hours at the 200 level and above); and

Students may take up to 20 hours of courses graded Satisfactory/No Credit in an area outside the major or minor, basic skills or distribution requirements.

PROGRAMS LEADING TO BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

The Bachelor of Arts and the Bachelor of Science Degrees share the same program of Basic Skills and Distribution Requirements (except where noted otherwise).

BASIC SKILLS REQUIREMENTS

All students who earn a degree in the College of Arts and Sciences must have demonstrated skill in the use of the English language, the ability to acquire another language, and the ability to use the tools of quantitative analysis or formal logic. The specific requirements are as follows:

1. English Composition Skills necessary to write persuasive, logical and coherent essays in English; to read critically texts from a variety of media; to evaluate and cite sources in research; and to be aware of how to write for different audiences and purposes.

Students may meet this requirement in one of two ways:

a. By completing six credits in English writing courses, either: (a) English 101 and 102 (English Composition); or (b) English 118 (Honors: English Composition) and English 102 (English Composition); or (c) English 131 and 132 (Composition for Non-Native Speakers of English). [Students who obtain a grade of A or B in 118 may complete their freshman requirement with 102, or with a sophomore literature course in the English Department, or English 355 Rhetoric and Writing. The sophomore literature course may (if so listed) also be used]
level course in the same language. If they do, elementary placement credit is forfeited and removed from the student’s transcript. Students who place into 300 level courses will receive six hours of intermediate language credit. Under no circumstances may any student earn more than six hours of language placement examination credit. Students who feel they have been inappropriately placed should consult the appropriate language section.


Students may meet this requirement by completion of one of the following courses or by selecting two math courses under Natural Science List B:

- Any course in Mathematics numbered 110 or higher
- Computer Science 100: Introduction to Computers and Computing
- Philosophy 130: Critical Thinking or Philosophy 135: Formal Logic.

DISTRIBUTION REQUIREMENTS

All of these requirements are designed to enhance the skills of thinking critically and analytically, and of effective communication and writing through the use and understanding of different kinds of human knowledge. The distribution requirements are in two parts. Part A: Divisional Distribution Requirements, which require students to take courses in the various divisions of the College, and Part B: the Upper-Level Distribution Requirements.

PART A: DIVISIONAL DISTRIBUTION REQUIREMENTS

1. NATURAL SCIENCE

A two-course laboratory sequence and an additional two-course sequence that will introduce students to the increasingly important role of science and technology in all aspects of modern life. This requirement will introduce students to the basic discoveries, knowledge and logical organization of scientific disciplines and to development and testing of hypotheses. Laboratory courses will develop skills in experimental tests of hypotheses; lectures will introduce students to the role of scientific methodology and problem-solving in society. Students may meet this requirement by completion of a two-course sequence from List A and an additional two-course sequence or package from List A or List B.

List A:
- Astronomy 161-162: Introductory Astronomy
- Biology 101-102: Humankind in a Biotic World
- Biology 130: Biodiversity and 140: Organization and Function of the Cell
- Botany 110-120 General Botany
- Chemistry 100: Principles of Chemistry and 110: Introduction to Organic and Biochemistry
- Chemistry 128-129: Honors General Chemistry
- Geography 131-132: Geography of the Natural Environment
- Geology 101: The Dynamic Earth and either 102: Earth, Life and Time or 103: The Earth’s Environment
- Geology 109-110: Principles of Biological Anthropology
- Physics 135-136: Introduction to Physics for Physical Science and Mathematics Majors
- Physics 137-138: Honors: Fundamentals of Physics for Physics Majors

List B:
- Anthropology 110: Human Origins and 210: Principles of Biological Anthropology
- Astronomy 151-152: Introductory Astronomy
- Botany 306: Genetics and Society (Same as Anthropology 306) and 309: Biology of Human Affairs or 310: Plant Morphology or 330 Field Botany
- Chemistry 150: Chemistry and Society and Chemistry 160: Chemistry and the Home
- Computer Science 102: Introduction to Computer Science and either 140: Data Structures or 160: Computer Organization
- History 201: World History
- History 301: Introduction to History and any two Mathematics courses numbered 110 or higher
- Microbiology 210: General Microbiology and Biochemistry, Cellular and Molecular Biology
- Physics 101-102: How Things Work
- Statistics 201: Introduction to Statistics and any Mathematics course numbered 110 or higher except Mathematics 115 (If Mathematics 115 is used to satisfy Basic Skills or Natural Science requirements, Statistics 201 may not be selected to meet this requirement.)

2. SOCIAL SCIENCE

Courses that will introduce students to the idea of individuals in societies, to perspectives and methods used by social scientists, and to the uses of these perspectives and methods in thinking about current social, economic and political issues and problems. Bachelor of Arts students may meet this requirement by completion of four courses selected from the list below. These courses must be from two departments. Bachelor of Science students must complete two courses from at least two departments.

- Anthropology 120: Prehistoric Archaeology, 130: Cultural Anthropology, 362: Principles of Archeology
- Audiology and Speech Pathology 320: Speech and Language Development
- Botany 305: Socio-Economic Impact of Plants
- Economics 201: Introductory Economics: A Survey Course; 207: Honors Introductory Economics
- Human Services 220: Introduction to Human Services
- Linguistics 200: Language, Linguistics and Society
- Music History 310: Introduction to African American Music (Same as African and African-American Placement Requirement)

b. By earning a score of 4 or 5 on the College Board Advanced Placement Test in Literature and Composition. (Credit in English 101 is earned with a score of 4 or 5 on the Advanced Placement Test in Language and Composition.)

Placement information: Eligibility for English 118 (Honors: English Composition) will be determined by ACT or SAT scores and a placement exam. Selected students will be placed in English 103 (Writing Workshop) based on ACT or SAT scores and may not drop this course without departmental approval. (Details available from the English Department.) NOTE: A student must complete the English Composition requirement prior to enrolling in English courses numbered 200 or higher.

2. FOREIGN LANGUAGE
Skills necessary to learn the basic structures and vocabulary of a foreign language; to read, write, understand, and, for modern languages, speak a foreign language; to understand how to learn another language; to better understand one’s own native language; and to complement the study of other cultures or civilizations. Students may meet this requirement in one of three ways:

a. Completion of the intermediate level sequence of a foreign language. Any one of the following sequences will satisfy the requirement:
   - Asian Languages 231-232 Intermediate Chinese I, II
   - Asian Languages 251-252 Intermediate Japanese I, II
   - Asian Studies 221-222 Intermediate Modern Standard Arabic I, II
   - Asian Studies 241-242 Intermediate Modern Hebrew I, II
   - Asian Studies 261-262 Intermediate Persian I, II
   - French 211-212 Intermediate French or 217-218 Honors: Intermediate French
   - German 201-202 Intermediate German
   - Greek (Classics) 261 Intermediate Greek: Grammar Review and Readings and 264 Intermediate Readings in Greek
   - Italian 211-212 Intermediate Italian
   - Portuguese 211-212 Intermediate Portuguese
   - Russian 201-202 Intermediate Russian
   - Demonstration of competence on a departmental placement or proficiency examination or by AP or CLEP credit.

b. Students whose native language is not English may satisfy the requirement with English 131 and 132 and any two courses from List A: Literature under the Humanities Distribution Requirement.

Placement information: All students who wish to enroll in a French, German, Latin or Spanish course, who have completed at least two years of this language in high school and who have not yet taken a college course in the language must take a UTK placement examination before enrolling. Placement in the appropriate course will be determined by the score on the examination. Examinations will be given during summer orientation and at designated times during the fall, spring and summer. Students who place into 200 level courses will receive six hours of elementary language credit, provided that they do not subsequently enroll and receive credit for any 100
<table>
<thead>
<tr>
<th>List A: Literature</th>
<th>List B: Philosophical and Religious Thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Languages 311: Chinese Literature in English Translation; 312: Chinese Literature in English Translation; 314: Japanese Literature in English Translation</td>
<td>Classics 201: Introduction to Classical Civilization; 221: Early Greek Mythology; 222: Classical Greek and Roman Mythology</td>
</tr>
<tr>
<td>Classics 253: Greek Literature in English Translation</td>
<td>Philosophy 101: The Human Condition; Values and Reality; 111: The Human Condition: Knowledge and Reality; 240: Ethics; 342: Business Ethics; 344: Professional Responsibility</td>
</tr>
<tr>
<td>Comparative Literature 202: Crosscultural Perspectives in World Literature; 203: Cross-cultural Perspectives in World Literature</td>
<td>345: Medical Ethics (Same as Religious Studies 345); 346: Environmental Ethics; 360: War and Morality; 380: The Concept of Woman</td>
</tr>
<tr>
<td>English 201: British Literature I: Beowulf through Johnson; 202: British Literature II: Wordsworth to the Present; 221: Literature of the Western World I: Ancient, Medieval and Renaissance; 222: Literature of the Western World II: Enlightenment, Romantic and Modern</td>
<td>Classics 232: Archaeology and Art of Ancient Greece; 233: Archaeology and Art of Etruria and Rome</td>
</tr>
<tr>
<td>English 293: Introduction to Creative Writing</td>
<td>English 293: Introduction to Creative Writing</td>
</tr>
<tr>
<td>Women’s Studies 220: Women in Society; Women’s Studies 375 Gender in Society</td>
<td>Theatre 100: Introduction to Theatre; 220: Acting; 245: Basic Stage Costuming; 250: Introduction to Scenery Technology; 260: Fundamentals of Lighting and Sound Production</td>
</tr>
</tbody>
</table>

### List C: Study or Practice of the Arts

**Architecture 111: Architecture and the Built Environment**

Art 191: Introduction to Studio Art: Various Media

*Classics 232: Archaeology and Art of Ancient Greece; 233: Archaeology and Art of Etruria and Rome*

*English 293: Introduction to Creative Writing*  
*Music History 110: Introduction to Music in Western Culture; 115: Music in the United States; 120: History of Rock*

*Music Theory 100: Fundamentals of Music Philosophy 350: Aesthetics; 353: Philosophy and Literature*  
*Speech Communication 280: Introduction to Oral Interpretation*  
*Theatre 100: Introduction to Theatre; 220: Acting; 245: Basic Stage Costuming; 250: Introduction to Scenery Technology; 260: Fundamentals of Lighting and Sound Production*

*Women’s Studies 330: Women in Music (Same as Music History 330)*

### 4. NON-U.S. HISTORY

A course sequence to enhance appreciation of the diversity of the world’s societies, their cultures, and histories. This requirement will develop understanding of how the past shapes individuals and communities in practical decisions and in understanding of self and world; will contribute to skills in explaining change and continuity of human society and the interpretation of people, events, and trends in context of the ideas, values, social and political conditions that affect them.

Students may meet this requirement by completion of one of the following sequences. All courses are writing-emphasis courses.

* Medieval Studies 261: Medieval Culture: Readings from the Early Middle Ages, 500-1000; 262: Medieval Culture: Readings from the Later Middle Ages, 1000-1500*  
* Russian 221: Rebels, Dreamers, and Fools: The Outcast in 19th Century Russian Literature; 222: Heaven or Hell: Utopias and Dystopias in 20th Century Russian Literature*  
* Spanish 291: Spanish Literature in English Translation*  
* Women’s Studies 210: Images of Women in Literature: Biography and Autobiography; 215: Images of Women in Literature: Fiction, Poetry, Drama*  

### PART B: UPPER LEVEL DISTRIBUTION REQUIREMENTS

Courses that use skills and knowledge acquired in the Basic Skills and Divisional Distribution areas to understand and analyze a highly interdependent world system and to make informed comparisons among contemporary cultures. These courses develop understanding of U.S., society, national and international diversity, and of critical issues of the modern world.

Bachelor of Arts students may meet this requirement by completion of two courses from one of the lists below and a third course from either of the other lists. Bachelor of Science students must complete two courses from two of the three lists. All courses are writing-emphasis courses.

**List A: United States Studies**


American Studies 310: Introduction to American Studies


Ecology and Evolutionary Biology 305: Evolution and Society (Same as Anthropology 305); Economics 413: Macroeconomic Fluctuations; 435: Industrial Organization Analysis; 462: Economics of Resources and Environmental Policy; 471: Public Finance: Optimal Government Functions and Expenditure Analysis; 472: Public Finance: Taxation and Intergovernmental Relations

English 313: Race and Ethnicity in American Literature; 332: Women in American Literature (Same as Women’s Studies 332); 333: Black American Literature and Aesthetics; 334: Film and American Culture (Same as American Studies 334)

Geography 361: Regional Geography of the United States; 365: Geography of the American South; 365: Geography of Appalachia; 423: Geography of American Popular Culture (Same as American Studies 423); 425: Historical Geography of the United States; 441: Urban Geography of the United States; 443: Rural Geography of the United States; 444: Geology of National Parks; 381: Minerals and Energy Resources

Economy: 441: The American West; 442: Indian-White Relations in United States History; 446: History of American Culture; 451: United States Military History, 1754 to the Present; 453: Women in American History (Same as Women's Studies 453); 454: Cities and Urbanization in American History; 459: Jefferson's America

Music History 350: History of Jazz (Same as African and African-American Studies 350)

Philosophy 390: Philosophical Foundations of Democracy

Political Science 311: Contemporary Issues in American Public Policy; 312: Popular Culture and American Politics (Same as American Studies 312 and Cinema Studies 312);

330: Law in American Society (Same as Legal Studies 330); 374: African Political Thought

Psychology 434: Psychology and Gender (Same as Women's Studies 434)

Religious Studies 351: Introduction to Religion in the United States; 352: African-American Religion in United States (Same as African and African-American Studies 352);

355: Religion and Culture in the United States Society (Same as American Society;

340: Class Structure; 343: Race and Ethnicity (Same as African and African-American Studies 343); 455: Society and Law

Speech Communication 450: Propaganda; 466: Rhetoric of the Women's Rights Movement to 1930 (Same as Women's Studies 466);

469: Freedom of Speech; 476: Rhetoric of the Contemporary Feminist Movement. (Same as Women's Studies 476)

Women's Studies 310: Emergence of the Modern American Woman; 340: Women, Politics, and the Law

List B: Foreign Studies

NOTE: This list is subdivided by geographic area and topic. If Western Civilization (History 241-242) or Medieval Civilization (Medieval Studies 201-202) is used to satisfy the non-United States History divisional requirement, courses from the European concentration may not be used to satisfy this requirement.

In addition to the courses listed here this requirement may be satisfied by literature courses taught in Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, Sanskrit, or Spanish. Literature courses in English translation will not meet this requirement.

Africa


Geography 379: Geography of Africa (Same as African and African-American Studies 379)

History 371: African History (Same as African and African-American Studies 371);

372: African History (Same as African and African-American Studies 372); 381: History of South Africa (Same as African and African-American Studies 381);

Political Science 452: Black African Politics (Same as African and African-American Studies 452)

Religious Studies 373: African Religions (Same as African and African-American Studies 373 and Anthropology 373)

Asia

A History 411: Art of South and Southeast Asia; 415: Art of China; 419: Art of Japan

History 362: History of East Asia;

363: History of East Asia; 364: History of China; 365: History of Japan

Political Science 454: Government and Politics of China and Japan.

Religious Studies 374: Philosophy and Religion in India (Same as Philosophy 374);

376: Buddhist Philosophy and Religion (Same as Philosophy 376); 379: Religion and Philosophy in China (Same as Philosophy 379); 383: Religion in Japan; 474: Modern and Contemporary South Asian Religion

Europe

Anthropology 462: Early European Pre-history

Art History 425: Early Christian and Byzantine Art to 1350; 431: Medieval Art of the West, 800-1400; 441: Northern European Painting, 1350-1600; 442: Art of Northern Europe, 1600-1675; 451: Art of Italy, 1250-1450;

452: Art of Italy, 1450-1575; 453: Art of Southern Europe, 1575-1700; 454: Renaissance and Baroque Theory; 475: History of 19th Century Painting and Sculpture in Europe;

476: History of 20th Century Painting and Sculpture in Europe

Classics 331: Archaeology of the Aegean Bronze Age and Early Greece; 334: Cities and Sanctuaries of the Greek and Roman World;

381: Greek Civilization; 382: Roman Civilization; 383: Women in the Greek and Roman World (Same as Women's Studies 383); 385: English 301: British Culture to 1660; 302: British Culture: 1660 to Present;

401: Medieval Literature

French 420: French Cinema; 431: Highlights of French Civilization; 432: Contemporary French Culture

Geography 371: Geography of Europe;

375: Geography of Russia and the Commonwealth of Independent States

German 323: German Film; 350: German-Jewish Topics in Literature and Culture; 363: Modern German Culture

History 319: Modern Europe, 1750-1914;

320: Contemporary Europe, 1900-present; 323: Deviance and Persecution in the Christian West, 1100-1700; 429: Medieval Intellectual History; 432: Women in European History (Same as Women's Studies 432); 490: Internship in the Center for the Study of War and Society

Italian 414: Italian Cultural Studies;

421: Topics in Italian Literature and Cinema

Medieval Studies 403: Seminar in Medieval Studies

Philosophy 320: Ancient Western Philosophy; 322: Medieval Philosophy; 324: Seventeenth- and Eighteenth-Century Philosophy; 326: Nineteenth- and Twentieth-Century Philosophy

Political Science 361: Politics in Western Democracies; 459: Government and Politics of Russia and Eastern Europe;

Russian 325: Russian Film; 371: Martyrs, Mobs, and Madmen in Russian Culture; 988-1861; 372: Eros, Death and Resurrection and Modern Russian Culture

Spanish 431: Spanish Civilization

Latin America

Anthropology 313: Peoples and Cultures of Mesoamerica (Same as Latin American Studies 313); 316: Peoples and Cultures of South America (Same as Latin American Studies 316);

319: Caribbean Cultures and Societies (Same as African and African-American Studies 319 and Latin American Studies 319)

Economics 424: Political Economy of World Development

Geography 372: Geography of Middle America (Same as Latin American Studies 372);

373: Geography of South America (Same as Latin American Studies 373)

History 360: History of Latin America:

Colonialism and Independence; 361: History of Latin America: National Development;

369: History of Brazil; 374: Art of the Renaissance in Historical Perspective; 462: History of Mexico;

463: Modern Latin American History in Film;

475: Studies in Latin American History

Political Science 355: Latin American Government and Politics

Spanish 331: Introduction to Hispanic Culture (Same as Latin American Studies 331);

401: Cultural Plurality and Institutional Changes in Latin America (Same as Latin American Studies 401); 489: Topics in Hispanic Civilization

Middle East

Anthropology 463: Rise of Complex Civilizations

History 336: History and Archaeology of Mesoopotamia; 369: History of the Middle East (Same as Judaic Studies 369);

370: History of the Middle East (Same as Judaic Studies 370);

383: History of Jewish Civilization I (Same as Judaic Studies 383);

384: History of Jewish Civilization II (Same as Judaic Studies 384);

Religious Studies 311: Ancient Hebrew Religious Traditions (Same as Judaic Studies 311);

322: Classical Islam; 333: Islam in the Modern World; 381: Introduction to Judaism (Same as Judaic Studies 381);

385: Contemporary Jewish Thinkers (Same as Judaic Studies 385);

405: Modern Jewish Thought (Same as Judaic Studies 405)

Critical Issues in Foreign Studies

Economics 323: Economic Development (Third World)

Geography 345: Population and Environment; 351: The Global Economy

History 374: A History of Imperialism Since 1850; 375: Revolutions in Historical Perspective; 395: The Crusaders and Medieval Christian-Muslim Relations

Political Science 350: Political Change in Developing Areas; 365: Introduction to International Relations

Religious Studies 371: Eastern Religions and Western Thought

Sociology 442: Comparative Patterns of Poverty and Development; 446: The Modern World System

Women's Studies 360: Women in Cross-Cultural Perspective

C. Capstone Courses

These courses are offered within major fields and are designed to provide an integrative experience to broaden comprehension of the major field, to enhance understanding of how the field has and continues to influence society, and to draw attention to ethical considerations applicable to the field. As writing emphasis courses the capstones promote development of written communication skills used by the major field. It is recommended that this option be satisfied during the senior year.

NOTE: If used to satisfy the major requirement, these courses may not be used to satisfy the distribution requirement.
African and African-American Studies 431; Research Seminar in African-American Studies 432; Audioloy and Speech Pathology 499; Senior Seminar in Communication Sciences and Disorders 411; Biochemistry and Cellular and Molecular Biology 409; Perspectives in BCMB 420; Advanced Topics in BCMB 420; Botany 471; Senior Seminar 405; Topics in the Development of Chemistry 411; Computer Science 411; Senior Thesis I; 412; Senior Thesis II 411; Ecology and Evolutionary Biology 409; Perspectives in Ecology and Evolutionary Biology 499; Analysis of Economic Problems 411; Senior Seminar 440; Capstone Experience in French 440; Geography 499; Proseminar in Geography 440; Field Geology; 475: Physical and Chemical Systems of the Earth 482; Colloquium in History 411; Human Services 430; Working Within the System 411; Mathematics 411: Mathematical Modeling; 400; History of Mathematics 499; Seminar Music History 460; Music Aesthetics 401; Background of Physics; 402; Forefront of Physics 403; Psychology 430: Health Psychology; 496; Senior Seminar: Great Ideas in Psychology 459; Capstone Colloquium in Spanish 459; Urban Studies 460; Senior Seminar

AREAS OF CONCENTRATION

1. Required Major
Requirements for specific majors vary by program and are discussed under each department or program. A major consists of at least 24-40 credit hours in courses numbered 200 or above as specified by the department or program. Up to 6 credit hours taken in the major may also be used to satisfy basic skills or divisional distribution requirements where listed. In addition, students making A or B in English 118 may use a 200-level literature course in the English Department to satisfy both the second half of their Basic Skills English Composition requirement and part of their Humanities requirement if the course is listed there. A minimum grade of C must be earned in every course counted as part of a major. Students transferring from other institutions must complete at least 9 credit hours at UT in each major awarded on this campus. Students may elect as many courses as P's desired in any department or program. In lieu of a major, students may develop an Individualized Program (described below). Majors available in the Basic Program for a B.A. or B.S. include: Anthropology, Art, Art History, Audiology, Biological Sciences, Chemistry, Classics, Computer Science, Economics, English, French, Geography, Geology, German, History, Interdisciplinary Programs, Italian, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Religious Studies, Russian, Sociology, Spanish, Speech Pathology, Statistics, and Theatre.

2. Optional Multiple Majors
After the general requirements of basic skills, distribution and a major have been satisfied, additional majors may be recorded on the transcript without regard to course overlap among majors or among the additional majors and Basic Skills and Distribution requirements. Students developing multiple majors must declare this intent at the time of application for graduation. Once a student has graduated, the establishment of additional majors becomes subject to University second degree requirements.

Students who satisfy the requirements of a degree in a college other than Arts and Sciences may also major inside the College of Arts and Sciences with the approval of the degree granting unit. These students need complete only the major requirements, not the Basic Skills or Distribution requirements for Arts and Sciences degrees. The Arts and Sciences major may also be listed on the student’s transcript.

3. Optional Minors
At the time of application for graduation, single or multiple minors may be recorded on the academic record without regard to course overlap among minors and major or among minors and Basic Skills and Distribution requirements. Students who satisfy the requirements of a degree in a college other than Arts and Sciences may also major inside the College of Arts and Sciences with the approval of the degree granting unit. The minimum requirement for a minor is 15 credit hours in courses numbered 200 or above. Minors are available in most departments or programs in which majors are offered, and also in Astronomy, Portuguese, and Cinema Studies. Minors may be developed in other colleges or schools of the University, but must be approved by the department head in which the minor is proposed and by the Associate Dean for Student Academic Affairs in Arts and Sciences. At least six of the 15 credit hours required for a minor must be completed at the University of Tennessee.

Business Minor for Non-Business Students Requirements include the following courses: Accounting 201-202, Economics 201, Statistics 201, Finance 301, Management 301, Marketing 301, and one additional 300 level or above business elective. All upper division (300 level or above) course work must be taken at UT, Knoxville. Students are responsible for meeting all prerequisites for upper-division courses taken in a particular concentration.

4. Supplementary Elective Courses
At least one-fourth of each student’s curriculum in the Basic Program will be made up of courses selected according to the individual’s interests to supplement and support the work being done in the major and Basic Skills and Distribution requirements. This dimension of the student’s experience in the University represents that freedom within which total education may be rounded out and enriched. Elective courses should be chosen with care so that they will truly enhance the student’s total program and help in the achievement of well thought out educational objectives. Some of the choices which the student might make in selecting the elective courses are:
1. Additional courses in the major field;
2. A related minor;
3. An area in the arts;
4. An off-campus semester.
Only the student’s imagination and initiative and the willingness to conceive and develop a meaningful academic program limit the choices of supplementary elective courses.

INDIVIDUALIZED PROGRAM
The Basic Program described above will meet the educational needs of most students enrolling in the college. Some, however, come with particular strengths in their preparation or with special interests which do not coincide with the departmental or interdepartmental majors specified in the Basic Program. For these students the Individualized Program has been established as a means of attaining a closer correlation between student needs and academic programs.

Students in the Individualized Program will satisfy all the Basic Skills and Distribution requirements, just as do those in the Basic Program. The point at which the individualization takes place is in the area of concentration. The quantitative aspect of the area of concentration is the same as for the major in the Basic Program (i.e., a minimum of 24 hours in courses numbered above 200), and at least two-thirds of the courses must be selected from disciplines within the College of Arts and Sciences. The student may design a program in consultation with an advisor and submit it for consideration to the Committee on the Individualized Program. The proposed courses of study must have some clear central focus, usually implemented through intensive work in two or three departments; an undirected scattering of courses will not be approved. For further information contact Arts and Sciences Advising Services.

COLLEGE SCHOLARS PROGRAM
A limited number of freshmen and sophomores, entering transfer students with fewer than 42 credit hours, and resident students with fewer than 62 credit hours are invited each year to enter this distinguished honors curriculum. Selection is based on previous academic record, test scores, recommendations, a written essay, and a personal interview. Admission is provisional for two semesters; continuation depends upon maintenance of a satisfactory record (normally 3.25 or above) and evidence of ongoing motivation and interest.

The College Scholars Program affords the highest degree of freedom to the student in developing a meaningful curriculum. Each program is worked out individually with a special advisor (mentor) who under ordinary circumstances continues to advise the student throughout the college career. Together they determine what kinds of course work and/or other learning experiences will best fulfill the student’s objectives, while at the same time achieving the kind of liberal education the college believes is important for every student. In the final two years of the program students will be heavily involved in independent study or research required of all College Scholars.

When College Scholars fulfill departmental requirements for additional majors or minors, these will be recorded on the student’s transcript. Scholars will not be required to meet Basic Skills or Distribution requirements in order to have such majors or minors officially recognized.

Further information and applications may be obtained from Arts and Sciences Advising Services.
# PRE-PROFESSIONAL PROGRAMS

## PRE-DENTAL PROGRAM

The college offers both a three-year program leading to a Bachelor of Science degree and a four-year program leading to a Bachelor of Arts or Science degree for students preparing for the study of dentistry. Both programs are based upon the curriculum outlined below. In the three-year program the student must complete at least 93 credit hours while enrolled in the college, and the B.S. degree is granted upon satisfaction of the completion of the first year of study at UT Health Science Center, Memphis. In the four-year program the degree is granted upon completion of 124 or more credit hours while enrolled in the college, including a major of 24 or more hours in addition to the courses listed below. The requirement for a major is waived for those completing their fourth year at UT Health Science Center, Memphis. Students in either the three- or four-year program must complete the last 30 hours of credit in residence at the University of Tennessee before entering UT Health Science Center, Memphis. Although the B.A. or B.S. degree is not required for admission to the College of Dentistry at Memphis, most of the students accepted into the study of dentistry have the baccalaureate degree before admission. Therefore, pre-dental students are encouraged to plan to complete all requirements for the B.A. or B.S. degree before enrolling in the College of Dentistry.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
</table>

### Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101-102 or equivalent</td>
<td>6</td>
</tr>
<tr>
<td>Biology 130,140</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 120-130</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divisional Distribution: Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Divisional Distribution: Non-U.S. History</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Basic Skills (b) Foreign Language (Intermediate Level Sequence)</td>
<td>6</td>
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</table>

### Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>Divisional Distribution: Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Divisional Distribution Social Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Upper Level Distribution (A) U.S. Studies</td>
<td>6</td>
</tr>
<tr>
<td>(B) Foreign Studies or (C) Capstone Experience</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>16</td>
</tr>
</tbody>
</table>

Total: 93 hours

### Senior

Completion of major program and B.A./B.S. requirements or completion of one year at UT-Memphis.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
</table>

1. Or equivalent honors courses.
2. Dental schools require 8 hours of Biology.
3. Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements. Mathematics 130 or any Calculus course is a prerequisite to Physics. All students must complete the Math Basic Skills requirements as outlined in the Arts and Sciences curriculum.
4. This requirement assumes a student has had enough language background in high school to begin one intermediate language sequence at UT.
5. BA students must take at least one course from List A: Literature and at least one course from List B: Philosophical and Religious Thought plus one additional course from List A, B, or C. BS students must complete a minimum of 6 credits from the three lists; not more than 3 credits can be taken in the Arts.
6. BA students must complete a minimum of 12 credits from at least two areas; BS students must complete a minimum of 6 credits from at least two areas for the Social Science requirement.
7. BA students must complete a minimum of 6 credits in one of the three areas and 3 credits from one of the remaining two areas. BS students must complete a minimum of 6 credits in two of the three areas.
8. (Upper Level Distribution)
9. Depending upon course selection, a student may require less than the listed elective hours to reach the minimum total of 93 hours. Recommended courses in biology are genetics, and comparative vertebrate anatomy.

## PRE-MEDICAL PROGRAM

The college offers a joint B.A./M.B.A. program with the College of Business Administration. Admission requirements are higher than those normally expected of M.B.A. applicants. Desired qualifications include a minimum of 3.4 GPA and a Graduate Management Admission Test Score of 600 or higher.

Students in this program take their first three years of course work in Arts and Sciences, and their last two years in the College of Business Administration. Within their first three years, students must fulfill all general education requirements for the B.A. degree, both upper and lower division, along with a minor offered by one of the Arts and Sciences departments. They may use one Economics course only to fulfill distribution requirements, and they are required to take a year of calculus as the only prerequisite to the M.B.A.

Students interested in the Dual B.A./M.B.A. program are counseled initially in the Arts and Sciences Advising Services regarding admission requirements for the degree before enrollment.

### Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman English</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Non-U.S. History</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science: List A</td>
<td>8</td>
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### Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Social Sciences Electives</td>
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<tr>
<td>Humanities</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
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<tr>
<td>Upper division distribution</td>
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</tr>
<tr>
<td>Electives</td>
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Total: 101 hours

### Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>15</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>15</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
</table>

This requirement assumes a student has had enough language background in high school to begin one intermediate language sequence at UT. This one course in one of Economics may be used to fulfill this requirement.

### Senior

Completion of major program and B.A./B.S. requirements or completion of one year at UT-Memphis.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
</table>

1. Medical schools require 8 hours of General Biology.
2. Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements. Mathematics 130 or any Calculus course is a prerequisite to Physics. All students must complete the Math Basic Skills requirements as outlined in the Arts and Sciences curriculum.
3. This requirement assumes a student has had enough language background in high school to begin one intermediate language sequence at UT.
4. The College of Medicine at E.T.S.U. requires one course in literature, BA students must take at least one course from List A: Literature and one course from List B: Philosophical and Religious Thought plus one additional course from List A, B, or C. BS students must complete a minimum of 6 credits from the three lists under the Humanities requirement; not

### Hours Credit

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman English</td>
<td>6</td>
</tr>
<tr>
<td>Biology 130-140</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 120-130</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Sophomore Chemistry 350, 360, 369</td>
<td>8</td>
</tr>
<tr>
<td>Physics 221-222</td>
<td>8</td>
</tr>
<tr>
<td>Divisional Distribution: Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Divisional Distribution: Non-U.S. History</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Basic Skills (b) Foreign Language (Intermediate Level Sequence)</td>
<td>3</td>
</tr>
<tr>
<td>Junior</td>
<td>6</td>
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<tr>
<td>Divisional Distribution: Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Divisional Distribution: Social Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Upper Level Distribution (A) U.S. Studies</td>
<td>6</td>
</tr>
<tr>
<td>(B) Foreign Studies or (C) Capstone Experience</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>16</td>
</tr>
</tbody>
</table>

Total: 124 minimum hours
more than 3 credits may be taken in the Arts.
4 BA students must complete a minimum of 12 credits from at least two areas; BS students must complete a minimum of 6 credits from at least two areas for the Social Science requirement.
5 BA students must complete a minimum of 6 credits in one of the three areas and 3 credits from one of the remaining two areas. BS students must complete a minimum of 6 credits in two of the three areas. (Upper Level Distribution).
6 Depending upon course selection, a student may require less than the listed elective hours to reach the minimum total of 93 hours. Not all, specifically required by the College of Medicine, the Health Professions Advisory Committee strongly recommends that students include additional work in upper division Biological Sciences such as Biochemistry and Cellular and Molecular Biology 410-419, Biochemistry and Cellular and Molecular Biology 330-331, 420 and Microbiology 310-319.

**NUCLEAR MEDICINE TECHNOLOGY**

The Nuclear Medicine Technology Curriculum requires a minimum of 94 hours credit, including the College’s basic skills and distribution requirements, prior to application for admission to a final year of study at the University of Tennessee Medical Center, Knoxville.

Students who complete the Nuclear Medicine Technology program at UTMC receive the B.S. degree in Preprofessional Programs with a concentration in Nuclear Medicine Technology from the College of Arts and Sciences.

NOTE: Admission to the Nuclear Medical Technology Program at UTMC is at the discretion of the admissions committee of that department; successful completion of the three-year curriculum noted below does not assure admission to the program.

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
</tr>
<tr>
<td>1 English 101-102</td>
</tr>
<tr>
<td>1 Chemistry 120-130</td>
</tr>
<tr>
<td>1 Mathematics</td>
</tr>
<tr>
<td>1 Basic Skills: Foreign Language (Intermediate Level Sequence)</td>
</tr>
<tr>
<td>Divisional Distribution: Non-U.S. History</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>1 Biology 130-140</td>
</tr>
<tr>
<td>2 Chemistry 350, 360, 369</td>
</tr>
<tr>
<td>1 Speech Communication 210</td>
</tr>
<tr>
<td>6 Divisional Distribution: Humanities</td>
</tr>
<tr>
<td>1 Divisional Distribution: Social Sciences</td>
</tr>
<tr>
<td>1 Computer Science 100 or 102</td>
</tr>
<tr>
<td>1 Junior</td>
</tr>
<tr>
<td>2 Biochemistry and Cellular and Molecular Biology 230 and Ecology and Evolutionary Biology 240</td>
</tr>
<tr>
<td>1 Physics 221-222</td>
</tr>
<tr>
<td>1 Divisional Distribution: Humanities</td>
</tr>
<tr>
<td>1 Upper Level Distribution (A) U.S. Studies, (B) Foreign Studies, or (C) Capstone Experience</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td>Total: 94 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior</strong></td>
</tr>
<tr>
<td>Completion of Nuclear Medicine Technology program at UTMC (12 month program) or completion of major program and BA or BS requirements.</td>
</tr>
</tbody>
</table>

Total: 124 minimum hours

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Semester</strong></td>
</tr>
<tr>
<td>Physics For Nuclear Medicine I</td>
</tr>
<tr>
<td>Nuclear Instrumentation</td>
</tr>
<tr>
<td>Radiopharmacy/Radiochemistry</td>
</tr>
<tr>
<td>Clinical Nuclear Medicine I</td>
</tr>
<tr>
<td>Clinical Practicum I</td>
</tr>
<tr>
<td>Spring Quarter</td>
</tr>
<tr>
<td>Physics for Nuclear Medicine II</td>
</tr>
<tr>
<td>Computer Applications</td>
</tr>
<tr>
<td>Clinical Nuclear Medicine II</td>
</tr>
<tr>
<td>Clinical Practicum II</td>
</tr>
<tr>
<td>Summer Quarter</td>
</tr>
<tr>
<td>Registry Review</td>
</tr>
<tr>
<td>Clinical Nuclear Medicine III</td>
</tr>
<tr>
<td>Clinical Practicum III</td>
</tr>
<tr>
<td>Total: 44 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRE-PHARMACY PROGRAMS</strong></td>
</tr>
<tr>
<td>The college offers three programs preparing students for the study of pharmacy at UT Health Science Center, Memphis. The Doctor of Pharmacy (Pharm.D.) degree is conferred by the College of Pharmacy upon completion of four years of professional study at Memphis following any of the three programs. Bulletins describing the three pre-pharmacy programs in detail may be obtained from Arts and Sciences Advising Services, 220 Ayres Hall.</td>
</tr>
</tbody>
</table>

The two-year program prepares students to be admitted to the College of Pharmacy upon completion of 60 hours of a prescribed course of study in the College of Arts and Sciences. Further information may be obtained from Arts and Sciences Advising Services, 220 Ayres Hall. |

The three-year program leading to a B.A. degree and the four-year program leading to either a B.A. or B.S. degree from the University of Tennessee as well as to the professional degree in pharmacy from UT Health Science Center, Memphis, are based upon the program outlined below. In the three-year program, the student must complete at least 93 credit hours while enrolled in the College of Arts and Sciences, and the B.A. degree is granted upon satisfactory completion of the first year of study in Memphis. In the four-year program the B.A. or B.S. degree is granted upon completion of 124 or more credit hours while enrolled in the college, including a major of 24 or more hours in addition to the courses outlined below. The requirement for a major is waived for those taking their fourth year at UT Health Science Center, Memphis. Students in either the three- or four-year program must complete the last 30 hours of credit in residence at he University of Tennessee before enrolling in the College of Pharmacy. |

<table>
<thead>
<tr>
<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
</tr>
<tr>
<td>1 English 101-102; or equivalent</td>
</tr>
<tr>
<td>1 Chemistry 120-130</td>
</tr>
<tr>
<td>1 Basic Skills: Foreign Language (Intermediate Level Sequence)</td>
</tr>
<tr>
<td>1 Mathematics</td>
</tr>
<tr>
<td>Divisional Distribution: Non-U.S. History</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>1 Biology 130-140</td>
</tr>
<tr>
<td>2 Chemistry 350, 360, 369</td>
</tr>
<tr>
<td>1 Speech Communication 210, 220, or 240</td>
</tr>
<tr>
<td>1 Divisional Distribution: Humanities</td>
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<td>1 Divisional Distribution: Social Sciences</td>
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<tr>
<td>Electives</td>
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<td><strong>Junior</strong></td>
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<tr>
<td>Statistics 201</td>
</tr>
<tr>
<td>Physics 221-222</td>
</tr>
<tr>
<td>1 Divisional Distribution: Humanities</td>
</tr>
<tr>
<td>Divisional Distribution: Social Sciences</td>
</tr>
<tr>
<td>1 Upper Level Distribution (A) U.S. Studies, (B) Foreign Studies, or (C) Capstone Experience</td>
</tr>
<tr>
<td>Electives</td>
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<tr>
<td>Total: 124 minimum hours</td>
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</table>

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior</strong></td>
</tr>
<tr>
<td>Completion of major program and B.A./B.S. requirements or completion of one year at UT Health Science Center, Memphis</td>
</tr>
</tbody>
</table>

| Election | 93 hours |

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Teaching Programs</strong></td>
</tr>
<tr>
<td>Students planning careers in K-12 teaching must complete an Arts and Sciences major in a department, in one of the Interdisciplinary or Pre-Teaching programs or, if eligible, in the College Scholars Program. Prospective secondary teachers must fulfill the requirements of appropriate content majors; prospective elementary teachers may choose either a departmental major or one of the four options described below. All pre-teaching students should consult appropriate materials in Arts and Sciences Advising Services before making final choices of majors.</td>
</tr>
</tbody>
</table>
To be licensed for teaching, students must also gain formal admission to the Teacher Education Program in the College of Education. The process involves successful completion of a series of requirements including presentation of satisfactory scores on certain tests, completing professional courses in the College of Education, maintenance of a 2.7 or higher GPA, and completing a fifth year program emphasizing practical application. For details, see The College of Education section of the Undergraduate Catalog and contact the Education Advising Center, Claxton Complex 332.

PRE-TEACHING SCIENCE AND MATHEMATICS OPTIONS: BACHELOR OF SCIENCE

1. Environmental Science
   This concentration should develop the knowledge and understanding of the environmental sciences appropriate to the needs of the teacher in grades K-8. The prerequisite courses assure that the student has an adequate background in the biological, chemical, and physical sciences to proceed to upper division courses in either of the chosen areas of concentration. The two tracks beyond the core stress the two major emphases of the ecological sciences—the biological and the physical-chemical. The student choosing to emphasize the biological track should be prepared to teach courses in biological science through the middle school years. The student choosing to emphasize the physical-chemical track should be prepared to teach general and earth science through the middle school years.

   Prerequisite courses: NB: One mathematics and one science sequence or two science sequences (14-16 hours) may be used to satisfy general education requirements.

   1. Mathematics
      115, 123 (3.3) or Mathematics 123, 125 (3.3) or Mathematics 141-142 (4, 4) or Mathematics 151-152 (3.3)
      2. Chemistry 120, 130 (4, 4)
      3. Biology 130, 140 (4, 4) or Botany 110-120 (4, 4)
      4. Geology 101-102 (4, 4) or Geography 131-132 (4, 4) or Physics 211-222 (4, 4)

   Core courses: (11 hours)
   1. Biology 240: General Genetics (4)
   2. Biology 250: General Ecology (4)
   3. Geology 203: Geology of National Parks (3)

   Beyond the core curriculum, the student must choose 18 hours from the two tracks listed below: 15 hours from one track and 3 hours from the other track.

   A. Biological Sciences Track
      Botany 305: Socio-Economic Impact of Plants (3); Botany 310: Plant Morphology (4); Botany 330: Field Botany (3); Botany 403: Plant Evolution (3); Botany 431: Plant Ecology (3); Ecology and Evolutionary Biology 350: Comparative Vertebrate Biology (4); Ecology and Evolutionary Biology 360: Comparative Invertebrate Biology (4); Ecology and Evolutionary Biology 380: General Entomology (3); Ecology and Evolutionary Biology 402: Practicum in Ecology and Evolutionary Biology (2); Ecology and Evolutionary Biology 450-459: Comparative Animal Behavior and Lab (3.3); Ecology and Evolutionary Biology 470: Aquatic Ecology (3); Ecology and Evolutionary Biology 474: Ichthyology (3); Ecology and Evolutionary Biology 475: Field Ornithology (2); Ecology and Evolutionary Biology 484: Conservation Biology (3); Forestry, Wildlife and Fisheries 311: Dentrology and Silvics of North American Trees (3); Geography 435: Biogeography (3); Geography 439: Plant Geography of North America (3); Geology 320: Paleobiology (3); Geology 420: Paleocology (4); Microbiology 310-19: Introduction to Microbiology and Lab (3.1); +Microbiology 470: Microbial Ecology (3).

      Course has prerequisite other than courses prerequisite to this major. See catalog for details.

   B. Physical-Chemical Sciences Track
      Biochemistry and Cellular and Molecular Biology 310: Physiological Chemistry (4); Chemistry 350-360-369: Organic Chemistry and Lab (3.3, 3.2); Ecology and Evolutionary Biology 446: Introduction to Oceanography (4); Geography 334: Meteorology (3); Geography 433: The Land-Surface System (3); Geography 434-435: Climatology (3); Geography 436: Water Resources (3); Geology 450: Process Geomorphology (3); +Geology 455: Basic Environmental Geology; Geology 485: Principles of Geohydrology (3).

      Course has prerequisite other than courses prerequisite to this major. See catalog for details.

   Total (core + track concentration) = 29 hours

2. Science
   This concentration should develop the knowledge and understanding of the sciences appropriate to the needs of the teacher in grades K-8. The curricular requirement that the student take courses in both biological science (anthropology, biochemistry and cellular and molecular biology, biology, botany, ecology and evolutionary biology, microbiology, psychology) and in physical science (chemistry, geography, geology, physics) is designed to fulfill the state competencies for I General Science and Physical Science and II Biology.

   Prerequisite courses: NB: One mathematics and one science sequence or two science sequences (14-16 hours) may be used to satisfy general education requirements.

   1. Mathematics 115, 123 (3.3) or Mathematics 123, 125 (3.3) or Mathematics 141-142 (4, 4) or Mathematics 151-152 (3.3)
   2. Chemistry 120, 130 (4, 4)
   3. Biology 130, 140 (4, 4) or Botany 110-120 (4, 4)
   4. Geology 101-102 (4, 4) or Geography 131-132 (4, 4) or Physics 211-222 (4, 4)

   Core courses: (11 hours)
   1. Biology 240: General Genetics (4)
   2. Biology 250: General Ecology (4)
   3. Geology 203: Geology of National Parks (3)

   Beyond the core curriculum, the student must choose 18 hours from the two tracks listed below: 15 hours from one track and 3 hours from the other track.

   A. Biological Sciences Track
      Botany 305: Socio-Economic Impact of Plants (3); Botany 310: Plant Morphology (4); Botany 330: Field Botany (3); Botany 403: Plant Evolution (3); Botany 431: Plant Ecology (3); Ecology and Evolutionary Biology 350: Comparative Vertebrate Biology (4); Ecology and Evolutionary Biology 360: Comparative Invertebrate Biology (4); Ecology and Evolutionary Biology 380: General Entomology (3); Ecology and Evolutionary Biology 402: Practicum in Ecology and Evolutionary Biology (2); Ecology and Evolutionary Biology 450-459: Comparative Animal Behavior and Lab (3.3); Ecology and Evolutionary Biology 470: Aquatic Ecology (3); Ecology and Evolutionary Biology 474: Ichthyology (3); Ecology and Evolutionary Biology 475: Field Ornithology (2); Ecology and Evolutionary Biology 484: Conservation Biology (3); Geography 334: Meteorology (3); Geography 433: The Land-Surface System (3); Geography 434-435: Climatology (3); Geography 436: Water Resources (3); Geology 450: Process Geomorphology (3); +Geology 455: Basic Environmental Geology; Geology 485: Principles of Geohydrology (3).

   Beyond the core curriculum, the student must take 18 hours from the two tracks listed below: 15 hours from one track and 3 hours from the other track. At least 15 of the 18 hours must be at the 300 or 400 level.

   B. Physical Sciences
      Chemistry 350-360-369: Organic Chemistry and Lab (3.3, 3.2); Ecology and Evolutionary Biology 446: Introduction to Oceanography (4); Geography 334: Meteorology (3); Geography 433: The Land-Surface System (3); Geography 434: Climatology (3); Geography 436: Water Resources (3); +Geography 445: Geography of Resources (3); *Geology 201: Biodiversity; Past, Present, and Future (3); *Geology 202: Earth as an Ecosystem: Modern Problems and Solutions (3); Geology 203: *Geology of National Parks (3); Geology 310: Mineralogy (4); Geology 330: Igneous and Metamorphic Petrology (3); Geology 340: Stratigraphy and Sedimentation (3); Geology 370: Structural Geology (4); Geology 381: Minerals and Energy Resources: Geologic Constraints and Environmental Impacts (3).

   Beyond the core curriculum, the student must take 18 hours from the two tracks listed below: 15 hours from one track and 3 hours from the other track. At least 15 of the 18 hours must be at the 300 or 400 level.

   Total (core + track concentration) =32 hours

A. Biological Sciences
   +Anthropology 210: Principles of Biological Anthropology (3); +Anthropology 464: Principles of Zoarcheology (3);
   +Anthropology 480: Human Osteology (3); +Anthropophic Paleolontology (3); Evolution 3;
   +Anthropoph 495: Human Paleontology (3); Anthropology 496: Biology of Human Variability (3); Biochemistry and Cellular and Molecular Biology 230: Human Physiology (5); Biochemistry and Cellular and Molecular Biology 310: Physiological Chemistry (4); Biochemistry and Cellular and Molecular Biology 330-331: Mechanisms of Development and Lab (3.2).

   Of the following three Botany courses, choose only one: Botany 306: Socio-Economic Impact of Plants (3); Botany 306: Genetics and Society (3); Botany 309: Biology of Human Affairs (3); Botany 310: Plant Morphology (4); Botany 321: Introductory Plant Physiology (4); Botany 330: Food Botany (3); Ecology and Evolutionary Biology 240: Human Anatomy (4); Ecology and Evolutionary Biology 350: Comparative Vertebrate Biology (4); Ecology and Evolutionary Biology 360: Comparative Invertebrate Biology (4); Ecology and Evolutionary Biology 380: General Entomology (3); Ecology and Evolutionary Biology 450-459: Comparative Animal Behavior and Lab (3.3); Ecology and Evolutionary Biology 470: Aquatic Ecology (3); Ecology and Evolutionary Biology 474: Ichthyology (3); Ecology and Evolutionary Biology 475: Field Ornithology (2); Ecology and Evolutionary Biology 484: Conservation Biology (3); Geography 435: Biogeography (3); Geography 436: Water Resources (3); *Geography 445: Geography of Resources (3); *Geology 201: Biodiversity; Past, Present, and Future (3); *Geology 202: Earth as an Ecosystem: Modern Problems and Solutions (3); +Psychology 410: Sensory Processes and Perception (3); +Psychology 461: Physiological Psychology (3).

   *Course has prerequisite other than prerequisite to this major. See catalog for details.
3. Mathematics
This concentration aims at developing a fundamental understanding of some of the primary avenues of mathematical thought appropriate to the needs of the teacher in grades K-8. Topics include algebra, calculus, computing, geometry, history of mathematics, probability, and statistics.
Mathematics 115: Statistical Reasoning (3); Mathematics 130: Precalculus I (4); Mathematics 141-142: Calculus I and II (4,4); Mathematics 241: Calculus III (4); Mathematics 251: Matrix Algebra (3); Mathematics 300: Introduction to Abstract Mathematics (3); Mathematics 323: Probability (3); Mathematics 400: History of Mathematics (3); Mathematics 401: Math and Microcomputing (3); Mathematics 460: Geometry (3).

Total: 36 hours

4. Mathematics and Science
This concentration should develop the knowledge and understanding of the natural sciences and mathematics appropriate to the needs of the teacher in grades K-8 and is intended to provide the student with the minimal competence to teach in either or both disciplinary areas. Of necessity, depth in any particular discipline is secondary to obtaining breadth from an array of natural science and mathematics areas. Courses included in the major have been selected to maximize the number of upper division courses that can be taken without prerequisites.

Prerequisite courses: (32 hours)
1. Mathematics 141-142 (4,4)
2. Chemistry 120, 130 (4,4)
3. Biology 130, 140 (4,4) or Botany 110-120 (4,4)
4. One sequence from among the following: Astronomy 161-162 (4,4) or Geography 131-132 (4,4) or Botany 101-102 (4,4) or Physics 221-222 (4,4)

NB: One mathematics and one science sequence or two science sequences (14-16 hours) may be used to satisfy general education requirements.

Core courses: (17 hours)
1. Biology 240: General Genetics (4); Biology 250: General Ecology (4) or Biochemistry and Cellular and Molecular Biology 230: Human Physiology (5); and Ecology and Evolutionary Biology 240: Human Anatomy (4)
2. Choose two of the following three courses: Geology 201: Biodiversity; Past, Present, and Future (3); Geology 202: Earth as an Ecosystem; Modern Problems and Solutions (3); Geology 303: Geology of National Parks (3)
3. Mathematics 300: Introduction to Abstract Mathematics (3) Beyond the core curriculum, the student must take two courses from each of these three areas:

A. *Biological Sciences (6-8 hours)
   +Anthropology 496: Biology of Human Variability (3); Biochemistry and Cell Biology 310: Physiological Chemistry (4); Biochemistry and Cellular and Molecular Biology 330: Animal Development and Embryology (3); Of the following three Botany courses you may choose only one: Botany 305: Socio-Economic Impact of Plants (3); Botany 306: Genetics and Society (3); Botany 309: Biology of Human Affairs (3). Botany 310: Plant Morphology (4); Botany 321: Introductory Plant Physiology (4); Botany 330: Field Botany (3); Ecology and Evolutionary Biology 350: Comparative Vertebrate Biology (4); Ecology and Evolutionary Biology 360: Comparative Invertebrate Biology (4); Ecology and Evolutionary Biology 380: General Entomology (3); Ecology and Evolutionary Biology 450-459: Comparative Animal Behavior and Lab (3,3); Ecology and Evolutionary Biology 470: Aquatic Ecology (3); Ecology and Evolutionary Biology 474: Ichthyology (3); Ecology and Evolutionary Biology 484: Conservation Biology (3); Geography 435: Biogeography (3); Microbiology 310: Introduction to Microbiology (3); Microbiology 470: Microbial Ecology (3); +Psychology 410: Sensory Processes and Perception (3); +Psychology 461: Physiological Psychology (3)
   +Course has prerequisite other than prerequisite to this major. See catalog for details.
   * Some of these courses may require additional prerequisites. See catalog for details.

B. Physical Sciences (6-8 hours)
   Chemistry 350-360-369: Organic Chemistry and Lab (3,3,2); Ecology and Evolutionary Biology 446: Introduction to Oceanography (4); Geography 334: Meteorology (3); Geography 433: The Land-Surface System (3); Geography 434: Climatology (3); Geography 436: Water Resources (3); +Geography 437: Natural Hazards (3); Geology 310: Mineralogy (3); Geology 320: Paleobiology (3); Geology 330: Igneous and Metamorphic Petrology (3); Geology 440: Stratigraphy and Sedimentation (3); Geology 370: Structural Geology (4); Geology 381: Minerals and Energy Resources; Geology and Constraints and Environmental Impacts (3); Geology 420: Paleoecology (4)
   +Course has prerequisite other than courses prerequisite to this major. See catalog for details.

C. Mathematics (6 hours)
   Mathematics 400: History of Mathematics (3); Mathematics 401: Microcomputing (3); Math 405: Models in Biology (3); Mathematics 460: Geometry (3)

Total (core + areas A, B, and C) = 35 hours

PRE-VETERINARY MEDICINE PROGRAM
The following program is designed for students who wish to pursue an Arts and Sciences degree while preparing for the study of Veterinary Medicine. Students in this program must complete at least 93 credit hours while enrolled in the College of Arts and Sciences, must satisfy the Basic Skills and Distribution requirements, and must complete the last 30 hours in residence at UT Knoxville before enrolling in the College of Veterinary Medicine. A departmental major is not required. Upon successful completion of the first year (two semesters) of the first professional veterinary medicine curriculum, the Bachelor of Science degree will be conferred by the College of Arts and Sciences.

Note: Admission to the College of Veterinary Medicine is at the discretion of the Admissions Committee of that College; admission to and successful completion of this program does not assure admission to the College of Veterinary Medicine.

Hours Credit
Freshman
1English 101-102 .................................................. 6
2Chemistry 120-130 ............................................. 8
3Biology 130-140 ............................................... 8
4Basic Skills (B) Foreign Language (Intermediate Level Sequence) ........................................... 6
5Mathematics ......................................................... 4-8
Sophomore
4Biology 240 .......................................................... 4
4Chemistry 350, 360, 369 .......................................... 8
4Physics 221-222 ................................................... 8
4Divisional Distribution: Non-U.S. History ................. 6
4Divisional Distribution: Social Sciences ..................... 3
Junior
4Biology and Cellular and Molecular Biology 410 or 401 and 402 ................................................. 4-6
4Divisional Distribution: Social Science ....................... 3
4Divisional Distribution: Humanities ........................ 6
4Upper Level Distribution (A) U.S. Studies, (B) Foreign Studies, or (C) Capstone Experience .............. 6
4Electives .................................................................. 7-12

Total: 93 hours

Senior
Completion of major program and B. A./B.S. requirements or completion of one year at UT College of Veterinary Medicine

Total: 124 minimum hours

1Or equivalent honors courses.
2This requirement assumes a student has had enough language background in high school to begin an intermediate language sequence at UT.
3Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements.
4Divisional Distribution: Humanities .......................... 6
5A. students must take at least one course from List A: Literature and at least one course from List B: Philosophical and Religious Thought plus one additional course from List A, B, or C. B. S. students must complete a minimum of 6 credits from one of the three lists; not more than 3 credits may be taken from List C: Arts.
6A. students must complete a minimum of 6 credits in one of the three areas and 3 credits from one of the remaining two areas. B. S. students must complete a minimum of 6 credits in two of the three areas.
7Depending upon course selection, a student may require less than the listed elective hours to reach the minimum total of 93 hours.

SCIENCE-MEDICAL TECHNOLOGY CURRICULUM
Students who complete the Science-Medical Technology Curriculum receive the B.S. degree with a major in medical technology from the College of Arts and Sciences. The curricu-
lum requires a minimum of 94 hours of credit which includes the Basic Skills and Distribution requirements of the college prior to application for admission to a final year of study at the University of Tennessee Medical Center, Knoxville (UTMCK). After the course of study is completed, UTMCK, awards the student a Certificate of Laboratory Training. Students are then eligible for examination by the Board of...
Registry of the American Society of Clinical Pathologists to earn certification as registered medical technologists.

ANTHROPOLOGY


Associate Professors: L. Harris (Emeritus), Ph.D. Syracuse; J. Kramer (Head), Ph.D. Michigan; M. Marks, Ph.D. Tennessee.

Assistant Professor: M. Ferreira, Ph.D. California (Berkeley); H.N. Qirko, Ph.D. Tennessee.

Research Associate Professor: J. Chapman (Director), F.H. McClung Museum, Ph.D. North Carolina.

Research Assistant Professor and Curator: S. Frankenberger, Ph.D. Northwestern.

Research Assistant Professor: M. Elam, Ph.D. Missouri.

Instructor and Coordinator, Forensic Center: L.M. Jantz, Ph.D. Tennessee.

Adjunct Professor: R. Dunnell, Ph.D. Yale; F.V. Harrison, Ph.D. Stanford.

PROGRESSION STANDARDS

Progression into the Anthropology major is based on performance in the three prerequisite courses: 110, 120 and 130. Students must maintain a grade point average of at least 3.0 for the three introductory courses, with none of the three courses below a C. Upon satisfactory completion of the prerequisites, the student may apply for progression into the Anthropology major by: (1) completing a formal application for progression in the Anthropology Department and (2) including with that application an academic history demonstrating satisfactory completion of the progression requirements. The Undergraduate Committee of the Anthropology Department will meet regularly to determine the status of these applications. Upon progression to the major, the department advisor will be assigned in consultation with the student.

The anthropology major consists of 450 or 357 and 24 additional hours of upper division coursework to work in Anthropology. This course work shall be distributed as follows:

1. One course from categories (a), (b), (c), and (d); and two courses from category (e).
   a. archaeological method and theory: 361, 362, 440, 464
   b. archaeological area: 360, 363, 462, 463
   c. cultural area: 310, 311, 312, 313, 315, 316, 319, 320
   d. cultural method and theory: 410, 411, 412, 413, 414, 416, 431
   e. biological anthropology: 480, 485, 490, 494, 495, 496
2. Remaining hours may be selected from any upper division Anthropology courses.

Students with senior standing are encouraged to substitute appropriate 500 level courses (with permission of the instructor of the course and approval of the Department Head) for any portion of (1) or (2) above.

The Department of Anthropology offers honors seminars for juniors and seniors, leading to an honors major. The honors major consists of 357 and 457 plus 24 additional hours of upper division coursework in Anthropology distributed as specified above for the major.

To enroll in Anthropology 357, the student must have fulfilled the progression requirements necessary to declare a major in Anthropology and must have an overall GPA of 3.2.

To enroll and receive honors credit for Anthropology 457, the student must complete 357 with a grade of B or better, maintain a 3.5 GPA in all Anthropology courses, and maintain a 3.2 GPA overall.

Continuation in the anthropology major requires maintenance of a 2.5 GPA or better in all anthropology courses. Students failing to meet this standard will be notified in writing that they are on probation and their records will be reviewed. Those who continue in probationary status for two consecutive semesters will be dropped from the major.

Anthropology 110, 120, 130 are prerequisite to a minor in anthropology, consisting of 15 hours of upper division Anthropology courses, chosen in consultation with an Anthropology advisor.

ART


Associate Professors: S. Brodgen, M.F.A. New York State College of Ceramics at Alfred; T. W. Hiles, Ph.D. Pennsylvania State; A. Neff, Ph.D. Pennsylvania; C. Staples, M.F.A. Michigan State.


PROGRESSION REQUIREMENTS

The following core courses must be completed before students can progress into the program as art majors and before further art classes may be taken: *

Art 101
Art 103
Art History 162, 172, 173, or 183 (choose one)

*See section on transfer students. Students have the right to petition the School in the event of unusual enrollment circumstances.
Students entering the major must have earned a minimum 3.00 cumulative average in the above courses to be considered for progression into the School of Art. Those applying will progress in rank order of cumulative average as space allows. The overall record will be evaluated for quality and seriousness of purpose. Excessive absences, withdrawals, incompletes or repeated courses may result in denial of progression. Progression into the School of Art does not guarantee progression into a chosen concentration. Progression into a concentration will follow successful completion of a Concentration Portfolio Review.

### B. F. A. IN STUDIO ART

The B.F.A. in Studio Art is a professionally oriented degree especially intended for those students planning careers or graduate study in the visual arts. All students seeking studio degrees (B.A. Studio, B.F.A. Studio and Art Education) must present and pass the appropriate Portfolio Review for their area of study in order to be admitted into advanced courses. Contact specific program area faculty for review of schedules and details. It should not be assumed that a high grade point average in the major itself assures passing Portfolio Review. The Portfolio Review is recommended in the Sophomore year and is intended to provide students with an overview assessment of their potential for success in the intended area of study early enough to allow a student to make a program change should that be advisable. Before choosing a concentration, students should contact their intended area to see what options are offered in the event they do not pass portfolio review. All studio courses require 3 hours per week attendance for each credit hour earned. Completing the B.F.A. program may take more than 8 semesters. Students are urged to seek departmental advisement each semester to ensure proper scheduling. Students seeking the B.F.A. Degree in Studio Art should also consider pursuing a minor in Art History.

Transfer students are advised that a minimum of 21 hours in studio courses, and 6 upper division hours in art history, must be earned at UT. Transfer students must have a minimum overall GPA of 3.00 in Art and Art History courses and may be required to present a portfolio. Those students who have not taken any art courses must take the sequence of courses required of freshmen (see section on Progression into the School of Art). Students should be cautioned that art courses taken at another institution may not apply toward their concentration. Art Design 252, Drawing 212, and Painting 214 must be taken at the University of Tennessee. Courses not accepted for application toward a concentration may be counted as studio electives.

No grade below "C" in art courses may be applied to the B.F.A. major. A minimum of 40 credit hours, 300 level or above, must be earned prior to graduation.

Students may be accepted into advanced media concentrations in Ceramics, Drawing, Painting, Media Arts, Printmaking, Sculpture, and Watercolor after passing the appropriate portfolio course.

### Basic Requirements (All Concentrations Except Media Arts)

<table>
<thead>
<tr>
<th>Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 101,103</td>
</tr>
<tr>
<td>Art 295</td>
</tr>
<tr>
<td>Art History 172 and 173 and 162 or 183</td>
</tr>
<tr>
<td>Art History Electives</td>
</tr>
<tr>
<td>One course from each of the following 6 areas:</td>
</tr>
<tr>
<td>Art Ceramics, Art Drawing, Art Media Arts, Art Painting/Watercolor, Art Printmaking, and Art Sculpture</td>
</tr>
</tbody>
</table>

*Sub-Total: 43*

### Studio Electives

Additional hours in studio courses to be completed in the School of Art or our affiliated facility, Arrowmont School of Arts and Crafts. Students may also apply a maximum of 6 hours of approved studio courses from Architecture, Art Education, Broadcasting, Journalism, Computer Science, Human Resource Development, Interior Design, or Theatre. Students electing an additional major in Art Education and licensure to teach in schools K-12 must take 13 hours in undergraduate Art Education courses.

*Sub-Total: 18*

### General Curriculum

| English Composition | 6 |
| Non U.S. History/Social Science | 6 |
| Natural Science/Mathematics | 6-8 |
| Arts and Sciences Non-Art Electives | 14-16 |

*Sub-Total: 34*

### Concentrations

#### Ceramics

| Ceramics 222 | 3 |
| Ceramics 321, 322 (prerequisite for all 400 level ceramic courses) | 6 |
| Ceramics 421, 422, 429, 493, or 494 | 14 |
| Approved Concentration Electives: (9 hours from the following) |
| Drawing 212 | 9 |
| Sculpture 241, 242, 243, 245, 246 | 9 |
| Printmaking 262, 263 | 9 |
| Painting 213, 214, 215 | 9 |
| Arrowmont Ceramics 420 | 9 |

*Sub-Total: 32*

#### Drawing

| Art Drawing 212 (may be repeated) | 3 |
| Portfolio Review 320 (S/NC) | 3 |
| Art Drawing 311 (for two semesters) | 8 |
| Art Drawing 411 (for two semesters) | 12 |
| Approved Concentration Electives: (9 hours from the following) |
| Art Drawing 219/419 (maximum 6 hours) | 9 |
| Art Painting 213, 214, 215, 216 | 9 |
| Art Media Arts 231 | 9 |
| Art Printmaking 262, 263 | 9 |

*Sub-Total: 32*

#### Painting

| Painting 214 (may be repeated) | 3 |
| Portfolio Review 312 (S/NC) | 3 |
| Painting 313 (for two semesters) | 8 |
| Painting 413 (for two semesters) | 12 |
| Approved Concentration Electives: (9 hours from the following) |
| Art Drawing 219/419 (maximum 6 hours) | 9 |
| Art Painting 213, 214, 215 | 9 |
| Art Media Arts 231 | 9 |
| Art Drawing 212 | 9 |

*Sub-Total: 32*

### Printmaking

| Printmaking 200 level course | 3 |
| Portfolio Review 360 (S/NC) | 20 |
| Printmaking 300 and 400 level courses | 20 |
| Approved Concentration Electives: (9 hours from the following) |
| Art Drawing 212 (maximum 6 hours) | 9 |
| Art Drawing 311 | 9 |
| Art Drawing 419 (maximum 6 hours) | 9 |
| Art Media Arts 231 | 9 |
| Art Printmaking 469 (3 hours) | 9 |

*Sub-Total: 32*

### Sculpture

| Sculpture 200 level course | 3 |
| Portfolio Review 340 (S/NC) Prerequisite to 300 and 400 level courses | 20 |
| Sculpture 300 and 400 level courses | 20 |
| Approved Concentration Electives: (9 hours from the following) |
| Art Drawing 212 (maximum 6 hours) | 9 |
| Art Drawing 311 | 9 |
| Art Drawing 419 (maximum 6 hours) | 9 |
| Art Media Arts 231 | 9 |
| Art Printmaking 469 (3 hours) | 9 |

*Sub-Total: 32*

### Watercolor

| Painting 216 (may be repeated) | 3 |
| Portfolio Review 314 (S/NC) | 8 |
| Art Drawing 315 (for two semesters) | 12 |
| Approved Concentration Electives: (9 hours from the following) |
| Art Drawing 219/419 (maximum 6 hours) | 9 |
| Art Painting 213, 214 | 9 |
| Art Media Arts 231 | 9 |
| Art Drawing 212 | 9 |

*Sub-Total: 32*

**Total: 127**

### B. F. A. IN STUDIO ART—MEDIA ARTS CONCENTRATION

#### Basic Requirements

<table>
<thead>
<tr>
<th>Core</th>
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<tbody>
<tr>
<td>Art 101, 103</td>
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<tr>
<td>Art 295</td>
</tr>
<tr>
<td>Art History 172 and 173 and 183 or 162</td>
</tr>
<tr>
<td>Art History Electives</td>
</tr>
<tr>
<td>Art 295 and 400 level courses</td>
</tr>
<tr>
<td>Art History Electives</td>
</tr>
<tr>
<td>Media Arts 231, 235, 236</td>
</tr>
<tr>
<td>Media Arts 231, 235, 236</td>
</tr>
<tr>
<td>One course from each of the following 5 areas: Art Drawing, Art Painting/Watercolor, Art Ceramics, Art Sculpture, Art Printmaking</td>
</tr>
</tbody>
</table>

*Sub-Total: 46*

### Concentration

#### Media Arts 330 (Portfolio Review) (Prerequisite to 300 and 400 level courses) (S/NC)

| Art History 403 (History of Photography) | 3 |
| Art Media 433 (History of Film and Modern Art) | 3 |
| Art Media 435 (Cinematography as Art) | 6 |
| Art Media 436 (Video Art) | 6 |
| Art Media 331 (Photography II) or Art Media 341 (Digital Photography) | 4 |
| Art Media 431 (Photography III) or Art Media 441 (Digital Photography II) | 4 |

*Sub-Total: 32*
Studio Electives
Additional hours in studio courses to be completed in the School of Art or our affiliated facility, Arrowmont School of Arts and Crafts. Students may also apply a maximum of 6 hours of approved studio courses from Architecture, Art Education, Broadcasting, Journalism, Computer Science, Human Resource Development, Interior Design, or Theatre. Students electing an additional major in Art Education and licensure to teach must take 13 hours in undergraduate Art Education courses. ................. 15

Sub-Total: 15

General Curriculum
English Composition .............................................. 6
Social Science .......................................................... 6
Natural Science/Mathematics .................................. 12-14
Arts and Sciences Non-Art Electives .................... 6-9

Sub-Total: 32-33
Total: 125-126 hours

B.F.A. IN STUDIO ART WITH ADDITIONAL COURSES IN ART EDUCATION
Students who wish to obtain licensure to teach art in schools K-12 can pursue the B.F.A. degree in studio with additional courses in Art Education. Up to 13 credit hours of Art Education courses may be used as studio electives. Students who wish to pursue licensure to teach should be aware that General Curriculum requirements are different. For details, see Art Education listings in the College of Education section of this catalog.

B.F.A. IN GRAPHIC DESIGN
The Graphic Design major is specifically designed to provide the basic visual education for students who wish to pursue careers in graphic design-related fields such as advertising, art direction, three-dimensional design, publications, or electronic media.

Transfer students are advised that a minimum of 21 hours in studio courses, and 6 upper division hours in art history, must be earned at UT Knoxville. Transfer students who expect to enroll in 300 (junior level) courses must present a portfolio of 10-15 works, the majority of which must be in graphic design.

No grade below “C” in art courses may be applied to the B.F.A. major. A minimum of 42 credit hours, 300 level or above, must be earned prior to graduation.

A minimum of 127 credit hours are required for graduation. Students are advised that courses in Graphic Design must be taken in sequence, and that successful completion of Art 350 (Portfolio Review, S/NC) is prerequisite to all upper division courses.

Students must complete 351 and 356 with a grade of C or better by the end of the second fall semester following successful completion of Portfolio In (school 350). If 351 and 356 are not successfully completed in this time, the student must resubmit a portfolio to regain entrance into the junior program. Resubmission of the portfolio must occur during the scheduled spring portfolio review.

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Course</th>
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<tbody>
<tr>
<td>Art Core</td>
<td></td>
</tr>
<tr>
<td>Art 101, 103, 295 ................................. 7</td>
<td></td>
</tr>
<tr>
<td>Art History 172, 173 ................................ 6</td>
<td></td>
</tr>
<tr>
<td>Art History electives ................................ 9</td>
<td></td>
</tr>
<tr>
<td>Art Drawing 211, 212; Art Painting 213 (or 215); Art Media Arts 231 ...... 12</td>
<td></td>
</tr>
<tr>
<td>Sub-Total: 34</td>
<td></td>
</tr>
</tbody>
</table>

Graphic Design
Art Graphic Design 151 ................................. 3
Art Graphic Design 251, 252, 351, 352, 356, 451, 452, 455 (in sequence) ............. 24
Art Graphic Design 350
Portfolio Review (S/NC) .................................. 0
Art Graphic Design 444 (maximum 6 hours) and/or 456 ........................................ 12

Sub-Total: 39

Design and Professional Electives
Art Graphic Design 254, 256, 259, 354, 395, 405, 453, 454, 459; Art Media Arts 235, 236, 331, 435, 436; Art 491, 492; Advertising 250, 350, 490; Marketing 301 .......................... 12

Sub-Total: 12

Studio Electives
Students must choose a total of 9 hours from a minimum of 2 categories:
(1) Art Printmaking; (2) Art Ceramics; (3) Art Sculpture; or (4) Art Media Arts ............................. 9

Sub-Total: 9

General Curriculum
English Composition .............................................. 6
Non U.S. History/Social Science ................................ 6
Natural Science/Mathematics .................................. 6-8
Arts and Sciences Non-Art Electives .................. 13-15

Sub-Total: 33
Total Semester Hours: 127 hours

B.A. MAJORS IN ART HISTORY
Prerequisite: Art 172 and 173 and 183 or 162 (or their Honors equivalents) ............... 9
Art History courses numbered 300 and above ........... 21
Students are required to take at least one course in four of the following areas: Medieval/Early Renaissance—Art History 425, 431, 441, 451; Renaissance/Baroque—Art History 442, 452, 453; American—Art History 471, 472, 473, 483; 19th/20th Century—Art History 403, 472, 474, 475, 476, Art Media Arts 432, Asian—Art History 411, 415, 419; 9 Art History elective hours or courses in the Departments of Classics, Religious Studies, or School of Architecture in consultation with departmental advisor.
Art 481 (Museology I: Museums, Purpose, and Function ................................................. 3
Art History 376 (Seminar in Art History) ................. 3
Studio courses numbered 200 and above .................. 3

Total: 39 hours

Undergraduate work in Art History is enhanced by knowledge of at least one foreign language and by additional studio art experience. Graduate work normally requires reading knowledge of German, French, and any other language appropriate to an area specialization.

Students anticipating possible careers in the museum or gallery field are advised that elective hours in Art 482, Museology II, should be considered.

MAJOR IN STUDIO
Prerequisite: Art 101, 103, 295 ............................. 7
Art History 162, 172, 173, 183 (any two) and 3 additional hours ................................... 9
Major: Studio courses numbered 200 and above, including a minimum of 15 hours in 300-400 level courses ........................................ 24

Total: 40 hours

In addition to the general B.A. requirements, the following are required for minors in the School of Art:

MINOR IN ART HISTORY
Prerequisite: Art History 172, 173, 183 ....................... 9
(or their Honors equivalents)
Minor: Art History courses numbered 200 and above ....... 15

Total: 24 hours

MINOR IN STUDIO
Prerequisites: Art 101, 103, 295 ............................. 7
Art History 172, 173, 183 (any two) ........................ 6
Studio courses which include a minimum of 8 additional upper-division hours.
Concentration may be Ceramics, Drawing, Media Arts, Painting-Watercolor, Printmaking, Sculpture or a combination from these areas .... 15

Total: 28 hours

PI BETA PHI ARROWMONT SCHOOL OF ARTS AND CRAFTS
Director:
S.J. Blain, M.F.A Wisconsin

Arrowmont, located 40 miles from the UT Knoxville campus, is a visual arts complex which functions as a regional and national cultural center. In 1954, Pi Beta Phi Fraternity established an affiliation with the University of Tennessee, and with the School of Art in 1978. The program currently includes spring and summer one and two week media workshops, special weekend conferences, and community classes. Media offerings include: clay, fiber, fabric, metal, wood, stained glass, leather, papermaking, drawing, painting, graphics and photography. Students may receive audit, undergraduate, or graduate credit for spring and summer classes through the University of Tennessee School of Art. Facilities include well-equipped studios, on campus book and supply store, a large auditorium, art library, and resident accommodations. The Arrowmont Gallery presents changing juried, invitation, theme or media oriented exhibitions. The Gallery and library are open to the public Monday-Saturday, 8:30 a.m. - 5:30 p.m. Arrowmont receives financial support from chapters of the Pi Beta Phi Fraternity, alumnae clubs, and individual members.

Courses are offered periodically at the Pi Beta Phi Arrowmont School of Arts and Crafts, Gatlinburg, Tennessee. Content varies with faculty. Students should check specific course content as printed in the Arrowmont timetable published each spring.

ASIAN STUDIES
See Interdisciplinary Programs.

ASTRONOMY
See Physics and Astronomy.
Audiology and Speech Pathology

Professors:
S. Handel (Interim Head), Ph.D. Johns Hopkins; Peter Alfonso, Ph.D. Illinois; C. W. Asp, Ph.D. Ohio State; P. J. Carney, Ph.D. Iowa; D. M. Lipscomb (Adjunct), Ph.D. Washington; I. Vernalek (Emeritus), Ph.D. Czech Technical (Prague); H. A. Peterson (Emeritus), Ph.D. Illinois; B. Silverstein (Emeritus), Ph.D. Purdue.

Associate Professors:
S. B. Burchfield, Ph.D. Michigan State; C. J. F. Ferrell, M. A. Tennessee; M. D. Hedrick, Ph.D. Vanderbilt; P. Payne, Ph.D. Tennessee; L. Swanson, Ph.D. Purdue; J. Thein, Ph.D. Iowa.

Assistant Professors:
M. L. Erickson, Ph.D. Southern California; P. Fliipsen, Ph.D. Wisconsin; A. Harkrider, Ph.D. Texas; G. McCullough, Ph.D. Vanderbilt; S. Newsom (Adjunct), Tennessee; J. Ruark, Ph.D. University of Pittsburgh.

Research Professor:
A. K. Vernalek (Emerita), Ph.D. Polish Academy of Sciences, Warsaw, Poland.

Research Coordinator:
Polly Alfonso, M.A. Southwest Missouri State.

The Department of Audiology and Speech Pathology offers course work in the scientific study of human communication sciences and disorders. The two undergraduate majors (audiology and speech pathology) are preparatory to graduate work in occupational therapy, physical therapy, or to professional certification in some aspect of speech, language, and hearing disorders. The master’s degree is required for professional certificates and employment positions. Information about the audiology and speech pathology programs may be obtained from the departmental office, 457 South Stadium Hall, and students are strongly encouraged to consult with the undergraduate advisors in the area when possible in their programs. Suggested elective courses for students not majoring in Audiology and Speech Pathology include 300, 302, 303, 305, 306, 320, and 473.

The B.A. Major in Speech Pathology consists of Audiology and Speech Pathology 300, 302, 303, 305, 306, 320, 331, 433, 461, 473, 494; and one course from the following courses: Linguistics 200, 371, 372, 411, 471, or 472.

The B.A. Major in Audiology consists of Audiology and Speech Pathology 300, 302, 303, 305, 306, 320, 331, 433, 461, 473, and 494. Applicants for enrollment in clinical practice must submit an application to the departmental Director of Clinical Services. Requirements for enrollment in practicum courses (434 in Speech Pathology or 445 in Audiology) include a minimum cumulative GPA of 2.7 (or 3.0 in the last 30 hours of enrollments), a minimum of “C” in all courses taken within the department, successful completion of 433, and a minimum GPA of 2.75 within the major.

Students who fail to satisfy the above prerequisites for clinical practicum experience may graduate with a degree from the department, but will not be recommended for graduate study at UTK. Requests for exceptions to this rule may be submitted to the departmental Admissions Committee. Additional requirements for professional certification include courses in biological/physical sciences, mathematics, and at least six semester hours in behavioral and/or social sciences which pertain to the understanding of normal/abnormal behavior. Students majoring in Audiology and Speech Pathology are strongly encouraged to consult with their advisors before selecting elective courses.

Bacteriology

See Microbiology.

Biochemistry and Cellular and Molecular Biology

Professors:
R. M. Bagby, Ph.D. Illinois; J. M. Becker, Ph.D. Cincinnati; J. G. Carlson (Emeritus) (Distinguished Prof.), Ph.D. Pennsylvania; J. E. Churchich, Ph.D. Sheffield; M. A. Handel (Distinguished Prof.), Ph.D. Kansas State; B. Hochman (Emeritus), Ph.D. California; K. W. Jeon, Ph.D. London; J. G. Joshi (Ph.D. Poona; D. C. Joyce (Distinguished Scientist), Ph.D. Oxford (UK); J. R. Kennedy, Ph.D. Iowa; J. W. Koontz, Ph.D. Kentucky; J. N. Liles (Emeritus), Ph.D. Ohio State; J. A. MacCabe, Ph.D. California (Davis); B. D. McKee (Head), Ph.D. Michigan State; K. J. Monty, Ph.D. Rochester; D. M. Roberts, Ph.D. California (Davis); L. E. Roth (Emeritus), Ph.D. Chicago; T. P. Salo (Emeritus), Ph.D. Michigan; C. A. Shivers, Ph.D. Michigan State; H. G. Welch (Emeritus), Ph.D. Florida; G. L. Whitson (Emeritus), Ph.D. Iowa; W. D. Wicks, Ph.D. Harvard.

Associate Professors:
B. Bruce, Ph.D. California (Berkeley); R. Ganguly, Ph.D. Nebraska; J. C. Hall, Ph.D. Illinois; E. E. Howell, Ph.D. Lehigh; C. B. Peterson, Ph.D. LSU; R. A. Prosser, Ph.D. Illinois; E. H. Serpersu, Ph.D. Dalhousie.

Assistant Professors:
C. D. Asp, Ph.D. London; R. H. Feinberg (Emeritus), Ph.D. California (Berkeley); J. Park, Ph.D. Texas.

Students wishing to emphasize study in this area elect to major in Biology with a concentration in Biochemistry and Cellular and Molecular Biology. See the description of the Biology Major under “Division of Biology” for requirements.

Division of Biology

Director:
John Koontz, Ph.D. Biochemistry and Cellulary and Molecular Biology.

Basic Faculty:

The Biological Sciences major offers four areas of concentration: Biochemistry and Cellular and Molecular Biology; Ecology and Evolutionary Biology; Microbiology; and Plant Biology. (See section C. below for information on honors options.) The name of the major will be Biological Sciences: [Concentration Name]. The requirements are as follows:

A. Prerequisites to All Concentrations
1. Chemistry 120-130
2. Physics 221-222
3. Math 141-142 or 151-152
4. Biology 130 or Botany 110-120
5. Biology 140-240-250
College of Arts and Sciences  69

B. Progression Requirement
A cumulative GPA of at least 2.5 in prerequisite science and math courses is required both to declare and to continue as a Biological Sciences major. Students wishing to declare a major in Biological Sciences will be assigned a faculty advisor in one of the biological sciences departments in consultation with the student. Declaration of a Biological Sciences major should occur as soon as the student decides on this course of study but not later than three semesters before the expected graduation date. This is necessary in order to ensure that requirements can be met in a timely manner as not all courses are taught every year.

C. Honors Major
An honors option is presently available in Biochemistry and Cellular and Molecular Biology; Ecology and Evolutionary Biology; Microbiology; and Plant Biology concentration areas. Requirements for honors options are listed with the appropriate concentration areas.

D. Concentration Area Requirements

Biochemistry and Cellular and Molecular Biology (BCMB) Additional prerequisite: Computer Science 100. The concentration consists of Chemistry 350-360-369, BCMB 401-402, and at least 18 additional credit hours selected from BCMB courses numbered 300 or above (except BCMB 310 and 410), or from the following courses in other departments: Microbiology 310-319, 410-411, 420-429, 430-440; Botany 321, 404; EEB 350, 360, 460. At least two of the 18 credit hours must be selected from the following laboratory courses: BCMB 403, 416, 419, 429 and 452, and Biology 401. At least three of the 18 credit hours must be selected from the following physiology courses: BCMB 440, Botany 321, and Microbiology 310. No more than 9 of the 18 credit hours may be in non-BCMB courses.

An honors option is offered to students with a cumulative GPA in Biological Sciences prerequisite courses of 3.5 or above and who have completed Biology 130-140-240-250. The honors option also requires a substantive research project carried out under the supervision of a BCMB faculty member and a thesis describing the results of that project. The thesis must be approved by the faculty supervisor.

Ecology and Evolutionary Biology
The concentration consists of:
1. Chemistry 350-360-369 or 350, 310-319 or Chemistry 310-319 and BCMB 310.
2. Quantitative Requirement: One course from (note math prerequisites):
   - Math 231 Differential Equations (3) (Prereq. 141-142)
   - Math 251 Matrix Algebra I (3) (Prereq. 141-142)
   - Math 405 Models in Biology (3) (Prereq. 141-142 or 151-152)

3. Upper Division courses: A total of 24 additional hours is required at the 300 level or above to include at least 15 hours from EEB, and at least one course from each of the following four categories:

   Evolution
   EEB 460 Evolution
   BOT 403 Plant Evolution

   Ecology
   EEB 446 Oceanography
   EEB 470 Aquatic Ecology
   EEB 480 Entomology
   EEB 431 Plant Ecology
   MICRO 470 Microbial Ecology

   Organismal Biology
   EEB 350 Vertebrate Biology
   EEB 360 Invertebrate Biology
   EEB 450 Comparative Animal Behavior
   EEB 474 Ichthyology
   EEB 461 Special Topics in Organismal Biology
   BOT 310 Plant Morphology
   BOT 330 Field Botany
   MICRO 310/319 Introduction to Microbiology/Introductory Lab

   Physiology
   BOT 321 Introduction to Plant Physiology
   BCMB 440 General Physiology
   BCMB 415 Neurobiology
   MICRO 310 General Microbiology

4. The remaining hours for the EEB concentration can include any of the remaining EEB courses on these lists, other Upper Division EEB courses, or appropriate Upper Division courses offered by the following departments: Anthropology, Botany, Forestry, Wildlife and Fisheries; Geography; Geology; Microbiology; Plant and Soil Sciences. A list of approved appropriate courses may be obtained from the office of either the Division of Biology or EEB. Other courses, related to the student’s determined interests, may be approved by petition to the department and the Division. Courses applied to the major must include at least 4 hours at the 400-level and one laboratory course.

Requirements for the honors option are as follows: (a) fulfill all requirements for the Biological Sciences: EEB major; (b) maintain a GPA of 3.5 in all the 300-level and above courses from the concentration and an overall GPA of 3.2; (c) pass a minimum of 4 hours of EEB 400, Undergraduate Research, during the junior and senior years; (d) pass EEB 401, Senior Thesis, or (e) pass EEB 490, Undergraduate Seminar.

Microbiology
The microbiology concentration consists of Chemistry 350-360-369, BCMB 410, Microbiology 310-319, 320-329, and 12 additional hours of 400-level Microbiology courses.

An honors option is offered to selected students who have completed the required 300-level Microbiology courses with a minimum grade point average of 3.5 in Microbiology courses and 3.2 for all courses. In addition to these 300-level courses, an honors major requires successful completion of 15 additional hours of 400-level Microbiology courses, including 401 and 402.

Plant Biology
The Plant Biology concentration may be obtained by completing the Biological Sciences prerequisites and Chemistry courses in order: 350-360-369 or 350, 310-319 or 310-319, BCMB 310, and the following Botany courses:

   Botany 310 (4)
   Botany 321 (4)
   Botany 330 (4)
   Botany 403, 404 or 431 (3) or (4)
   Botany 400, 441, or 442 (2)

plus 9 additional hours of other Upper Division courses offered by Botany or other life science departments (except Botany 305, 306, or 309). A list of approved courses from other life science departments is available in the Division of Biology office.

Requirements for honors option are as follows: a) Maintain a GPA of 3.5 in all the 300-level and above courses from the concentration and an overall GPA of 3.2; b) Pass a minimum of 4 hours of Botany 441-442 (undergraduate research) during the junior and senior year; and c) Write a senior thesis that is acceptable to the student’s committee. Students interested in pursuing an honors option should contact the Botany office for details.

A minor includes the following prerequisites and requirements: Prerequisites are Botany 110-120 or Biology 130-140; and Chemistry 120-130. Requirements are Biology 240 and 250; and at least 8 hours chosen from 300- and 400-level courses in Biochemistry, Cellular and Molecular Biology; Botany; Ecology and Evolutionary Biology; and Microbiology. In meeting the upper-division minimum requirement, no more than 6 hours may be credited from any one biological science department, and no more than 3 hours of undergraduate research may be credited.

BOTANY

Professors:
- E. E. Schilling (Head), Ph.D. Indiana; J. D. Caponetti (Emeritus), Ph.D. Harvard; E. E. Clebsch (Emeritus), Ph.D. Duke; H. R. DeSelm (Retired), Ph.D. Ohio State; A. M. Evans (Emeritus), Ph.D. Michigan; W. R. Herndon (Emeritus, Alumni Distinguished Service Professor), Ph.D. Vanderbilt; L. G. Hickok, Ph.D. Massachusetts; R. W. Holton (Emeritus), Ph.D., Michigan; K. W. Hughes, Ph.D. Utah; B. C. Mullin, Ph.D. North Carolina State; R. H. Petersen (Distinguished Professor), Ph.D. Columbia; O. J. Schwarz, Ph.D. North Carolina State; P. L. Walne (Emeritus), Ph.D. Texas.

Associate Professors:
- C. C. Amundsen, Ph.D. Colorado; A. S. Heilman (Emeritus), Ph.D. Cornell State; M. Pigliucci, Ph.D. Connecticut; D. K. Smith, Ph.D. Tennessee; B. E. Wofford (Curator of Herbarium), Ph.D. Tennessee.

Assistant Professors:
- M. B. Cruzan, Ph.D. SUNY (Stony Brook); A. von Arnim, Ph.D. East Anglia, United Kingdom; R. L. Small, Ph.D. Iowa State.

Lecturer:

Students wishing to emphasize study in this area elect to major in Biology with a concentration in Plant Biology. See the description of the Biology Major under “Division of Biology” for requirements.

CHEMISTRY

Professors:
- M. J. Sepaniak (Head), Ph.D. Iowa State;
- J. L. Adcock, Ph.D. Texas; S. D. Alexandratos, Ph.D. California (Berkeley); D. C. Baker, Ph.D. Ohio State; J. E. Bartmess, Ph.D. Northwestern; J. E. Bloor (Emeritus), Ph.D. Manchester (England); W. E. Bull (Emeritus), Ph.D. Illinois;
CURRICULUM REQUIREMENTS

Freshman
Chemistry 120-130 or (preferably) 128-138 ................................. 8
Mathematics 141-142 ....................................................... 8
English Composition ......................................................... 6
Foreign Language (intermediate level sequence) ......................... 6-10
Distribution ....................................................................... 3

Sophomore
Chemistry 240 ................................................................. 2
Chemistry 230 .................................................................. 2
Chemistry 350-360 ............................................................ 6
Chemistry 389 .................................................................. 6
Mathematics 241 and either 231 or 251 ..................................... 7
Physics 135-136 or 137-138 .................................................. 8-10
Distribution ....................................................................... 3

Junior
Chemistry 310-320 ............................................................ 6
Chemistry 319-329 ............................................................ 6
Chemistry 473-483 ............................................................ 6
Chemistry 479-489 ............................................................ 4
Electives ........................................................................... 9

Senior
Chemistry 430 .................................................................... 3
Chemistry 499 .................................................................... 1
Chemistry 400 .................................................................... 3
BCMB 410 or 401 ............................................................. 3-4
Electives ........................................................................... 9

Total: 125-132 hours

1 Preferably chosen from German, French, Russian or Japanese; the College of Arts and Sciences requires that a student demonstrate intermediate-level competence in whatever foreign language is chosen.
2 The distribution requirements of the College of Arts and Sciences are satisfied by taking: Non-U. S. History (6 hours), Social Science (6 hours), Humanities (6 hours), and Upper Level Distribution (3 hours in either U.S. Studies or Foreign Studies and 3 hours Capstone Experience). The number of credit hours shown in each year of the curriculum are merely intended as a guideline.
3 It is recommended that a portion of these elective hours be applied to advanced courses in biochemistry and cellular and molecular biology, mathematics, physics, or chemical, metallurgical, and polymer engineering.
4 To be chosen from Chemistry 400, 401, 408, 450, and 490.

B.S. Degree and Chemistry Major
For students wishing to major in chemistry but desiring a more flexible course of study than the B.S. in Chemistry, there is the regular B.S. degree. Both programs are designed for students with different career goals, the following paragraphs should be carefully considered before selecting courses. A student who decides to major in chemistry should ask the Arts and Sciences Admissions Director for assignment of a faculty advisor in the Department of Chemistry. For further information, contact the Head of the Department of Chemistry, 552 Buehler Hall. For information concerning the Cooperative Program in chemistry, see description of the B.S. program below.

Placement in General Chemistry Sequences
The sequences which meet all of the requirements of a year of General Chemistry and which serve as prerequisites for upper-division courses are 120-130 and 128-138; chemistry majors are strongly urged to take the latter sequence. Courses 100 and 110 emphasize organic and biochemistry, and may not be used as prerequisite for other chemistry courses. Chemistry 150 and 160 are designed to increase the chemistry literacy and consumer knowledge of students and may not be used as prerequisites for any other chemistry course.

It is possible to move from one sequence to another if permission for substitution is obtained in advance. For example, a student who finds a need to complete the 120-130 series after having completed 100 may substitute 100 for 120 with approval of the Department of Chemistry and may then take 130. Credit may be received for only one of the courses 120 or 128.

In any chemistry course above the freshman level which has Chemistry 130 as a prerequisite, 110 may be used as a prerequisite with approval of the Department of Chemistry.

Chemistry 128-138 is an honors course designed for the student who has already made considerable progress in science. Class size is limited to promote faculty-student interaction. Selection is based on ACT scores, high school chemistry grade, and, if neces-
The Latin Minor consists of 18 hours including 12 hours of Latin language courses numbered above 200, and 6 hours chosen from Classics 221-222, 331, 334.

Placement Examination

Students who transfer to UT from other colleges and students who enter with high school units in Latin should register for the courses in which they would normally be placed on the basis of such credits. During freshman orientation a placement test will be given, and students will be advised if a change in registration is indicated by the results.

Proficiency Examinations

Students who have acquired a knowledge of Latin through private study or tutoring should request from the Department a proficiency test. A student who earns a grade of B or better in this examination is eligible for credit toward graduation. A student who omits any course in a sequence may receive credit for it by passing the appropriate proficiency examination.

COMPARATIVE LITERATURE

See Interdisciplinary Programs.

COMPUTER SCIENCE

See Interdisciplinary Programs.

COMPARATIVE LITERATURE

See Interdisciplinary Programs.
Associate Professors: Amundsens, C.C., Ph.D. Colorado; J.A. Drake, Ph.D. Purdue; D.J. Fox, Ph.D. Johns Hopkins; S. Gavriletes, Ph.D. Moscow State; M. Pigliucci, Ph.D. Connecticut.

Assistant Professors: M.B.C. Cruzan, Ph.D. SUNY (Stony Brook); J. Weltzin, Ph.D. Arizona.

Students wishing to emphasize study in this area elect to major in Biology with a concentration in Ecology and Evolutionary Biology. See the description of the Biology Major under “Division of Biology” for requirements.

ECONOMICS

See faculty listing the College of Business Administration.

The program in economics combines a broad liberal education with the rigorous study of current issues of the day such as employment, inflation, poverty, wealth, and the benefits and costs of economic growth.

Courses offered in the Department of Economics of the College of business Administration provide opportunity for a major or minor in economics in the College of Arts and Sciences.

Requirements for a B.A. Major in Economics consist of (1) Economics 201 or equivalent honors courses as a prerequisite to the major and (2) Economics 311, 313, and 499 plus 18 additional hours in upper division economics courses. Majors are encouraged to satisfy List B of the Natural Science Distribution Requirement with one of the mathematics packages Mathematics 115-123, 123-125, or 141-142. Students planning graduate work in Economics should elect Mathematics 141-142.

A minor consists of (1) Economics 201; and (2) 12 additional hours at the upper-division level. Minors are encouraged to include Economics 311 and 313.

Honors
The Department of Economics offers an honors B.A. degree. Candidates for the honors degree must complete 311, 313, 499, and 18 additional upper division hours, including registering for three hours of 493 Independent Study, which serves as the writing of an honors thesis. Students interested in the honors degree should contact the department for details.

In addition, certification to teach economics in secondary schools is available. Students with such interest should consult the Certification Clerk, Room 212, Claxton Education Building as early in their program as possible to determine the appropriate requirements.

Rhetoric and Writing

(1) a three-course package in rhetoric and writing; (2) one other course in rhetoric or writing; (3) four courses in literature, two of which must be before 1900, and at least one of those before 1800; (4) one course in language, theory, cultural, ethnic, or gender studies; (5) one course from the department’s offerings, including criticism, film, folklorie, language, literature, rhetoric, and writing.

Technical Communications

(1) a three-course package in technical communications; (2) one other course in technical communication; (3) four courses in literature, two of which must be before 1900; (4) one course in language, theory, cultural, ethnic, or gender studies; (5) one course from any of the department’s offerings, including criticism, film, folklorie, language, literature, rhetoric, and writing.

See departmental brochure, Undergraduate Study in English, for a list of courses that satisfy the distribution, package, and sequence requirements for the various areas.

Individualized Program

The Director of Undergraduate Studies is empowered to approve individualized programs developed by students in consultation with their academic advisors. These programs should be designed to achieve academically sound objectives that are not addressed by the above requirements.

Honors

For students who qualify, the English Department offers specially designed courses at the freshman, sophomore, junior and senior levels. The freshman and sophomore honors courses are enriched versions of regular sections in composition, and in American and British literatures. To be given “Honors” in English on the transcript, a student must have achieved a 3.0 or better GPA, a 3.5 or better grade point in English courses, and grades of A or B in English 398 and 498.

An English Minor consists of at least 15 semester hours of English courses at the 300-400 level.

An English Minor with Technical Communication Emphasis consists of at least 15 semester hours of English courses chosen from the following: (1) at least three courses in technical communication chosen from 355, 360, 371, 372, 455, 460, 462, 466, 470, 471, 472, 484, 485, 495, 496; and (2) one other 300 or 400 level English course.

Certification for Teaching

Students planning to teach English in public schools should consult the Certification Clerk, Room 212, Claxton Education Building.

Graduate Study

Students wishing to enter a graduate program in English should address inquiries to the Dean of the Graduate School. To be accepted for graduate study in English, the student should in general have had at least eighteen semester hours in English courses above the freshman and sophomore level with a better than B average and a B average in all other undergraduate courses. Students who lack eighteen semester hours of undergraduate English may be required to take and pass with a grade of B or better a designated number of...
undergraduate courses at the University of Tennessee before being admitted to graduate study. Admission is also dependent on satisfactory GRE scores. Consult the Graduate Catalog for specific requirements.

### FRENCH
See Modern Foreign Languages and Literatures.

### GEOGRAPHY

**Professors:**
- C.S. Alston, Ph.D. Georgia; T.L. Bell, Ph.D. Iowa; R.A. Forrest, Ph.D. Rutgers; E.H. Hammond (Emeritus), Ph.D. California (Berkeley); C.P. Harden, Ph.D. Colorado (Boulder); S.P. Horn, Ph.D. California (Berkeley); S.R. Jumper, Ph.D. Tennessee; R.G. Long (Emeritus), Ph.D. Northwestern; C.W. Minkel (Head, Urban and Regional Planning), Ph.D. Syracuse; L.M. Pulapirsen, Ph.D. Southern Illinois; B.A. Johnson (Head), Ph.D. Northwestern; J.B. Sheider, Ph.D. Louisiana State; T.H. Schmidmeier (Emeritus), Ph.D. Wisconsin; T.J. Wilbanks (Adjunct), Ph.D. Syracuse.

**Associate Professors:**
- T.J. Blasing (Adjunct), Ph.D. Wisconsin; L.W. Brinkman (Emeritus), Jr., Ph.D. Wisconsin; M.A. Brown (Adjunct), Ph.D. Ohio State; Cheng Liu (Adjunct), Ph.D. Tennessee; Kenneth Orvis, Ph.D. California (Berkeley); S.L. Shaw, Ph.D. Ohio State.

**Assistant Professors:**
- Henri Grissino-Mayer, Ph.D. Arizona; Glen Harrison (Adjunct), Ph.D. Tennessee; R. McKeown (Adjunct), Ph.D. Oregon.

**B.A. Major** Geography 131 and 132 are prerequisite to a major in Geography, which consists of Geography 310, 320, 340, 411 or 415, 499, and 12 additional credits selected from Geography courses at the 300 and 400 levels. At least one course must be chosen from among Geography 361, 363, 365, 371, 372, 373, 375, and 378 and at least 9 hours must be at the 400 level. No more than 3 hours of Geography 490 may be counted toward the major.

Students who enter the major with more than 60 hours of credit, and who have completed a laboratory science sequence other than Geography, may petition the department to substitute certain upper division physical geography courses for 131 and/or 132.

**Minor** The Minor in Geography consists of 15 semester hours of Geography courses at the 300 level and above. Geography 490, 491, 492, 493 may not be counted toward the minor without departmental permission.

**Honors** Students who have an overall GPA of 3.2 may elect to participate in an enrichment program that involves the successful completion of Geography 497 and 498. Honors: Senior Thesis is under the direction of a faculty mentor. An approved written copy of the thesis must be submitted to the Department of Geography. Interested students should consult their advisor for details about participation.

### GEOLOGICAL SCIENCES

**Professors:**
- W.M. Dunne (Head), Ph.D. Bristol; T.W. Broadhead, Ph.D. Iowa; D.W. Byerly (Emeritus), Ph.D. Tennessee; S.G. Driese, Ph.D. Wisconsin; R.D. Hatcher (UT Knoxville/ORNLE Distinguished Scientist), Ph.D. Tennessee; O.C. Kopp (Emeritus), Ph.D. Columbia; T.C. Labotka, Ph.D. Caltech; H.Y. McSween (Distinguished Professor of Science), Ph.D. Harvard; K.C. Misra, Ph.D. Western Ontario; L.A. Taylor, Ph.D. Lehigh; K.R. Walker, Ph.D. Yale.

**Associate Professors:**
- G. M. Clark, Ph.D. Pennsylvania State; P.A. Delcourt, Ph.D. Minnesota; L.D. McKay, Ph.D. Waterloo; M. L. McKinney, Ph.D. Yale; C.I. Mora (Carden Professor), Ph.D. Wisconsin; R.T. Williams, Ph.D. V.P.I.

**Assistant Professors:**
- L.C. Kah, Ph.D. Harvard; Maria Uhle, Ph.D. Virginia.

**Prerequisites to a B.S. Major** are Geology 101-102; Chemistry 120-130; Mathematics 141-142 or 147-148; plus one two-semester sequence and one additional course from Physics 135-136 and Biology 130-140.

**Major Requirements** Geology 310, 320, 330, 340, 370, and 440 (22 hours); plus 12 additional hours of geology courses at the 400 level. Geology majors must attend the UT field camp or an approved equivalent elsewhere. (For equivalent camps, prior approval by the Department on an individual-case basis is required.)

**Minor Requirement** Consists of Prerequisites: Geology 101 and 102 or 103. Geology courses: at least 16 hours of courses numbered 300 or higher, excluding 303 and 401. A maximum of 3 hours of 495 may be counted toward the minor.

**Concentration in Engineering Geology** Students wishing to prepare for a career in environmental/engineering geology, where communication with engineers is important, may elect this multidisciplinary concentration. Electives in the major and some of the courses necessary to satisfy the Arts and Sciences College Distribution requirements are specified. Required coursework includes: Geology 310, 320, 330, 340, 370, 440, 455, 460, 470 and 485; Mathematics 141, 142, (or equivalent honors courses) and 231 (or substitution of Geology 401 for Math 231); Physics 231; Basic Engineering 101, 121, and 131; Civil Engineering 330, 435 and any one of the following: 390, 440, 530, 532 or Environmental Engineering 535; Plant and Soil Science 210; English 461; and Speech 240. Courses from the College’s approved lists for satisfying the Social Sciences, Humanities and Upper Level Distribution requirements will be recommended and approved by the student's advisor.

**Honors** Students who have completed five upper division courses in the major and have an overall GPA of 3.0 may elect to participate in an enrichment program involving research in the geological sciences. Research, in the form of an approved senior thesis, will be accomplished by successful completion of 3 semester hours beyond the normal requirements of Geology 491, 492, or 493 under the direction of a faculty member. The results of the research must be formally presented to the Department’s Seminar (Geology 595), the Tennessee Academy of Science, or other acceptable professional organization. Also, an approved written copy of the thesis must be submitted to the Department of Geological Sciences. A GPA of 3.0 must be maintained throughout matriculation. Interested students should consult their advisor for details about participation.

### GERMAN
See Modern Foreign Languages and Literatures.

### GREEK
See Classical Studies.

### HEBREW
See Religious Studies.

### HISTORY

**Professors:**
- W.B. Wheeler (Head), Ph.D. Virginia; P.H. Bergeron, Ph.D. Vanderbilt; E.V. Chmielowski (Emeritus), Ph.D. Harvard; W. Curri, Ph.D. Texas; W.W. Farris, Ph.D. Harvard; J.R. Finger (Emeritus), Ph.D. Washington; A.G. Haas, Ph.D. Chicago; Y.P. Hao (Lindsay Young Professor), Ph.D. Harvard; R.W. Haskins (Emeritus), Ph.D. California (Berkeley); M.M. Klein (Alumni Distinguished Service Professor, Lindsay Young Professor and Emeritus), Ph.D. Columbia; A. Mayhew (Interim Vice Provost), Ph.D. Texas; H. Moser, Ph.D. Wisconsin; R.J. Norrell (Bernadette Schmitt Professor), Ph.D. Virginia; L.A. Ratner (Emeritus), Ph.D. Cornell; J.G. Utley (Emeritus), Ph.D. Illinois.

**Associate Professors:**
- S.V. Ash, Ph.D. Tennesseee; S.D. Becker (Emeritus), Ph.D. Case Western Reserve; J.D. Bing (Emeritus), Ph.D. Indiana; R. J. Bast, Ph.D. Arizona; J. Bohstedt, Ph.D. Harvard; O. Bradley, Ph.D. P. Brummett, Ph.D. Chicago; T.E. Burman, Ph.D. Toronto; T.A. Dion, Ph.D. Wisconsin; C. Higgs, Ph.D. Yale; P.J. Pincney, Ph.D. Vanderbilt.

**Assistant Professors:**
- J. Appier, Ph.D. California (Riverside); K. Brosnan, Ph.D. Chicago; J.P. Dessel, Ph.D. Arizona; L. Glover, Ph.D. Kentucky; V.G. Lulevicius, Ph.D. Pennsylvania; G.K. Piehler, Ph.D. Rutgers; J. Sahadeo, Ph.D. Illinois.

The department’s program is designed to provide students with a knowledge of their cultural traditions and of their world, past and present, and thus to prepare them for the responsibilities of citizenship in today’s complex society. Students take history courses to develop their skills in thinking, reading, writing and speaking; to understand the links between present, and thus to prepare them for the search for personal identity.

**B.A. Major** Majors in history should prepare their programs in consultation with a department faculty advisor. A student may not declare a history major until he/she has completed both semesters with a grade of C+ or better in each course of a survey chosen from the following: 221-222, 227-228, 241-242, 247-248, 261-262; or any two one semester courses from any of these sequences. AP (with a score of 4
or 5) or transfer credit is acceptable to fulfill this requirement. History 241-242 (or honors equivalent) or 261-262 are prerequisites to a major which consists of 30 hours, including (1) 6 hours of History 221-222 (or the honors equivalent); and (2) 24 upper-division hours, including: (a) one course in European history; (b) one course in United States history; (c) two courses in the history of Latin America, Asia, or Africa, at least one of which must be in Asia or Africa; and (d) one additional course dealing predominantly with a period prior to 1750.

History 241-242 (or honors equivalents) are prerequisites to a minor which consists of 15 hours of courses numbered 200 or above, including at least: (1) 6 hours in United States history; and (2) 9 upper-division hours.

History for Non-Majors The department welcomes non-majors in its courses. Few history courses have formal prerequisites.

Honors Program The Department of History offers honors sections of the Western Civilization and United States history survey courses. Some entering freshmen are invited to participate; other interested students may apply. These survey courses are open to non-majors. A grade of C+ or less in any part of the freshman-sophomore honors sequence will render the student ineligible for further honors work in history. An honors major requires successful completion of 307 and a senior thesis (407-408) with a grade of B or above. Altogether the honors major consists of 33 hours, including 30 hours as outlined in the B.A. Major above, plus 307. All juniors who are declared history majors with an overall GPA of at least 3.0 are invited to join the Junior-Senior Honors Program. Students interested in honors work at any level should consult the department’s honors coordinator.

INTERDISCIPLINARY PROGRAMS

Director: John Zomchick
College of Arts and Sciences

In keeping with the philosophy that integration of knowledge is as important as proficiency in a given field, the College of Arts and Sciences has combined the resources of several departments to offer a series of interdisciplinary majors and minors. These programs are as follows: African and African-American Studies, American Studies, Ancient Mediterranean Civilizations, Asian Studies, Cinema Studies, Comparative Literature, Environmental Studies, Judaic Studies, Latin American Studies, Linguistics, Medieval Studies, Urban Studies, and Women’s Studies. See individual program descriptions below for the major and/or minor requirements.

AFRICAN AND AFRICAN-AMERICAN STUDIES

Chair: John O. Hodges, Religious Studies.
Associate Professor: Asafa Jalata, Sociology, Ph.D. State University of New York (Binghamton).

Major Concentration African-American Studies 201-202 are required in the concentration which consists of 24 hours from the African-American Studies curriculum. At least 15 hours must represent upper division credit. Majors are required to take AAAS 431, preferably in their senior year. A maximum of 6 hours in AAAS 492 and 493 combined can be applied toward the AAAS major. In planning their program majors must include courses from at least 2 other departments which crosslist courses with African- and African-American Studies in addition to the AAAS core course offerings.

Minor African-American Studies 201-202 are required in the minor which consists of 15 hours at least 9 of which must be upper division credits. A maximum of 3 hours in AAAS 492 and 493 combined can be applied to a minor. In planning their programs minors must include courses from at least 2 other departments which crosslist courses with African and African-American Studies in addition to the AAAS core course offerings.

AMERICAN STUDIES

Chair: Benita J. Howell, Anthropology.

Major Concentration English 231 and either 232 or 233 are prerequisite to a major concentration in American Studies which consists of 27 upper-division semester hours including American Studies 310; at least two approved American History courses; and six hours of approved courses chosen from the following disciplines: anthropology, economics, political science, or sociology. Courses in the major will be chosen in consultation with an American Studies advisor, from a list approved by the program, in such a way that at least 3 courses help the student achieve a focus within the field. One course in the student’s curriculum must specifically focus upon one or more American ethnic minority cultures. An additional 3-6 hours of American Studies 493 (Independent Study) are recommended for majors in their senior year. A list of approved elective courses is published annually.

All majors and prospective majors should contact the Chair of the program.

The American Studies Minor consists of at least 15 hours of coursework chosen from the program’s list of electives, including American Studies 310, American Studies 410, and nine additional hours from at least two different disciplines.

ASIAN STUDIES

Chairs: Rosalind Gwynne, Religious Studies; Yang Zhong, Political Science.

The Asian Studies Major Concentration consists of 26 credit hours from the upper-division courses of Asian Studies and approved departmental offerings. Twelve of the hours must be taken from courses listed within one of the four geographical-cultural areas (Islamic World; South Asia; China; Japan), and 6 of those 12 hours must come from Subdivision A and 6 from Subdivision B. Subdivision A includes Art, Literature, Music, Philosophy, and Religious Studies; Subdivision B includes Anthropology, Economics, Geography, History, Political Science, and Sociology.

Six of the 26 hours must be taken from courses listed for other geographical-cultural areas. Prerequisite to the concentration is Asian Studies 101-102. Corequisite to the major concentration is competence in a major Asian language of the chosen geographical-cultural area. Competence is defined as the successful completion of the 200-level sequence of that language, or by demonstration of equivalent mastery.

The Asian Studies Minor consists of Asian Studies 101-102 and 15 credit hours at the 200 level and above. Twelve credit hours must be taken from courses within one of the four geographical-cultural areas. Six credit hours must come from Subdivision A and 6 from Subdivision B. Three hours must be taken from courses in another geographical-cultural area.

CINEMA STUDIES

Chair: Christine Holmlund, Modern Foreign Languages and Literatures.

The Cinema Studies Minor consists of 15 hours, including Cinema Studies 281; 3 hours chosen from Cinema Studies 235, 236, or Broadcasting 330; and 9 additional hours from any courses in Cinema Studies, courses cross-listed with Cinema Studies, or from the following list of approved courses: Broadcasting 275 Introduction to Broadcasting (3); Broadcasting 330 Audio/Video Production (3); Broadcasting 430 Electronic Field Production (3). It is strongly recommended that Cinema Studies 281 Introduction to Film Studies be taken before any other courses in the minor.

For further information about the minor, consult the chairperson of the Cinema Studies Program. Courses related to Cinema Studies and not listed above may be applied to the minor with the approval of the chair of the program.

COMPARATIVE LITERATURE

Chair: Carolyn R. Hodges, Modern Foreign Languages and Literatures.

A Major Concentration in Comparative Literature consists of 27 hours including Comparative Literature 202 and 401-402, and 9 hours of literature in a foreign language in courses numbered 300 or above. The remaining 9 hours should include literature courses, either in English or in a foreign language, numbered 300 or above, from at least two of the following departments: Classics, English, Modern Foreign Languages and Literature, and Religious Studies. Certain courses in Philosophy, Theatre, and Interdisciplinary Programs may be substituted with the approval of the chairperson of the Comparative Literature Program. Students concentrating in comparative literature are strongly encouraged to acquire a working knowledge of a second foreign language, especially if they hope to pursue comparative literature on the graduate level.

A Minor in Comparative Literature consists of 18 hours including Comparative Literature 202 and either Comparative Literature 401 or 402, 6 hours of literature in a foreign language in courses numbered 300 or above, and 6 hours of literature courses numbered 300 or above in a different department. These 6 hours may be either in English or in a foreign language and should be chosen from the following departments: English, Modern Foreign Languages and Literatures, and Religious
Studies. Certain courses in Philosophy, Theatre, and Interdisciplinary Programs may be substituted with the approval of the chairperson of the Comparative Literature Program. Minors in comparative literature are strongly encouraged to continue study of a foreign language beyond the minimum requirement.

ENVIRONMENTAL STUDIES
Chair: Michael McKinney, Geological Sciences.

The Major Concentration in Environmental Studies provides sound scientific, socio-economic, and philosophical background for understanding the earth’s environment with an opportunity to minor in one of the many environmentally related curricula offered by the various colleges within the University.

Prerequisites to a B.A. Major in Environmental Studies are: Biology 130-140; or Botany 110-120; Chemistry 120-130; Geology 101; Geography 131; Mathematics 123-125 or 141-142 or 151-152; and Economics 201.

The Major Concentration consists of a core and a specialty. The core includes: Biology 250; Sociology 360; Philosophy 346; Economics 462; Agriculture 333; History 373; Geography 436; or Plant and Soil Science 432. The specialty is satisfied by meeting the course requirements listed for a minor in any one of the environmentally related curricula offered by the various colleges of the University with a grade of "C" or better. The specialty will require 15-18 hours as specified by the chosen department. Curricula that would be suited for an Environmental Studies major include, but are not limited to: Plant and Soil Sciences, Wildlife and Fisheries Science, Forestry, Chemistry, Geography, Geology, Biology, Sociology, Economics, Political Science, Communications, or Business Administration.

JUDAIC STUDIES
Chair: Gilya Gerda Schmidt, Religious Studies

The Major Concentration in Judaic Studies offers a course of study that treats Judaism as a historically evolving and culturally specific enterprise. The concentration explores Jewish culture, religion and heritage through literature, philosophy and history. A multi-disciplinary combination of courses permits critical reflection about topics and issues in a world civilization and cross-cultural context.

A major concentration consists of at least 27 hours at the 300 level or above, distributed as follows: (a) Religious Studies 381, History 370, and 12 hours from Religious Studies 311, 312, 320, 385, 386, 405; (b) 9 hours selected from Art History 425, 431, 475; German 350; History 369, 395; Philosophy 322.

Students should contact the program advisor early in planning a Judaic Studies major. The Judaic Studies Minor consists of Religious Studies 381, History 370, and 9 hours selected from the Judaic Studies Major Concentration. It is recommended that students minoring in Judaic Studies discuss their program with a member of the Judaic Studies Committee.

LANGUAGE AND WORLD BUSINESS
For a complete list of requirements, see Modern Foreign Languages and Literatures.

LATIN-AMERICAN STUDIES
Chair: Todd Diacon, History.

The Major Concentration consists of two optional tracks: (1) General Studies or (2) Brazilian Studies. The major program requires 27 hours, of which 12 are in core courses, including Latin American Studies 401 and 402, three hours of either History 360 or 361, and three hours of an approved Spanish or Portuguese language/culture course at either the 300 or 400 level. In addition to the core courses, the General Studies track will consist of fifteen hours selected from courses offered by three different participating departments. The Brazilian Studies track will consist of fifteen hours beyond the core courses including a minimum of six hours in UTK’s Summer Study Program in Fortaleza, Brazil (or other programs in Brazil approved by the director of Latin American Studies) and up to nine hours of approved courses that focus on Brazil. Majors are strongly urged to take as a prerequisite Latin American Studies 251-252.

The minor consists of 18 hours including Latin American Studies 251-252, three hours of an approved Spanish or Portuguese literature/culture course at either the 300 or 400 level, and nine additional hours selected from courses offered by three different participating departments.

A practical working knowledge of Spanish or Portuguese is a prerequisite for majors and minors. All students are strongly encouraged to earn credit hours through UT’s Latin American Studies Abroad Program at the Federal University of Ceara in Fortaleza, Brazil. Other foreign study programs are also available for both Spanish and Spanish-speaking Latin America.

For further information, consult the Chairperson of the Latin American Studies Program.

LEGAL STUDIES
Chair: James A. Black, Sociology.

The major in Legal Studies places the study of law within the context of a liberal arts education. This major offers a course of study that treats law as a historically evolving and culturally specific enterprise. The concentration seeks to attract students interested in exploring the ways in which law and social institutions shape and are shaped by values, behavior, communication patterns, and organization of social, economic, and political systems. A multidisciplinary combination of courses permits critical reflection about how law and social life are interconnected historically and culturally. The program is designed to provide education about law and legal culture. It should not be viewed as a preferred avenue for admission to law school.

Specific objectives of the program are to:
1. Foster an appreciation for the larger context within which law-based phenomena are developed and nourished.
2. Comprehend the connections between law and other components of society.
3. Promote an interest in studying how law shapes, and is shaped by the larger social, behavioral, political, historical, and cultural context.
4. Present an interdisciplinary program that speaks to the need to address problems about law that will face us in the next century.
5. Offer an integrated program drawn from existing curriculum and faculty.

The concentration consists of 27 hours, including Sociology 455 Society and Law and 24 hours of upper division courses distributed among five categories: (1) analysis—3 hours from Communications 300, English 496, Sociology 331; (2) processes—Sociology 451, and 3 hours from Political Science 430,442; (3) perspectives—3 hours from English 490, Political Science 330, Psychology 424; (4) historical and global dynamics—3 hours from Classics 362, Political Science 470; (5) issues—6 hours from Communications 400, Philosophy 344, Political Science 431, Speech Communication 469, Women’s Studies 340. The remaining three hours are to be chosen from one of the five categories or an approved elective.

Students should consult program advisors early in planning a Legal Studies major. It is strongly recommended that Sociology 455 Society and Law, be taken before selecting electives. Other law-related courses consistent with the purposes and objectives of the major may be approved through consultation with the Chair of the Legal Studies Committee.

LINGUISTICS
Chair: Bethany K. Dumas, English.

This Major Concentration offers a broad exposure to the various fields of linguistics (including historical, descriptive, theoretical and applied linguistics) along with an opportunity to study areas where linguistics overlaps with other disciplines such as psycholinguistics, sociolinguistics, and speech pathology. The program of study is designed to prepare a student for graduate work in linguistics or related areas or to serve as a general survey of language and linguistics. The program of study provides the additional possibility of emphasizing the teaching of English as a second language for the student interested in language-related employment at the B.A. level.

Students should consult program advisors early in planning a Linguistics major or minor. Linguistics 200 is highly recommended. Audiology and Speech Pathology 305 should be taken as soon as possible. Other 300-level courses should, if possible, be completed before 400-level courses are begun.

Corequisites (a) Completion of a third year of foreign language study (literature) which satisfies the Foreign Studies option to fulfill the upper-level distribution requirement (required). (b) A two-semester sequence of a non-Indo-European language to be selected from the following: Asian Studies 121-122 (5.5) (Arabic); Asian Studies 131-132 (5.5) (Chinese); Asian Studies 141-142 (4.4) (Hebrew); Asian Studies 151-152 (5.5) (Japanese); Religious Studies 309-310 (3.3) (Hebrew); or any non-Indo-European language sequences approved by the Linguistics Committee (required).

Concentration 30 hours distributed as follows: (a) 21 hours composed of Audiology and Speech Pathology 305, English 371, 372, and 471; French, German, Russian or Spanish
Committee chairperson.

A concentration in Medieval Studies consists of Medieval Studies 201 and 403 and 12 additional hours distributed among the categories listed above for the major. Each student’s program, major or minor, must be approved in advance by the Medieval Studies Coordinating Committee chairperson.

Category #1 History, Philosophy, and Political Science: History 312 Medieval History: 300-1100 (3); History 313 Medieval History: 1100-1400 (3); History 330 History of England to 1688 (3); History 334 History of Germany to 1918 (3); History 365 History of the Middle East (3); History 474 Studies in Medieval and Early European History (3); Philosophy 322 Medieval Philosophy (3); and Political Science 475 Ancient and Medieval Political Thought (3).

Category #2 Language and Literature: Classics 435 Medieval Latin (3); English 371 Foundations of the English Language (3); English 401 Medieval Literature (3); English 402 Chaucer (3); French 410 Medieval French Literature (3); Italian 401 Dante and Medieval Culture (3); and Italian 402 Petrarch and Boccaccio (3).

Category #3 The Arts: Architecture 415 Seminar in Medieval Architecture (3); Art History 425 Early Christian and Byzantine Art to 1350 (3); Art History 441 Northern European Painting, 1350-1600 (3); Art History 431 Medieval Art of the Western World, 700-1450 (3); Art History 451 The Art of Italy, 1250-1400 (3); and Music History 210 History of Music to 1750 (3).

URBAN STUDIES
Chair: James A. Spencer, Urban and Regional Planning

Urban studies involves the interdisciplinary study of cities and their regions. Faculty from Planning, Architecture, Geography, History, Political Science, Sociology, History. Business participate in the program which has variable emphases from the relationship of the individual to the environment, the process of problem solving in an urban context, or the nature of current urban issues.

Prerequisites to the program are Economics 201 or 207, Political Science 101 or 102 or 117, and Sociology 110 or 120. Courses required for the major are Urban Studies 250, 350 and 460, plus 3 hours from each of these groups:

Group 1–History and Theory: Architecture 410, Urban Studies 363, 401, 454

Group 2–Physical Issues and Design: Urban Studies 323, 441, 464

Group 3–Planning and Policy: Planning 446, Urban Studies 321, 402

To complete the 30 hours required for the major, an additional 12 hours should be completed from any of the three groups or from the following list of approved courses: African and African-American Studies 480; Architecture 403, 404, 405; Classics 334; Economics 323, 361, 462, 471, 472; Geography 310, 411, 412, 449; Logistics and Transportation 302; Marketing 310, 320; Political Science 340; Sociology 340, 343, 344, 345, 360, 442, 462; Speech Communication 420; Statistics 201; Urban Studies 450, 481, 482, 493.

A Minor in Urban Studies consists of 18 semester hours, including Urban Studies 250 and 350, plus additional semester hours from Group 1, 2, 3 or 4 above. For more information contact the chairperson of Urban Studies.
MATHEMATICS

Professors:
J.B. Conway (Head), Ph.D. Louisiana State; V. Alexiades, Ph.D. Delaware; D.F. Anderson, Ph.D. Chicago; J.S. Bradley (Emeritus), Ph.D. Iowa; R.J. Davenport, Ph.D. Wisconsin; D.E. Dobbs, Ph.D. Cornell; G. Dydek, Ph.D. D. Warsaw (Poland); H. Frandsen (Emeritus), Ph.D. Illinois; L.J. Gross, Ph.D. Cornell; T.G. Hallam, Ph.D. Missouri; D.B. Hinton, Ph.D. Tennessee; L.S. Husc, Ph.D. Florida State; K. Johannson, Ph.D. Bielefeld, Germany; G. Samuel Jordan, Ph.D. Wisconsin; Ohanes Karakashian, Ph.D. Harvard; B.S. Kuperschmidt (UTSI), Ph.D. M.I.T.; Suzanne Lenthart, Ph.D. Kentucky, Robert M. McConnel, Ph.D. Duke; Balram S Rajput, Ph.D. Illinois; S. Mulay, Ph.D. Purdue; S. Richter, Ph.D. Michigan; K.C. Reddy (Space Institute, Tullahoma), Ph.D. K. Indian Institute of Technology; J. Rosinski, Ph.D. Wroclaw University; P.W. Schaefer, Ph.D. Maryland; S.M. Serbin, Ph.D. Cornell; Henry Simpson, Ph.D. California Institute of Technology; R.P. Soni, Ph.D. Oregon State; F.W. Stallman (Emeritus), Ph.D. Giessen (Germany); K.R. Stephenson, Ph.D. Wisconsin; C. Sundberg, Ph.D. Wisconsin; M. Thistlethwaite, Ph.D. University of Manchester (England); W.R. Wade, Ph.D. California (Riverside); C.G. Wagner, Ph.D. Duke.

Associate Professors:
C. Collins, Ph.D. Minnesota; X. Feng, Ph.D. Purdue; A. Freire, Ph.D. Princeton; S. Gavrilets, Ph.D. Moscow State; Bo Guan, Ph.D. Massachusetts; K. R. Kimble (Space Institute, Tullahoma), Ph.D. Ohio State; Y. Kuo, Ph.D. Cincinnati; C. P. Plaut, Ph.D. Maryland; D.A. Polignone, Ph.D. Virginia; J. Smith, Ph.D. California (Berkeley); B. K. Soni (Space Institute, Tullahoma), Ph.D. Texas; J. Xiong, Ph.D. North Carolina, Chapel Hill.

Assistant Professors:
X. Chen, Ph.D. Case Western Reserve; R. Davis, Ph.D. Tennessee; J. Dwyer, Ph.D. Ireland; Y. Kachi, Ph.D. Tokyo; G. Matthews, Ph.D. Louisiana State; T. Schulze, Ph.D. Northwestern; P. Tzermias, Ph.D. California (Berkeley).

Instructors:

All entering freshman and all other students who have not completed a college level mathematics course, except students who have received AP calculus credit, must take the UT mathematics placement exam before enrolling in a mathematics course. Placement in the appropriate course will be determined by the score on the exam. Ordinarily a student will not be allowed to enroll in a course at a level above that determined by his or her placement exam score. In exceptional circumstances, students will have the right to appeal their placement to the Mathematics Department. The exam will be administered during summer orientation and at designated times during the Fall, Spring, and Summer registration.

B.S. Major
The undergraduate Mathematics major is designed to provide a broad introduction to mathematics which serves as preparation for a wide variety of careers. The requirements below, which provide a solid introduction to four of the core components of mathematics, should be regarded as minimal preparation for careers in mathematics or closely related mathematical fields. Students with special interests and talents are encouraged to take as many other mathematics courses as their schedule permits.

Prerequisites to the Major are Mathematics 141-142 (or Honors version: 147-148) and 171 or CS 102.

Major Requirements consists of 37 semester hours of mathematics courses including (1) Math 231, 241 (or 247), 251 (or 257), 300, and (2) eight additional courses at the 300-400 level. (except 399, 400, 401, 405, 411 and 490). satisfying the following conditions:

1. At least one course must be taken from each of the following categories:
   - Algebra: 351, 455-56 (457-58)
   - Analysis: 341, 445-46 (447-48)
   - Numerical Analysis: 371 or CS 370, 471-72
2. At least one 400 level two-semester sequence must be taken from the list above.
3. CS 311 and CS 380 may be used as upper division math electives in part (2).

There are many careers one can pursue with a mathematics major. Sample programs for three different goals are listed below. Additional information is available in the Mathematics Department Office.

INDUSTRIAL EMPLOYMENT

| Hours Credit |
| --- | --- |
| Freshman | Mathematics 141-142 (or 147-148) and 171 | 11 |
| | English Composition | 6-8 |
| | Foreign Language (beginning level, preferably French, German, or Russian) | 6-8 |
| | Lab Science Distribution Requirement | 8 |
| Sophomore | Mathematics 231, 241 (or 247), 251 (or 257), and 300 | 13 |
| | Non-US History Distribution Requirement | 6 |
| | Social Science Distribution Requirement | 3 |
| | Foreign Language (completion of secondary level) | 6-8 |
| | Elective | 3 |
| Junior | Mathematics 351, 431 (or 435), 341, 371 | 12 |
| | Humanities Distribution Requirement | 6 |
| | Social Science Distribution Requirement | 3 |
| | Elective | 12 |
| Senior | Mathematics 471-472, 423, 475 | 12 |
| | Upper Level Distribution Requirement | 6 |
| | (may include Math 400 or 411) | 6 |
| | Electives (must include at least 7 upper division hours) | 11 |
| | Total: 124 minimum hours | |

PREPARATION FOR GRADUATE SCHOOL

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<th>Hours Credit</th>
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<tbody>
<tr>
<td>Freshman</td>
<td>Mathematics 141-142 (or 147-148) and 171</td>
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<td>English Composition</td>
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<td>Foreign Language (beginning level, preferably French, German, or Russian)</td>
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<td>Lab Science Distribution Requirement</td>
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<tr>
<td>Sophomore</td>
<td>Mathematics 231, 241 (or 247), 251 or (257), and 300</td>
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<td>Non-US History Distribution Requirement</td>
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<td>Foreign Language (completion of secondary level)</td>
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<td>Elective</td>
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<tr>
<td>Junior</td>
<td>Mathematics 323 (or 423), 431 (or 421), 371, 435 (or 461)</td>
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<td>Humanities Distribution Requirement</td>
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<td>Social Science Distribution Requirement</td>
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Senior | Mathematics 445-46 (or 447-48) and 455-55 | 12 |
| | Upper Level Distribution Requirement | 6 |
| | (may include Math 400 or 411) | 6 |
| | Electives (must include at least 7 upper division hours) | 11 |
| | Total: 124 minimum hours | |

SECONDARY EDUCATION

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<th>Hours Credit</th>
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<tr>
<td>Freshman</td>
<td>Mathematics 141-142 (or 147-148) and 171</td>
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<td>English Composition</td>
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<td>Foreign Language (beginning level, preferably French, German, or Russian)</td>
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<td></td>
<td>Lab Science Distribution Requirement</td>
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<tr>
<td>Sophomore</td>
<td>Mathematics 231, 241 (or 247), 251 or (257), and 300</td>
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<td>Non-US History Distribution Requirement</td>
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<td>Foreign Language (completion of secondary level)</td>
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<td>Elective</td>
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<tr>
<td>Junior</td>
<td>Mathematics 323, 351, 341, 371</td>
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<td></td>
<td>Humanities Distribution Requirement</td>
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<td></td>
<td>Social Science Distribution Requirement</td>
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<td>Elective (strongly recommended: Math 400)</td>
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<tr>
<td>Senior</td>
<td>Mathematics 445-446, 460, 421 (or 431)</td>
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<td>Upper Level Distribution Requirement</td>
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<td>Total: 124 minimum hours</td>
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Honor's B.S. Major
Candidates for an honors degree in Mathematics must fulfill all of the requirements for the B.S. degree in Mathematics, but take nine courses (rather than eight) at the 300-400 level and take two 400 level two-semester sequences (rather than one). The grade point average computed on the nine 300-400 level courses mentioned above will determine the honors category: GPA at least 3.4—Honors; GPA at least 3.6—High Honors; GPA at least 3.8—Highest Honors. Students with more than nine courses at the 300-400 level may designate which courses will be used to compute these GPAs.

Minor Prerequisite to a minor in Mathematics 141-142 (or 147-148). The minor consists of (1) Math 231, 241, 251, 300 and (2) nine additional hours at the 300-400 level (except 399, 401, 405, and 490). CS 370 may be substituted for three of these hours. The grade in each of these courses must be at least C.

MEDIEVAL STUDIES
See Interdisciplinary Programs.
MEDICAL BIOLOGY/ MEMORIAL RESEARCH CENTER

The Department of Medical Biology of The University of Tennessee College of Medicine-Knoxville Unit was formed from the faculty of The University Memorial Research Center and Hospital in 1978. The Research Center was established in 1956. The faculty has research, education, and service interests in cancer, blood diseases, metabolism, neuroscience, birth defects, cytogenetics and clinical genetics. Courses in these areas are offered to students at the graduate and undergraduate levels. Elective courses are also available to students in the College of Arts and Sciences.

The faculty with the College of Veterinary Medicine participates in the graduate program leading to M.S. and Ph.D. degrees in Comparative and Experimental Medicine.

Other advanced degree students can do thesis research in the department by arrangement with other life science departments at the University.

MICROBIOLOGY

Professors:
- R.N. Moore (Head), Ph.D. Texas (Austin);
- R.W. Beck (Emeritus), Ph.D. Wisconsin; J.M. Becker, Ph.D. Cincinnati; D. Bemis, Ph.D. Cornell; D.A. Brian, Ph.D. D.V.M. Michigan State; T.C. Montle, Ph.D. Maryland; W.S. Rigsby, Ph.D. Yale; B.T. Rouse; Ph.D. Guelph State; T.B. Irving (Emeritus), Ph.D. Princeton; H. Kratz (Emeritus), Ph.D. Ohio State; K.D. Levy, Ph.D. Kentucky; F.D. Maurino (Emeritus), Ph.D. Columbia; C. J. Mellor, Ph.D. Chicago; J.C. Osborne (Emeritus), Ph.D. Northwestern; C. Pinsky (Emeritus), Ph.D. California (Berkeley); U.C. Ritzenhof (Emerita), Ph.D. Connecticuet; Oscar Rivera-Rodas, Ph.D. California; J.B. Remeiser, Ph.D. Vanderbilt; A.M. Vazquez-Bigi (Emeritus), Ph.D. Minnesota; A.H. Wallace (Emeritus), Ph.D. North Carolina; Yulan Washburn, Ph.D. North Carolina.

Associate Professors:
- D.L. Hacker, Ph.D. Michigan State; Pam Small, Ph.D. Stanford; H. Zaghouani, Ph.D. University of Paris.

Assistant Professors:
- E. Urbach, Ph.D. M.I.T.; S. Wilhelm, Ph.D. University of Western Ontario.

Students wishing to emphasize study in this area elect to major in Biology with a concentration under “Division of Biology” for Robertson.

MEDICAL TECHNOLOGY

Courses in this major are open only to qualified students who have completed the first three years of the Science-Medical Technology Curriculum, described in the College of Arts and Sciences curricula section of this catalog, and who have been approved by the Medical Technology Admissions Committee.

MODERN FOREIGN LANGUAGES AND LITERATURES

Professors:
- C. R. Hodges (Head), Ph.D. Chicago;
- P.E. Barrette, Ph.D. California (Berkeley);
- P. Brady (Shumway Chair of Excellence), Ph.D. Universite Paris (Sorbonne);
- E.J. Campion, Ph.D. Yale; C.W. Cobb (Emeritus), Ph.D. Tulane; J.C. Elliott (Emeritus), M.A. Illinois; J.E. Fallen (Emeritus), Ph.D. Pennsylvania; D.M. Fieno (Emeritus), Ph.D. Indiana; M.H. Handelman, Ph.D. Florida; W.H. Hefflin, Ph.D. Florida State; T.B. Irving (Emeritus), Ph.D. Princeton;
- R.W. Beck (Emeritus), Ph.D. Ohio State;
- K.D. Levy, Ph.D. Kentucky; F.D. Maurino (Emeritus), Ph.D. Columbia; C. J. Mellor, Ph.D. Chicago; J.C. Osborne (Emeritus), Ph.D. Northwestern; C. Pinsky (Emeritus), Ph.D. California (Berkeley); U.C. Ritzenhof (Emerita), Ph.D. Connecticuet; Oscar Rivera-Rodas, Ph.D. California; J.B. Remeiser, Ph.D. Vanderbilt; A.M. Vazquez-Bigi (Emeritus), Ph.D. Minnesota; A.H. Wallace (Emeritus), Ph.D. North Carolina; Yulan Washburn, Ph.D. North Carolina.

Associate Professors:
- M. Beauvais, Ph.D. J.E.; F. Brizio-Skov, Ph.D. Washington; B. Creel, Ph.D. California; S. DiMaria, Ph.D. Wisconsin; C.K. Duncan, Ph.D. Illinois; C. Holmlund, Ph.D. Wisconsin; J. LaCure, Ph.D. Indiana; N.A. Lauchner, Ph.D. Wisconsin; D. Lee, Ph.D. Stanford; C. Nakuma, Ph.D. Universite de Paris (Sorbonne);
- N. Penrukkhina, Ph.D. Bryn Mawr; D.J. Young, Ph.D. Texas.

Assistant Professors:
- A. Ayo, Ph.D. Arizona; S. Blackwell, Ph.D. Indiana; N. Cruz-Camara, Ph.D. SUNY (Buffalo); C. Cox (Emerita), M. A. Tennessee; L. Essil Ph.D. Brown; P. Hoeyng, Ph.D. Wisconsin; E. Johnson, Ph.D. Tennessee; G. Kaplan, Ph.D. Pennsylvania; H. Maxim, Ph.D. Texas; M. McAlpin, Ph.D. Columbia; S. Ohnesorg, Ph.D. McGill; E. Silva Filho, Ph.D. North Carolina; J. Williams, Ph.D. Ohio State; P. Wilson (Emerita), M.A. Tufts;
- Chi-Hung Yim, Ph.D. Yale.

The French Major consists of 30 hours in courses numbered 333 and above. (French 300 does not count toward the major, but is recommended for students needing grammar review). All majors must have the following courses (or their equivalent with consent of the department): 333-334; 351-352; 421; 422; 440. Literature concentration students must also have 6 hours of literature at the 400 level, plus a 3-hour language-oriented or civilization course. Language concentration students must also have 6 hours of language-oriented or civilization course, plus a 3-hour literature course at the 400 level. Exceptional students may substitute a 400-level course for either 333 or 334, with consent of the department.

German Major Majors or minors in German should carefully prepare their programs in consultation with a departmental faculty advisor. German 201-202 or the equivalent is a prerequisite to the major. The major shall consist of at least 30 hours of German in courses numbered above 300, including German 363 and usually including German 301-302. Courses in English translation or German 331-332 do not count toward the major. In order to graduate, majors will be required to take a proficiency test in German. It is recommended that German majors also take History 241-242 or 334-335 and 6 hours of 200-level English courses.

Majors are also strongly urged to consider a minor in some other area of the humanities.

B.A. Honors in German The B.A. Honors Program consists of at least 32 hours of German in courses numbered above 300, including completion of German 477 or 478 with a grade of A or B+. To be admitted to the Honors Program, students must present a cumulative grade point average in German major courses of at least 3.5 and have an overall GPA of not less than 3.2. Students should apply for admission to the B.A. Honors Program at the end of their junior year. Application forms are available in the department office. Since courses taken abroad are not calculated in the overall average, the department reserves the right to make a judgment on the appropriateness of a study-abroad curriculum for acceptance as honors work and to require other 400-level courses as a condition for the degree.

The Italian Major consists of 30 hours in courses numbered 311 and above. The Russian Major has two options, a traditional major with a literary emphasis and an area studies major. Russian 201-202 is a prerequisite for both. Majors should prepare their programs in consultation with the departmental faculty advisor. Both options consist of 30 hours of courses, and both require Russian 311-312 and 401-402. The major with literary emphasis also requires Russian 301-302, 451-452, and 6 hours from Russian 221, 222, 320, 371, 372, or other courses numbered above 300. The additional requirements for the area studies major are Russian 371-372; 3 or more credits chosen from Russian and East European Studies 410 or Russian 221, 222, and Russian courses numbered 300 and above; and 6 or more credits chosen from Geography 375, History 340-341, Philosophy 393, and Political Science 459.

The Spanish Major consists of 30 hours in courses numbered 323 and above in one of two concentrations. All majors must have the following courses: 323, 330 and 331. Literature concentration: (1) 332. 333. 334; (2) additional 400-level courses, at least two of which must be in literature. Hispanic Studies concentration: (1) one course from 323, 333 or 334; (2) 6 additional courses in language, literature or culture, at least 4 of which must be from the 400 level. Students whose level of proficiency in Spanish is superior as defined by the ACTFL Proficiency Guidelines may substitute a 400-level course for 323 with consent of the department.

Major in French, German, Italian, Russian, or Spanish with a Concentration in Language and World Business or a Major Concentration in Language and World Business with Chinese, Japanese, or Portuguese Students who wish to prepare for careers in international business may complete (a) a special major in Chinese, French, German, Italian, Japanese, Portuguese, Russian, or Spanish; (b) a professional emphasis in International Business, International Retail Merchandising, or International Agricultural Economics, and (c) some form of practical experience related to the concentration.

Admission is by permission of the program director.
A. LANGUAGE REQUIREMENTS

1. The Chinese Concentration consists of 30 hours. The following are required: Chinese 231, 232, 331, 332, three hours of 490 or 491, and 9 hours of courses from the following: Art 386, Asian Studies 102, History 362, 363, 364, 476, Political Science 454, Religious Studies/Philosophy 376, 379 (or other course approved by the Asian Studies Advisor).

2. The French Major consists of 33 hours. The following are required: French 333, 345, 351, 352, 400, 422, 432, 440, 445, a 400-level literature elective, and three hours of 491, 490 or 493.

3. The German Major consists of 30 hours. The following are required: German 301-302, 311-312, 323 or 363, 485, three credit hours of 490, 491 or 493, and three courses numbered 320 or above.

4. The Italian Major consists of 30 hours. The following are required: Italian 314, 341, 342, 401, 490 or 491, and 12 hours of any 400-level literature courses.

5. The Japanese Concentration consists of 30 hours. The following are required: Japanese 251, 252, 351, 352, three hours of 490 or 491, and 9 hours of courses from the following: Art 386, Asian Studies 102 or 471 (if related to Japan), History 365, Japanese 313 or 314, Religious Studies 383.

6. The Portuguese Concentration consists of 33 hours. The following are required: Portuguese 301, 302, 309, 315, 316, 409, 431, six hours of 490 or 491 as approved by the director of the program, History 360 or 361, three hours of an approved Latin American Studies course.

7. The Russian Major consists of 30 hours. The following are required: Russian 301-302, 311-312, 401-402, 451-452, 490 or 491, and 3 hours from the following: 221, 222, 320, 371, 372, or any 400-level courses.

8. The Spanish Major consists of 33 hours. The following are required: 323, 330, 331, 345, 346, at least one 300-level literature survey course, three hours of 490 or 491, and any four courses in language, literature or culture, at least two of which must be from the 400 level while the remaining two may be selected from courses numbered above 300. Students whose level of proficiency in Spanish is superior as defined by the ACTFL Proficiency Guidelines may substitute a 400-level course for 323 with consent of the department.

B. PROFESSIONAL EMPHASIS

1. International Business students will take 24 hours. The following are required: Accounting 201, 202, Marketing 301, Management 301, and Finance 301. Students then choose three courses from the following general business courses: Logistics and Transportation 301, 302, Business Law 301, Management 471, Marketing 440, Logistics and Transportation 441, Economics 321, or Business Administration 311.

2. International Retail Merchandising Students will take 25 hours. The following are required: Accounting 201, 202, Marketing 301, Retail and Consumer Sciences 210, 310, 321, 421, and three additional credit hours from the following: Retail and Consumer Sciences 350, 410, 411, 412, 415, 450, or 493.

3. International Corporate Economics students will complete 24 hours. The following are required: Accounting 201, Agricultural Economics 210, 320, 342, 350, 420, 430, and three credit hours from the following: Marketing 301, Management 301, Finance 301, Logistics and Transportation 301 or 302.

C. PRACTICAL EXPERIENCE

Through Asian Languages 490, French 490, German 490, Italian 490, Portuguese 490, Russian 490, or Spanish 490, each Language and World Business student must undertake study abroad, an internship, or a relevant research project for a minimum of 3 hours (included in major requirements).

Additionally, Language and World Business students must consult an advisor in the Department in selecting relevant courses under the Basic Skills and Distribution requirements for the Concentration.

Students interested in the Language and World Business Program should contact the Director for advising as early as possible in their college careers. The academic record presented will be assessed by the Director of Language and World Business. Minimum requirements for progression to the concentration are a 2.75 cumulative average in the courses specifically required by the College of Arts and Sciences in Basic Skills and Distribution and in the Language and World Business plan of studies, and a 3.0 average in language courses.

Course prerequisites for the program include Asian Languages, French, German, Italian, Portuguese, Russian, or Spanish 199, Economics 201 (under Social Sciences electives) and Math 125 and Statistics 201 (under Part II of the Natural Science electives). Progression is based on availability of space in the program. Program standards are adjusted periodically, and current requirements are available from the Director of the Language and World Business Program.

Further information, inquire in 701 McClung Tower.

Placement Examination

Students who have had previous work (either two or more years in high school or one year in college) in Chinese, French, German, Italian, Japanese, Portuguese, Russian, or Spanish should take a placement test to determine the appropriate level course for which to register. Placement tests are given for incoming students during summer orientation and throughout the year. Please contact the department for further details.

Proficiency Examinations

Students who have acquired a knowledge of French, German, Italian, Russian, or Spanish should request a proficiency test. A student earning a grade of C or better will receive credit for an appropriate number of courses. Superior students are encouraged to proceed as rapidly as their achievement permits.

Study Abroad

Five summer study abroad opportunities are available to students through the Department. The department sponsors programs in Brazil, France, Italy, Mexico, and Spain. Students can earn up to six credit hours by participating in these programs. In most cases, the courses will fulfill part or all of the foreign language requirement (completion of the elementary or intermediate level). Upper division classes in literature, culture, and language are also available for major and minor credit. Participation in these programs will satisfy the foreign study requirements for the Language and World Business degree. A faculty member accompanies students on these programs. In addition to formal classes held at a major university in the city, group excursions to cultural and historical sites are an integral part of the programs.

For more information concerning prerequisites, lodging arrangements, costs, and dates of an individual program, contact the Department of Modern Foreign Languages and Literatures, 701 McClung Tower.

Students are also encouraged to study abroad, particularly through participation in the University’s International Student Exchange Program (ISEP). The department is also prepared to recommend summer study programs and year abroad programs for students who are interested in foreign study. Credits from recognized foreign study programs can readily be transferred to UT. For qualified students, the department also offers Asian Languages 491 Foreign Study, German 491 Foreign Study, and Russian 491 Foreign Study. Students should consult the department before registering for the foreign study course.

The Chinese Minor consists of Asian Languages 231-232 or its equivalent is a prerequisite to the minor. The minor shall consist of at least 17 hours of Chinese courses, including Asian Languages 331-332; 431; and six hours from Asian Languages 311-312 or other Chinese courses above 300.

The French Minor consists of 18 hours in courses numbered 333 and above, distributed as follows: 333 or 334; 351-352; 421; plus six hours of electives at the 300 or 400 level. French 300 does not count toward the minor, but is recommended for students needing grammar review.

The German Minor consists of German 201-202 or its equivalent is a prerequisite to the minor. The minor shall consist of at least 18 hours of German courses numbered above 300, which normally include German 301-302 and 12 additional hours of courses numbered above 300 (excluding 331-332 and courses in English translation).

The Italian Minor consists of 18 hours in courses numbered 311 or above. Students pursuing a minor must consult with a departmental advisor.

The Japanese Minor consists of Asian Languages 251-252 or its equivalent is a prerequisite to the minor. The minor shall consist of at least 17 hours of Japanese courses, including Asian Languages 351-352; 451; and 6 hours from Asian Languages 313-314 or other Japanese courses above 300.

The Portuguese Minor consists of 18 hours in courses numbered 350 or above. Students pursuing a minor must consult with a departmental advisor.

The Russian Minor Russian 201-202 is a prerequisite to the minor. The minor in Russian shall consist of at least 18 hours of Russian courses, including Russian 301-302; 311-312; and 6 hours from Russian 221-222 or other Russian courses numbered above 300.

The Spanish Minor consists of 18 hours in courses numbered 323 or above, distributed as follows: 323, 330 and 331; one course from 332, 333 or 334; two additional courses. Students pursuing a minor are strongly advised to consult with a departmental advisor.
MUSIC


Assistant Professors: A.L. Tatey, D.M.A. South Carolina; W. Baldwin, D.M.A. Maryland; C. Freeman, M.P.A. Oklahoma City; W.W. Hawthorne, Ph.D. Cincinnati; E. Keatley, Ph.D. SUNY (Stonybrook); E. Powell, M.M. Cincinnati; J. Richter, M.M. Andrews University; D.M. Ryder, D.M.A. Iowa; C. Walters, D.M. Florida State; A.N. Wentzel, M.M. Southern California.

BACHELOR OF MUSIC DEGREE
The School of Music offers curricula leading to the Bachelor of Music degree with concentrations in music theory/composition, music education, and applied music (voice; piano; organ; sacred music-organ or piano; sacred music-voice; piano pedagogy and literature; strings; woodwind, brass, and percussion instruments; studio music and jazz). This study prepares students for graduate music study or for positions in music for which a professional music degree is required. The General Education (6 hours foreign language requirement) is in addition to the University admission requirement. Students may continue at the 200 level in a language begun in high school or elect to begin a new language at the 100 level. Students majoring in vocal performance must complete one year each of two languages chosen from French, German and Italian.

PROGRESSION REQUIREMENTS
All new music students (freshman and transfer) must perform an audition in applied music and take a music theory examination, the results of which will determine his or her placement in applied music and theory. Both the audition and theory exam should be completed during a visit to the University prior to final arrival to begin classes. Applicants are urged to contact the School to schedule appointments for satisfying both requirements as early as possible, but certainly no later than the Summer Orientation period.

No student officially progresses to a Major in Music until both the audition and entrance examination have been successfully completed.

MINIMUM PERFORMANCE STANDARDS
Potential performance and music education majors not meeting minimum performance standards, but showing potential, will be allowed to register for applied music (Music 140—Fundamentals of Performance) in order to attain the desired level. Such students are normally expected to demonstrate sufficient progress by the end of the first academic year to perform on a level commensurate with a freshman student. Successful completion of all required coursework by the end of the first year is required of all students without exception. Acceptance into the Bachelor of Music degree program is contingent upon the School of Music. Students seeking admission to the Bachelor of Music degree program must satisfactorily complete the admission requirements as outlined above. A student who fails to meet the requirements of the School of Music will be dropped from the degree program.

KEYBOARD SKILLS PROFICIENCY EXAMINATION
Proficiency in keyboard skills is required of all music majors and is usually acquired in the four-semester series of Class Piano I, II, III, IV (Mus Kbd 110, 120, 210, 220). Students who already possess keyboard skills may pass a proficiency examination in lieu of these courses.

RECITAL ATTENDANCE POLICY
The faculty of the School of Music believes that exposure to a variety of live musical performances is an important part of the education of students studying music at the University level. As a result, the faculty has put in place a recital attendance requirement for undergraduate music students. Regular recital attendance helps students become acquainted with accepted norms of recital presentation, furnishes them with opportunities to get to know and respect the talents of other students and faculty in the School of Music, and helps them establish the habit of attending musical performances after graduation. Specific recital attendance requirements are listed in the School of Music Undergraduate Student Handbook.

BACHELOR OF MUSIC IN MUSIC EDUCATION
Students seeking licensure to teach music in the public schools should pursue one of the options within this degree program. Four-year and five-year options are available to prepare teachers for instrumental teaching or for the teaching of vocal and general music. The four year program leads to the degree and to teaching licensure. The five year program provides for the granting of the degree at the end of four years, with teacher licensure being awarded after a fifth-year, graduate level internship. Students choosing the five year program earn twenty-four hours which may be applied to the Master’s degree.

BACHELOR OF ARTS DEGREE
The School of Music offers curricula leading to the Bachelor of Arts degree with a major and minor in Music, designed for those students who have a strong interest in music, but desire a comprehensive liberal studies program.

THE BACHELOR OF ARTS DEGREE—MUSIC MAJOR
Music Course Requirements The Bachelor of Arts Degree—Music Major Music Course Requirements Prerequisites: Music Theory 110,120 (6); Music Theory 130, 140 (2); Music Performance 100 Level (2). Courses toward the major: Music Theory 210,220 (6); Music Theory 230, 240 (2); Music History 200 (3); Music History 210, 220 (6); Music Performance 200 level or above (four semester minimum) (8); Music Gen. Theory for Music Gen. Minor (minimum) (0); Music Ensemble (4); Music Theory 310 (3) 3 hours selected from: Music History 350, 380, 390. Music electives (0-3 hours) selected from: Music History 460 (3); Music General 301 (0); Music History 493 (3) or Music History 493 (3); Music General 411 (0). Total of 45-48 hours.
1. Students must complete a minimum of four semesters of Music Performance Major, instrument/voice at the 200 level or above.
2. Music General 200 must be completed a minimum of four semesters.
Degree requires a minimum of 124 hours. Remainder of hours to be structured per requirements as outlined in the catalog section.
Music Minor (a) Concentration in Applied Music—consists of 17 hours in courses numbered 200 and above, distributed as follows: Music History 200, 8 hours in applied music, and 6 hours in music electives. Prerequisites are Music General 100 or equivalent and two semesters of applied music study (Music Performance) at the 103-190 levels. (b) Concentration in Music History and Literature—consists of 17 hours in courses numbered 200 and above, distributed as follows: Music History 200, 9 hours in Music History and Literature courses, and 5 hours in music electives. Prerequisites are Music General 100 or equivalent and two semesters of applied music study at the 103-190 levels.

### B.M. Curriculum in Music Education—Wind/Percussion Emphasis (5-year option)

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<th>Course Title</th>
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<tr>
<td>Chamber Ensemble</td>
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<td>Total: 124 hours plus 24 graduate hours</td>
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### B.M. Curriculum in Music Education—Wind/Percussion Emphasis (4-year alternative)

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<td>Chamber Ensemble</td>
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<td>Total: 124 hours plus 24 graduate hours</td>
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### B.M. Curriculum in Music Education—Vocal/General Concentration/Vocal Emphasis (5-year option)
#### Hours Credit

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*Optional Full Recital with approval of major area

### Total: 125 hours plus 24 graduate hours
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**B.M. Curriculum in Organ**

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**B.M. Curriculum in Piano Pedagogy and Literature**

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
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<tr>
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**B.M. Curriculum in Strings**

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**B.M. Curriculum in Sacred Music**

<table>
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<tr>
<th>Year</th>
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<tbody>
<tr>
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<tr>
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<td>Music General 200 ....................................................................... 0</td>
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<td>Music History 380 ....................................................................... 3</td>
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<td>Music General 301 ....................................................................... 0</td>
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<td>Music Ensemble 399 .................................................................... 1</td>
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<td>Music Education 310 ................................................................... 3</td>
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<td>Social Science ........................................................................... 6</td>
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<td>Musical Electives ........................................................................ 3</td>
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</tbody>
</table>

**Total Credits:**

- **Freshman:** 6 hours
- **Sophomore:** 12 hours
- **Junior:** 18 hours
- **Senior:** 18 hours

**Total:** 130 hours
## B.M. Curriculum in Studio Music and Jazz

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>B.M. Curriculum in Studio Music and Jazz</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
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**Total: 131 hours**

## B.M. Curriculum in Theory/Composition

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<th>Hours Credit</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
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<td>Music Theory 110, 120 ................................. 6</td>
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<td>Arts and Sciences Electives .......................... 3</td>
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</table>

**Total: 132 hours**

1. Must take 1 year of two languages from French, German or Italian.
2. Humanities-Arts (Non-music) Literature, Philosophical Perspectives, Interdisciplinary Studies.

## B.M. Curriculum in Voice

<table>
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<tr>
<th>Hours Credit</th>
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<tr>
<td><strong>Freshman</strong></td>
<td>English 101, 102 ...................... 6</td>
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<td>English .................................. 6</td>
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<td>Social Science .......................... 6</td>
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**Total: 129 hours**

## ORGANIZATIONAL PSYCHOLOGY PROGRAM

See Graduate School.

## PHILOSOPHY

**Professors:**
- J.R. Hardwig (Head), Ph.D. Texas; R.E. Aquila, Ph.D. Northwestern; L.B. Cebik (Emeritus), Ph.D. Nebraska; S.M. Cohen, Ph.D. Northwestern; J.W. Davis (Emeritus), Ph.D. Emory; R.B. Edwards (Emeritus), Ph.D. Emory; G.O. Graber, Ph.D. Michigan; J.E. Noth, Ph.D. Ohio State; B.C. Postow, Ph.D. Yale; D. Van de Vate (Emeritus), Ph.D. Yale.

**Associate Professors:**
- K.A. Bohstedt, Ph.D. Ohio State; J.O. Bennett, Ph.D. Tulane; H.P. Hamlin, Ph.D. Georgia; M.L. Osborne (Emeritus), Ph.D. Tennessee.

**Assistant Professors:**
- J.M. Kaplan, Ph.D., Stanford; C.W. McLeod, Ph.D. Dalthouse; D.A. Reidy, Ph.D. Kansas.

**Major Prerequisite** Three hours of logic, normally 130 or 135. Requirements: 24 hours of courses numbered 200 or above, including three hours of ethics, normally 240 or 440, and six hours in the history of philosophy, three in ancient, normally 320, and three in modern, normally 324. Majors are required to discuss their programs with a member of the Philosophy faculty.

The minor consists of 18 hours in courses 200 or above. Minors should discuss their program with a member of the Philosophy faculty.
PHYSICS AND ASTRONOMY

Professors:
S.P. Sorensen (Head), Ph.D. Copenhagen (Denmark); F.E. Barnes (Collaborating Scientist), Ph.D. California; C.R. Bingham, Ph.D. Tennessee; W.E. Blais, Ph.D. Michigan State; M.J. Breining, Ph.D. Oregon; W.B. Bugg, Ph.D. Tennessee; J. Burgdoerfer (Distinguished Professor), Ph.D. Freie Universit Berlin; T.A. Callcott, Ph.D. Purdue; R.W. Childers, Ph.D. Vanderbilt; H.W. Crater (UTSI), Ph.D. Yale; K.E. Ducott, Ph.D. Tennessee; A.G. Eguiluz, Ph.D. Brown; S.B. Elston, Ph.D. University of Massachusetts; S. Georgihoiu, Ph.D. Manchester (England); M.W. Guidry, Ph.D. Tennessee; T. Handler, Ph.D. Rutgers; E.L. Hart, Ph.D. Cornell; I. Kamychkov, Ph.D. ITEP (Russia); J.W.L. Lewis (Distinguished Professor, UT), Ph.D. Mississippi; Ph.D. Michigan; J. Macek (Distinguished Scientist), Ph.D. Rensselaer Polytechnic Institute; G. Mahan (Distinguished Scientist), Ph.D. University of California (Berkeley); W. Nazarewicz, Ph.D. Warsaw; L.R. Painter, Ph.D. Tennessee; D.J. Pegg, Ph.D. New Hampshire; E.P. Plummer (Distinguished Scientist), Ph.D. Cornell; J.J. Quinn (Lincoln Chair), Ph.D. Maryland; L.L. Riedinger, Ph.D. Vanderbilt; C.C. Shih (Liaison), Cornell; M.R. Strayer, Ph.D. Massachusetts Institute of Technology; J.R. Thompson, Ph.D. Duke; B.F.L. Ward, Ph.D. Princeton.

Associate Professors:
G. Canright, Ph.D. Tennessee; L. Davis (UTSI), Ph.D. Austin; T.L. Ferrell, Ph.D. Clemson; J.C. Levin, Ph.D. Oregon; C. Parigger (UTSI), Ph.D. New Zealand; H.O. Cohn (Collaborating Scientist), Ph.D. Cornell; J.S. Shieh, Ph.D. Maryland; G. Sjöquist, Ph.D. California Institute of Technology; H.H. Weitering, Ph.D. Groningen.

Assistant Professors:
S.J. Daunt, Ph.D. Queens (Kingston, Ontario, Canada); D.J. Dean (Collaborating Scientist), Ph.D. Vanderbilt; A.J. Sanders, Ph.D. Tufts.

Research Professors:
H.O. Cohn, Ph.D. Indiana; L.A. Pinnaduwage, Ph.D. Pittsburgh; N. Thonnard, Ph.D. Kentucky; J. Zhang, Ph.D. Lanzhou.

Research Associate Professors:
P.E. Datkos, Ph.D. Tennessee; D.L. McCorkle, Ph.D. Tennessee.

Research Assistant Professors:
Y.Y. Efremenko, Ph.D. ITEP (Russia); S.A. Yost, Ph.D. Princeton.

Director of Undergraduate Laboratories:
J.E. Parks, Ph.D. Kentucky.

Instructor:
T. Riedinger, M.S. Vanderbilt.

PHYSICS

B. S. Major

The undergraduate physics major provides a thorough introduction to all of the core areas of physics. At the same time it allows students with special interests to pursue different concentrations.

The Department offers three concentrations: Academic, Applied, and General. The Academic Concentration is intended for students interested in professional employment or graduate work in physics or closely related fields such as astronomy, engineering, laser technology, or computational science. The Applied Concentration introduces students to the physics and technology of today and tomorrow. Such a broad physics background is increasingly useful in technological and industrial fields outside of physics. The General Concentration is intended for students who wish to apply a substantial knowledge of physics to fields such as secondary education, medicine, law, journalism, business, or any field of their choice.


The Major with an Applied Concentration consists of: Mathematics 241; Physics 240, 311-312, 321, 401, 421-441, 442-454 and 461. Total Major hours: 41.

The Major with a General Concentration consists of Mathematics 241, Physics 240, 311, 321 and 361, one lab course, chosen from 421, 453, and 461, and three core courses, chosen from 312, 411, 412, 431, 432, 441, 442. In addition, 12 coordinated hours in an area of the student's special interest are to be chosen by the student in consultation with a departmental advisor. Total Major hours: 40-41 including 28-29 in physics and 12 in chosen concentration.

A Physics Minor consists of Physics 137-138, 240, or 135-136, 240 and twelve hours from Physics and Astronomy courses numbered 300 and above.

An Astronomy Minor consists of one year of introductory astronomy, Astronomy 411, 490 (3), Physics 311-12, and 421.

POLITICAL SCIENCE

Professors:
Patricia K. Freeland (Head), Ph.D. Wisconsin; Robert B. Cunningham, Ph.D. Indiana; Michael M. Gant, Ph.D. Michigan State; Michael R. Fitzgerald, Ph.D. Okahama; Robert Gorman, Ph.D. New York; William Lyons, Ph.D. Oklahoma; Hyrum Plass, Ph.D. Utah; John M. Scheb, Ph.D. Florida; Thomas A. Smith, Ph.D. Ohio State; Otis H. Stephens, Jr. (Alumni Distinguished Service Professor), Ph.D. Johns Hopkins; Thomas D. Unger (Emeritus), Ph.D. Iowa.

Associate Professors:
David H. Fols, Ph.D. Tennessee; Janet Kelly, Ph.D. Wayne State; Anthony J. Nownes, Ph.D. Kansas; David J. Houston, Ph.D. SUNY-Binghampton; Robert L. Peterson, Ph.D. Yale; Lilliard E. Richardson, Ph.D. Texas; Yang Zhong, Ph.D. Kentucky.

Assistant Professor:
Donna Van Cott, Ph.D. Georgetown.

B.A. Major

Political Science 101 or 107, and 102 are prerequisites to the major. The major consists of 24 hours of courses numbered 300 or above. These 24 hours must include at least one course in each of the four areas of the discipline:


International Relations 365, 366, 470, 471, and 472.

Political Theory 300, 374, 475 and 476.

Minor Prerequisites to the major are Political Science 101 or 107 and 102. The minor consists of 15 hours of courses numbered 300 and above.

Honors in Political Science

The Honors concentration encourages highly motivated students to obtain a superior liberal education and more rigorous preparation in the discipline. Admission is selective. The Honors concentration is normally a two year program. Political Science 101 or 107, and 102 are prerequisites to the major. The major consists of 27 hours of courses numbered 300 or above, including 387, 388, 487, and 488. These 27 hours must include at least one course in each of the four areas of the discipline: Political Science 387 and 388 may be used to satisfy this requirement in the appropriate area.

To graduate with Honors in Political Science, the student must have a minimum GPA of 3.3 in Political Science, and a minimum cumulative GPA of 3.0.

Major in Political Science with a Concentration in Public Administration

Students majoring in Political Science who wish to prepare for a career in the public service may select to follow the concentration in Public Administration. Political Science 101 or 107, 102 and Economics 201 are prerequisites to the major in Political Science with a concentration in Public Administration. The concentration consists of course work in Political Science, Economics, and Accounting. Students must complete Political Science 340, 401, two of the following: Political Science 440, 441 or 442; and two of the following: Economics 471, 472 or Accounting 201. Students must also include one course in each of the three remaining fields of Political Science: Comparative Government and Politics, International Relations, and Political Theory.

PSYCHOLOGY

Professors:
James E. Lawler (Head), Ph.D. North Carolina; G.M. Burghardt (Alumni Distinguished Professor), Ph.D. Chicago; W.H. Calhoun, Ph.D. California (Berkeley); H.J. Fine (Emeritus), Ph.D. Syracuse; S.J. Handel, Ph.D. Johns Hopkins; L. Handler, Ph.D. Michigan State; Warren H. Jones, Ph.D. Ohio State University; K.A. Lawer, Ph.D. North Carolina; J.W. Lounsbery, Ph.D. Michigan State; J.F. Lubar, Ph.D. Chicago; J.C. Malone, Ph.D. Duke; K.R. Newton (Emeritus), Ph.D. Tennessee; H.R. Polio (Alumni Distinguished Service Professor), Ph.D. Michigan; P. Samejima, Ph.D. Kejo (Japan); R.A. Saudargas, Ph.D. Florida State; R.S. Shrade (Emeritus), Ph.D. Pennsylvania; E.D. Sundstrom, Ph.D. Utah; C.B. Travis, Ph.D. California (Davis); R.G. Wahler, Ph.D. Washington; J.A. Wiberley (Emeritus), Ph.D. Syracuse.

Associate Professors:
D. Baldwin, Ph.D. Kent State; M.G. Johnson, Ph.D. Johns Hopkins; A. McIntyre, Ph.D. Yale; W.G. Morgan, Jr., Ph.D. Tennessee; M.R. Nash, Ph.D. Ohio; Deborah P. Welsh, Ph.D. University of Massachusetts.

Assistant Professor:
Kristina Gordon, Ph.D. University of North Carolina.
Major Prerequisites are: one year of a biological science (e.g. Biology 101-102), Psychology 110 with a grade of C or better, and a GPA of at least 2.00. The major requires 24 Psychology hours at the 200 level or higher: (1) Either Psychology 320 or Statistics 201 and 21 additional hours in Psychology; or Math 115 and 24 additional hours in Psychology; (2) Three courses from Psychology 210, 220, 300, 310, 320, 330, 360, 370; (3) Two additional Psychology courses at the 300 level or higher; (4) Two additional Psychology courses at the 400 level. NOTE: No more than six hours of 389, 489, 491, 492, 493 may be used in this major. Continuation in the Psychology Major requires maintenance of a GPA of 2.00. Students placed on Academic Review will be informed in writing that they are on probation and their records will be reviewed. Students who continue on Academic Review will be dropped from the major.

Minor Consists of 110 or equivalent; and 15 additional hours at the 300 level and above. NOTE: 399, 489, 491, 492, 493 cannot be used in this minor.

Honors Program The Psychology Department offers an Honors Concentration that is a specially designed individualized mentorship program. University Honors students and psychology majors with ACT scores of 29 or higher (or SAT equivalent) may apply. Admission to the program will be based upon the basis of the review of the candidate’s application and interview by the Psychology Honors Faculty, normally in the student’s second year. Any semester with a GPA below 3.2 will lead to consideration of a student’s dismissal from the program by the program faculty. The honors concentration includes all the requirements of the Psychology Major and at least ten hours of upper division psychology honors courses including at least four hours of Psychology 347 (continuous registration is preferred), three hours of Psychology 367 and three hours of Psychology 467.

RELIIGIOUS STUDIES


Associate Professors: J.L. Fitzgerald, Ph.D. Chicago; R.W. Gwynne, Ph.D. Washington; J.O. Hodges, Ph.D. Washington State.


Major The basic concentration consists of at least 27 hours, all of which must be at the 300 level or above, including one course from each of the first six categories and two courses from category seven, one of which must be RS 499. Majors are strongly urged to take RS 399, and to do so as soon as possible after declaring their major. The remaining three hours, which complete this major, shall not include related language courses.

1. Methods and Issues in Religious Studies: 300, 301, 305, 313, 320, 342.

2. Religions and Cultures of South Asia: 374, 376.

3. Religions and Cultures of East Asia: 379, 383, 384.

4. Religions and Cultures of West Asia and Europe: 311, 321, 322, 323, 381, 385.

5. Religions and Cultures of Africa: 373.


7. Two 400-level courses including 499.

As an alternative to the basic concentration, a student-initiated concentration is available for students with special educational needs, such as those who intend to enter a graduate or professional school (seminary, law, medicine) which recommends a specific course of undergraduate study. A faculty member in Religious Studies will assist a student to formulate this major consisting of at least 27 hours of credit at the 300 level or above, including 499. Up to 9 hours in this major may be taken in approved courses from other programs or departments in the College of Arts and Sciences. Students whose vocational goals would best be served by such a major must discuss this option with a faculty member in the department, who will submit any specific proposal to the faculty in religious studies for approval. Further details on the major and on department courses are available in the department office, located in 501 McClung Tower, or from any member of the religious studies faculty.

Minor Fifteen hours of courses at the 300 level or above, not including related language courses. It is recommended that students minoring in religious studies discuss their program with a member of the department faculty.

RUSSIAN

See Modern Foreign Languages and Literatures.

SOCIOLGY

Professors: M.L. Benson, Ph.D. Illinois; J.A. Black, Ph.D. Iowa; D.W. Hastings, Ph.D. Massachusetts; T.C. Hood, Ph.D. Duke; R.G. Perrin, Ph.D. British Columbia; N.E. Shover, Ph.D. Illinois (Urbana); S.E. Wallace, Ph.D. Minnesota.

Associate Professor: S. Kurth (Head), Ph.D. Illinois (Chicago); S. Cable, Ph.D. Pennsylvania State; A. Jalata, Ph.D. SUNY-Binghamton; R.E. Jones, Ph.D. Washington State.

Assistant Professors: J. Shefner, Ph.D. California (Davis).

Instructor: D.K. Harris, M.A. Tennessee.

Major Before applying to the Sociology Department for admission to the major a student must complete either Sociology 110 or 120 and a grade of C+ or above. Upon granting admission to the major, the department will assign the student an academic advisor who will help the student plan a program of study for the major. The major consists of 24 upper-division hours in sociology and must include 321 and 331. Students should complete 321 and 331 by the end of their junior year.

Minor The minor consists of 15 upper-division hours in Sociology and must include 321 and 331. Prerequisite to the minor is three lower-division hours in Sociology (either 110 or 120).

Concentration in Criminal Justice All prerequisites and upper-division courses required for general majors are required for this concentration. In addition, the concentration consists of 18 hours of upper-division sociology courses as follows: 350, 351, 451, either 455, 459, or 492, and two courses selected in consultation with advisor.

Concentration in Environment and Society All prerequisites required for the major are required for this concentration. The Concentration in Environment and Society consists of Sociology 212 and 331 and eighteen hours of upper-division sociology courses as follows: 360, 464, either 344 or 345, either 442 or 446, and two courses selected in consultation with advisor.

Minor with Concentration in Environment and Society The minor consists of Sociology 321, 331, 360 and two courses from 344, 345, 442, 446, and 464. Prerequisites to the minor either Sociology 110 or 120.

COLLEGE SCHOLARS HONORS

Director: David Tandy, Professor of Classics.

College Scholars is a major with selective admission. For details contact the director. All Scholars must enroll in one of the College Scholars Seminars 317-318 each term. They are encouraged to complete work in College Scholars Honors 491-492-493. Each student must complete a substantial piece of research, scholarship or creative imagination. College Scholars 498 is the appropriate course to use to receive credit for this work.

SPANISH

See Modern Foreign Languages and Literatures.

STATISTICS

See faculty list in the College of Business Administration.

Arts and Sciences students may major or minor in statistics under the supervision of the faculty of the Statistics Department in the College of Business Administration. The major is designed to prepare students for graduate studies in statistics or for professional work in various applications of statistical methods, including applications in the natural and social sciences, business and industry. Contact the Statistics Department for further information on careers in statistics and appropriate courses to take. It is highly recommended that a student majoring in statistics have a minor in an area of application.

Major The major requires 33 semester hours including (a) Statistics 201 or 251; (b) Statistics 320, 330, 365, 471; (c) two courses selected from Statistics 472, 473, 475, Math 423, 424, 425; (d) Math 141-142 and 241-251, or upper division Math*; (e) two technical electives to be selected from upper division courses in Mathematics, Computer Science, Engineering, Physics, or Chemistry, with the approval of the student's advisor in the Department of Statistics.

*Students who have completed Mathematics 123-125 should see an advisor to select courses to complete this requirement.
Minor The minor consists of Statistics 201 or Statistics 251; an additional 12 hours from Statistics 320, 330, 365, 471, 472, 473, 475; and Math 423, 424, 425.

THEATRE

Professors:

Associate Professors:
E. Craven, M.A. Tennessee; L.J. DeCuir, M.F.A. Tulane; B.K.A. Gould, M.F.A. Catholic.

Assistant Professor:

Major Theatre 100 is a prerequisite to a major which consists of 200, 220, 300, 411, 412, 430, 1 from 340, 345, 350, 355, 360, and 12 additional hours of Theatre courses numbered 200 and above, 3 of which may be in cognate areas approved by the Department.

Minor Theatre 100 is a prerequisite to a minor which consists of 15 hours of Theatre courses, 6 of which must be in upper division. General requirements for the master’s degree are given in the Graduate Catalog.

URBAN AND REGIONAL PLANNING

Professors:
C.W. Minkel (Head) Ph.D. Cornell; D.A. Johnson (Emeritus), Ph.D. Cornell; K.B. Kenney (Emeritus), Ph.D. North Carolina; J.M. Prochaska (Emeritus), M.U.P. Michigan State; W.L. Shouse (Emeritus), M.C.P. Harvard; J.A. Spencer, M.C.P. Ohio State.

Associate Professors:
G.E. Bowen, M.A. George Washington; B.E. Tonn, Ph.D. Northwestern.

Assistant Professors:
T. Shupp, M.S.P. Tennessee; C. Zanetta, Ph.D. Ohio State.

Urban and Regional Planning offers a program of studies leading to the professional degree of Master of Science in Planning. For complete information, refer to the Graduate Catalog.

The Department also directs the Urban Studies program in the College of Arts and Sciences.

URBAN STUDIES

See Interdisciplinary Programs.

WOMEN'S STUDIES

See Interdisciplinary Programs.
Jan R. Williams, Interim Dean
David W. Schumann, Associate Dean for Research and Technology
Sarah F. Gardial, Assistant Dean, MBA Program
Patricia D. Postma, Assistant Dean, Center for Executive Education
Mary C. Holcomb, Interim Dean for Undergraduate Business Program
Margie H. Russell, Interim Director, Undergraduate Business Program

BUSINESS—EXCELLENCE FOR TODAY AND TOMORROW

The UT College of Business Administration is widely recognized for its leadership role in implementing some of the most innovative and exciting curriculum changes occurring during the last forty years of management education. Recently, the College has been recognized for its rising stock among the nation’s business schools, as Business Week’s Guide to Business Schools named UT as a “Best Buy” among all business schools, and cited the College for carving out a niche in Total Quality Management. As of Fall, 1996, the College’s undergraduate program was ranked 32nd nationally in a US News and World Report survey.

The tradition of innovation and change in business education has continued to be a hallmark of the College. In May 2000, the faculty unanimously agreed to adopt a new curriculum structure for the undergraduate program. The mission of the College of Business Administration’s undergraduate program is to produce leaders in business and society that will successfully function in a global, technology-driven environment. To this end, the new curriculum, which will be implemented in Fall Semester 2002, will focus on integrated business management, functional specialty education, and organizational processes that span functional specialties. A new component of the business core is the study of four major contemporary management perspectives. Supply chain management, demand management, lean operations management, and information management, and an integrative learning experience comprise the contemporary business management block of the business core. It is anticipated that topics in the block will change over time as business management perspectives change. The new undergraduate business program specifies up to 15 hours of collateral learning, which offers students the opportunity to pursue minors or dual majors.

An overall objective of the undergraduate business program is to move into the ranks of the top 25 programs in the country. To accomplish this objective, the College of Business Administration is committed to attracting and recruiting high ability students, creating a program innovation, and increasing the student and faculty satisfaction with the undergraduate program.

As of Spring, 1998, the US News and World Report survey ranked the College’s MBA program 43rd overall among the nation’s business schools. The MBA program is consistently praised for its “bold innovations” and its “high value-to-cost ratio.” Business Week’s Guide to the Best Executive Programs has rated the College’s Management Development Center as the best in the country in Total Quality Management and 13th overall for its executive programs. At the undergraduate, graduate, and executive education levels, the College of Business Administration continues to pace the nation in restructuring curriculum, in pedagogy, and in providing a healthier balance between academic rigor and managerial relevance.

Students in the College of Business Administration benefit from the 102 outstanding faculty who are recognized for excellence in teaching, research, and public service. The College was one of the first in the South to be accredited by the American Association of Collegiate Schools of Business, and the only one in Tennessee so designated for a period of nearly 30 years. The UT accounting program, ranked in the top 20 in the nation at the undergraduate level and 10th at the graduate level, was one of the first three in the nation to be accredited at all possible degree levels. The College’s logistics and transportation programs was ranked the number one program in the nation in Fall 1996.

The College has also been a national leader in bringing the concepts of industrial statistics and total quality management methods into the classroom. Many major American firms, including General Motors, Ford, Campbell’s Soup, Procter and Gamble, and the Harris Corporation, rely on the College and the Management Development Center for specialized training in these areas. Eighty-five percent of the top Fortune 500 firms have sent managers to the UT College of Business Administration for advanced management training.

While the College is an integral part of the national scene in education for businesses, it is deeply interested in Tennessee and its students. Through its Center for Business and Economic Research, the College provides the public administration, and statistics. These areas and management decisions by private businesses and public agencies in Tennessee.

Business students are the ultimate beneficiaries of the College’s aggressive involvement in business technology, research, and development of new management methods. In keeping with the College’s tradition of excellence, our professors challenge the student’s pioneering spirit and encourage their professional growth.

THE CURRICULUM

The College of Business Administration undergraduate curriculum consists of general education courses, a business “core,” and an area specialization. Building on a firm foundation in written and oral communications, mathematical and statistical methods, an appreciation of the humanities and the arts, and an understanding of the methodology and accomplishments of the social, behavioral, and natural sciences, the business core seeks to expose students to the realms of financial and managerial accounting, micro and macro economics, and the functional fields of business. In addition, an international dimension is included in the curriculum to prepare students for the world of international business.

In the first two years, students take the courses to meet the general education requirements of the curriculum. In their junior and senior years, students complete courses from the business core requirements and their major. A Bachelor of Science degree is offered in the following nine majors: accounting, economics, finance, general business, logistics and transportation, management, marketing, public administration, and statistics. These majors and related career opportunities are discussed later in this section of the catalog.
UNDERGRADUATE ADVISING CENTER

The College maintains an Undergraduate Business Center staffed with full-time academic advisors to assist students with educational program planning. The Undergraduate Advising Center is located in Glocker 52. Advisors serve students by answering questions concerning majors, curriculum, and elective options. The objective of the Advising Center is to provide students academic advising information. After being admitted to a major (junior and senior years), students will confer with a departmental advisor regarding career goals and opportunities.

PROGRESSION STANDARDS

Admission to the College of Business Administration does not guarantee acceptance in the chosen major. Students who enter the College of Business Administration as freshmen or sophomores must apply for a major in the semester after attempting 40 hours. The academic record presented will be assessed by the Undergraduate Business Program advising staff. The following minimum requirements must have been met in order to be considered for admission to the major:

1. The student must have followed a business curriculum.
2. The student must have earned a minimum 2.75 cumulative average (3.0 for accounting majors), excluding electives.
3. The overall record will be evaluated for quality and seriousness of purpose. An excessive number of withdrawals, incompletes, repeated courses, or failures may result in denial of progression.
4. Progression standards are subject to change; current standards are available in the Undergraduate Advising Center, Glocker 52.

TRANSFER STUDENTS FROM OTHER UT PROGRAMS

Students in other colleges at UT should apply for progression to the College of Business Administration at the earliest possible date—no later than the completion of 75 hours. Only in exceptional cases will application be considered after 75 hours of coursework (at UT or elsewhere) have been attempted. The following minimum requirements must have been met in order to be considered for admission to a major:

1. The student must have earned a minimum 2.75 average, cumulative, over the courses specifically required in the lower-division of that curriculum (3.0 for an accounting major), excluding electives.
2. The overall record will be evaluated for quality and seriousness of purpose. An excessive number of withdrawals, incompletes, repeated courses, or failures may result in denial of progression.
3. Progression standards are subject to change; current standards are available in the Undergraduate Advising Center, Glocker 52.

TRANSFER STUDENTS FROM OTHER INSTITUTIONS

The following minimum requirements must be met in order to be considered for admission to the major:

1. OUT-OF-STATE community college or four-year institution: The student must have a cumulative GPA of 3.0 or higher. If this standard is not met, the student shall be denied admission to the College.
2. IN-STATE community college or four-year institution: The student must have a cumulative GPA of 2.75 or higher. If this standard is not met, the student shall be denied admission to the College.

Only in exceptional cases will application be considered after 75 hours of coursework have been attempted.

ARTICULATION AGREEMENTS

In addition, the College of Business has special transfer articulation agreements with some Tennessee community colleges, leading to admission with junior standing in particular majors at UT. These transfer programs lead to the awarding of the associate degree by the specified community college and the baccalaureate degree by UT, provided the student successfully completes all the courses required in a particular program and meets the grade point average requirements for that agreement. All other academic regulations of the degree-granting institutions must also be satisfied.

Details on specific programs and requirements are available from the Office of Undergraduate Admissions at UT or from the specified community college.

RESIDENCY REQUIREMENT

Students transferring from other institutions must complete at least 9 credit hours in their major at UT.

APPEALS

Students who have been denied progression to a major in Business may appeal to the Undergraduate Admissions Appeals Committee. Information on procedures may be obtained in the Undergraduate Business Advising Center, Glocker 52.

COURSE LOAD

The normal course load for a semester is 15-18 hours. In unusual circumstances, permission to take a course load in excess of 19 hours may be granted by the Director of the Undergraduate Business Program in Business Administration.

SATISFACTORY/NO CREDIT

A maximum of 20 credit hours of satisfactory/NO credit (S/NC) may be used toward degree requirements for a Bachelor of Science in Business Administration. Such credit hours may be used to meet only the requirements identified in the curriculum as “electives,” plus any business courses specifically designated as being available for S/NC grading.

BUSINESS MINOR FOR NON-BUSINESS STUDENTS

Students pursuing majors in colleges other than the College of Business Administration and who wish to obtain a minor in Business Administration must successfully complete the following requirements:

Accounting 201-202, Economics 201, Statistics 201, Finance 301, Management 301, Marketing 301, and one additional 300 level or above business elective.

All upper division (300 level or above) course work must be taken at UT. Students are responsible for meeting listed prerequisites of any upper division courses taken.

Math 125 or 141 is a prerequisite to Statistics 201. Engineering students may substitute Chemical Engineering 301 for Statistics 201.

EXECUTIVE UNDERGRADUATE PROGRAM

Top students are invited into the Executive Undergraduate Program, a professional enrichment experience. Members meet with executives who present small group workshops and luncheons and share experiences with students who have similar goals and interests.

Executive in Residence courses for seniors bring distinguished business and industrial leaders to campus for lectures with small groups of students. In these sessions, students have the opportunity to ask questions of some of the nation’s business leaders.

SCHOLARSHIPS

A limited number of scholarships are available for highly qualified students. Students are invited to apply for a College of Business Administration scholarship. Selection criteria considered for scholarships include: academic merit, financial need, and leadership. Students must complete the University Undergraduate Academic College Scholarship Application Form and submit it by the date printed on the application.

In order to be considered for a scholarship, students must meet the following criteria:

1. Unweighted grade point average of 3.0;
2. ACT composite score of 23 or SAT combined score of 1050;
3. To apply, students must submit the following:
   1. A current high school transcript and a current college transcript, if the student is a transfer student;
   2. ACT or SAT scores;
   3. A completed Undergraduate Academic College Scholarship Application Form.

For a complete list of scholarships available to undergraduate students, please see the Honors and Awards section of the catalog.

FOREIGN STUDY

Several opportunities for study abroad are available to students in the college. One avenue is through group programs arranged and supervised by departments of the college on a full semester or summer term. A second is through group programs conducted abroad by another academic institution to which UT students with approval may be obtained through Overseas Study Information Service located in...
the University’s Division of International Education. A third opportunity is through individualized programs. The nature of this work as well as credit for it should be negotiated by students prior to departure with the appropriate department. Students should register for credit under the Foreign Study number BA 491. Credit will be awarded only after completion of all agreed upon requirements.

OFF-CAMPUS STUDY

Recognizing that learning is not restricted to formal classroom situations, the college provides for students to earn credit toward graduation for approved off-campus study. Such study may be undertaken only with prior approval of faculty member and the department granting credit. It may include certain types of work experiences, community involvement, etc. Students should register for credit under the Off-Campus Study number BA 492. Credit will be awarded only after completion of all agreed upon requirements.

STUDENT ORGANIZATIONS

Business students at UT have the opportunity to belong to several honorary and professional societies. For a complete list of these organizations and the related participation or entrance requirements, please see the listing of honorary and professional societies at the beginning of the catalog. Meeting the following requirements does not guarantee acceptance into the organization.

Alpha Kappa Psi—Professional business fraternity.

American Marketing Association Student Chapter—Open to students interested in marketing careers.

Beta Alpha Psi—Accounting students, graduate or undergraduate, registered in advanced accounting and having a minimum 3.0 average in 9 hours of accounting, as well as in the cumulative GPA.

Delta Sigma Pi—Professional business fraternity.

Logistics and Transportation Association—Open to all Logistics and Transportation majors and any student with an interest in logistics and transportation careers.

Students in Free Enterprise—Open to all business majors. Students complete projects which teach about the free enterprise system.

OTHER AVAILABLE RESOURCES:

Adult Student Services
413 Student Services Building
(865) 974-4504

Career Services
100 Dunford Hall
(865) 974-5435

Center for International Education
Metrolse Hall, Section G
(865) 974-3177

Disability Services
191 Hoskins Library
(865) 974-6087

Global Business Institute
Suite 9, Glocker Building
(865) 974-6110

Honors Programs
Melrose Hall, Section F
(865) 974-7875

Math Tutorial Center
322 Ayres Hall

English Writing Center
211 Humanities and Social Sciences Building
(865) 974-2611

GENERAL EDUCATION—FRESHMAN AND SOPHOMORE YEARS

The following courses are prerequisite to all majors in the College of Business Administration except for the Statistics major which is presented in the departmental listing.

CURRICULA

Freshman and Sophomore Curricula (Except Statistics)
The following courses are prerequisite to all majors in the College of Business Administration.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
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<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>4 English 101, 102 ........................................ 6</td>
<td></td>
</tr>
<tr>
<td>1 Mathematics 123, 125 or 141, 142 ..................... 6 or 8</td>
<td></td>
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<tr>
<td>2 Foreign Language ........................................ 6</td>
<td></td>
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<tr>
<td>3 Natural Science .......................................... 8</td>
<td></td>
</tr>
<tr>
<td>1 Social Science ........................................... 6</td>
<td></td>
</tr>
<tr>
<td>5 Humanities .............................................. 6</td>
<td></td>
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<tr>
<td>Business Administration 220 ............................. 1</td>
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<tr>
<td>Accounting 201, 202 ....................................... 6</td>
<td></td>
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<tr>
<td>Economics 201 ............................................. 6</td>
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<tr>
<td>2 Statistics 201 ........................................... 3</td>
<td></td>
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<tr>
<td>1 Oral Communications .................................... 3</td>
<td></td>
</tr>
<tr>
<td>Management 203 ............................................ 3</td>
<td></td>
</tr>
<tr>
<td>1 History ................................................... 6</td>
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<tr>
<td>Total: 64-66 hours</td>
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</tbody>
</table>

ACCOUNTING AND BUSINESS LAW

Professors:
K.G. Stanga (Head and Arthur Anderson Professor of Accounting)
State, CPA; K.E. Anderson (Distinguished Professor of Taxation), Ph.D. Indiana, CPA; N.E. Dittrich (Emeritus), Ph.D. Ohio State, CPA; B.D. Fisher, L.L.M. George Washington; J.E. Kiger (Warren L. Slagle Professor of Accounting), Ph.D. Missouri, CPA; J.R. Williams (Ernst & Young Professor), Ph.D. Arizona, CPA.

Associate Professors:
B.K. Behn, Ph.D Arizona State, CPA; J.V. Carcello, Ph.D., Georgia State, CPA, CMA; D.P. Murphy, Ph.D. North Carolina, CPA; I.A. Posey (Emeritus), M.S. Tennessee, CPA; CMA; A.W. Ray, Ph.D., Virginia Polytechnic Institute; W.L. Slagle (Emeritus), M.S., Tennessee, CPA; R.L. Townsend, Ph.D. Texas, CPA; J.B. Woodroof, Ph.D. Texas Tech, CPA.

Assistant Professors:
M.C. Lestingher (Emeritus), M.S. Tennessee, CPA; A.S. Rose, Ph.D. Texas A&M, CPA; J.M. Rose, Ph.D. Texas A&M.

Lecturers:
E.B. Anderson, MACC, Tennessee; A. R. Bryant, MACC Tennessee, CPA; D.D. DiVries, B.S., South Dakota, CPA, CISA; L.W. Hendrick, M.B.A. Houston, J.D., CPA; H.N. Hughes, B.S. Tennessee; C.M. Pfeifer, MACC Tennessee, CPA; L.M. Reeves, MACC, Tennessee, CPA.

Asian Languages 311, 312, 313, 314; Classics 253, 254; Comparative Literature 202, 203; English 201, 202, 221, 222, 231, 232, 233, 251, 252, 253, 281, 332, or 200-level Honors Literature Courses; Any foreign language courses whose content is literature including foreign literature in English translation; Medieval Studies 261, 262; Music History 310; Religious Studies 312, 313; Women’s Studies 210, 215; Other Humanities: Art 171; Classics 221, 222; Philosophy 110, 111, 120, 121, 130, 135, 290, 342, 360, 380, 382; Religious Studies 101, 102, 232, 235, 300; Women’s Studies 382.

Oral Communications—One course from: Speech 210, 240.

Social Science—Accounting majors must complete a course in Anthropology, Psychology, or Sociology and complete Political Science 101 or 107; Public Administration majors must complete either Political Science 101 or 107; Anthropology 110, 120, 130, 320; Geography 101, 102, 320, 323; Political Science 101, 102, 107; Psychology 110, 220, 310, 320, 360, 395; Sociology 110, 120, 200, 310, 346, 370, 415, 459.

Statistics majors may substitute Statistics 251 in place of Statistics 201.

Students who complete English 118, Honors English Composition, with a grade of A or B will complete the English Composition requirement by choosing English 102 or a sophomore literature course in the English Department. If the sophomore literature course appears on the list for the Humanities Literature requirement, the course may also be counted toward that Humanities requirement.
The Accounting Program at UT has established itself as one of the nation's top accounting schools. Modern society demands much from professional accountants. They are responsible for preparing and analyzing financial data and for consulting in many specialized areas such as tax planning and compliance, auditing (examining and verifying financial records), information systems, and management advisory services.

After completing the core requirements for a business education (including courses in statistics, economics, marketing, finance, business law, and management), the accounting major begins extensive work in financial and managerial accounting. The student then completes advanced work in specialized areas such as tax, auditing, and systems. The use of computers in accounting is also stressed.

UTK's Accounting Programs are accredited by the American Assembly of Collegiate Schools of Business and are among the initial programs in the nation to receive this accreditation. Since 1993, the state of Tennessee has required anyone wishing to take the Uniform Certified Public Accountant (CPA) Examination to complete 150 semester hours of study. Therefore, students are encouraged to continue their formal education in UTK's one-year Master of Accountancy program.

**ECONOMICS**

**Professors:**
M.N. Murray (Head), Ph.D., Syracuse; R.A. Bohm, Ph.D., Washington (St. Louis); R.L. Bowby (Emeritus), Ph.D., Texas; S.L. Carroll, Ph.D. Harvard; H.S. Chang, Ph.D. Vanderbilt; D.P. Clark, Ph.D., Michigan State; W.E. Cole (Emeritus), Ph.D., Texas; P. Davidson (J. Fred Holly Professor of Political Economy); Ph.D. Pennsylvania; W.F. Fox, Ph.D., Ohio State; C.B. Garrison, Ph.D. Kentucky; H.W. Herzog, Jr., Ph.D. Maryland; H.E. Jensen (Emeritus),
Ph.D. Texas; F.Y. Lee (Emeritus), Ph.D. Michigan State; J.R. Moore (Emeritus, Alumni Distinguished Service Professor), Ph.D. Cornell; W.C. Neale (Emeritus), Ph.D. London School of Economics; M. Russell (Emeritus), Ph.D. Oklahoma; G.A. Spiva, Jr. (Emeritus), Ph.D. Texas.

**Associate Professors:**
J.A. Gauger, Ph.D., Iowa State; E. Glustoff, Ph.D. Stanford.

**Assistant Professors:**
R. Santore, Ph.D., Ohio State; V.O. Stango, Ph.D., University of California; S. Stewart, Ph.D., University of New Mexico.

**Research Assistant Professor:**
D. Bruce, Ph.D., Syracuse University.

The economics major thoroughly examines the economic processes of society, focusing on the production, distribution, and consumption of goods and services. Students in economics may select courses from the fields of economic development, industrial organization, labor economics, international economics, economic history, regional economics, public finance, and quantitative methods. All students majoring in economics take a course in microeconomic theory. In addition, the student learns a knowledge of our culture and society as well as the world of business by completing our arts and sciences courses and in the functional areas of business. Graduates in economics are in demand in many sectors including industry, commerce, finance, trade associations, and government offices at all levels.

**FINANCE**

**Professors:**
J.W. Wansley (Head and Clayton Chair of Excellence), Ph.D. South Carolina; H.A. Black (James F. Smith Professor), Ph.D. Ohio State; T.P. Boehm (Patton Scholar), Ph.D. Washington (St. Louis); R.P. DeGennaro, Ph.D. Ohio State; W.W. Dotterweich (Emeritus), Ph.D. Pennsylvania; M.C. Ehrhardt (Voight Scholar), Ph.D. Georgia Tech; G.C. Philippatos (Distinguished Chaired Professor of Banking and Finance), Ph.D. New York; R.E. Shrieves (Sun Trust Professor of Finance), Ph.D. California (Los Angeles); J.M. Wachowicz, Jr., Ph.D. Illinois.

**Associate Professors:**
A.L. Auxier, Ph.D. Iowa; M.C. Collins, Ph.D. Georgia; P.R. Daves, Ph.D. North Carolina; D. Murphy, Ph.D. Florida.

The finance major gives students the flexibility to tailor their programs to fit their particular career goals and to prepare for one (or more) of the following specialties:

- **Courses in Investments** lead to career opps in investment analysis, commercial and investment banking, and insurance companies. Courses in **Real Estate** are designed for students who are interested in real estate brokerage, appraising, taxation, law, property management, real estate development, mortgage lending and banking, construction, government loan guarantees, and insurance. Courses in **Corporate Finance** lead to opportunities in corporate forecasting, planning, and control; cash management; and capital and financial analysis positions. Courses in **Financial Institutions and Markets** prepare students for opportunities in the management of financial institutions, as well as within the government organizations related to the industry. Courses in **Insurance and Risk Management** prepare students for opportunities in insurance, business, and public risk management.
GENERAL BUSINESS

The General Business Program offers a broader education that allows students to gain in-depth knowledge of a particular area of business while retaining an overall perspective. After completing the core requirements for a business degree, General Business majors complete twenty-four additional hours in upper-division business courses.

The wide range of business and arts and science courses required by this curriculum provides a solid base knowledge well suited for entry-level positions in many organizations. Graduates of the General Business program begin their careers as management trainees in sales, banking, or other areas. The curriculum is also ideal for students interested in pre-law, particularly specialization in corporate law.

Junior

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Marketing 301</td>
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<tr>
<td>Finance 301</td>
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<td>Management 301</td>
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</tr>
<tr>
<td>Electives</td>
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<td>Business Law 301</td>
<td>3</td>
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<tr>
<td>Economics 311 or Logistics and Transportation 301</td>
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<td>General Business Electives</td>
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<tr>
<td>Ethics</td>
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<td>Written Communications</td>
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Senior

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<td>Management 401</td>
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<td>General Business Elective</td>
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<tr>
<td>International Business</td>
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<tr>
<td>Arts Elective</td>
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</table>

Total: 126 hours

*General Business Elective (18 hours)—Six courses required, 300 level or above. Must include one course in at least four of the following areas: Accounting, Business Administration, Economics, Finance, Logistics and Transportation, Management, Marketing, Statistics.

*Ethics—One course from: Philosophy 242, 342, or 344.

*Written Communications—One course from: English 263, 295, 395, 360, 455.

*International Business—The international course requirement may be satisfied by taking either Business Administration 311 or 491 or an international course in a concentration area such as Management 471, Logistics and Transportation 441, Economics 311, 323, or Statistics 440.

*Arts—One course from the courses listed below: Art 191; Art History 172, 173, 183; Classics 232, 233; English 263; Music History 100, 110, 120; Music General 130; Speech 280, 380; Theatre 100, 220, 221, 260; Women’s Studies 330.

MANAGEMENT

Professors: R.W. Boling (Emeritus), Ph.D. Stanford; H.D. Dewhurst (Emeritus), Ph.D. Texas; K.C. Gilbert, Ph.D. Tennessee; L.R. James, Ph.D. Utah; A.H. Keally (Emeritus), M.B.A. Pennsylvania; R.T. Ladd, Ph.D. Georgia; J.M. Larsen, Jr., (Emeritus), Ph.D. Purdue; A. Miller (William B. Stokely Professor of Management), Ph.D. Washington; C.W. Neel, Ph.D. Alabama; C.E. Noon, Ph.D. Michigan; D. Reese (Emeritus), Ph.D. Iowa; M.C. Rush, Ph.D. Akron; M.M. Srivivasan, Ph.D. Northwestern; M.J. Stahl (Distinguished Professor of Management), Ph.D. Rensselaer; S.C. Vance (William B. Stokely Professor of Management, Emeritus), Ph.D. Pennsylvania; G.H. Whitlock (Emeritus and Alumni Distinguished Service Professor), Ph.D. Tennessee.

Associate Professors: O.S. Fowler (Head), Ph.D. Georgia; M.R. Bowers, Ph.D. Clemson; C.P. Erdi, Ph.D. British Columbia; Usha C.V. Hailey, Ph.D. New York University; W.O. Judge, Ph.D. North Carolina; R.C. Maddox, Ph.D. Texas; J.R. Rentsch, Ph.D. Maryland; D.J. Woehr, Ph.D. Georgia Institute of Technology.


Instructors: J.C. Anderson, Master of International Management, Arizona; W.L. Illic, M.A. Tennessee.

Management majors at UT may choose from several different areas of emphasis. Operations management and personnel management are the most specified, but an individualized program may be developed. The foundation is provided by studies of organizational structure and process, human behavior in organizations, and business strategy. Building on that foundation and the core courses in accounting, economics, marketing, and finance, the management major selects from the following four areas of emphasis: General Management, Operations Management, Human Resource Management, or International Management.

Career opportunities include staff positions in production planning, inventory management, employment, training, and recruiting. In addition, line management positions in all types of industries, such as manufacturing, retailing, banking, transportation, and hospitality are all available to management majors.

MANAGEMENT SCIENCE PROGRAMS

(Graduate Program only)


Associate Professors: M.R. Bowers, Ph.D. Clemson; C.P. Erdi, Ph.D. British Columbia.

GRADUATE

Consult the Graduate Catalog for information on graduate programs.

MARKETING, LOGISTICS, AND TRANSPORTATION

LOGISTICS AND TRANSPORTATION


Associate Professors: J.H. Foggin, Ph.D. Indiana; M.C. Holcomb, Ph.D. Tennessee.

Assistant Professor: M.E. Rozicka, Ph.D. Arizona State.

The internationally recognized logistics and transportation program at UT is currently regarded as one of the most comprehensive and contemporary programs in the nation. The program has attained such recognition through its integration of one of the country’s most highly regarded faculties, combined with a fundamental yet innovative curriculum. Logistics refers to the movement of raw materials and component parts into and within a business firm and to the distribution of finished products and services to customers. Because having products and/or services in the right place at the right time is critical for suc-
cess in any business, logistics is an important element in any firm’s comprehensive supply chain. A career in logistics offers students the opportunity to make a significant contribution to corporate effectiveness in this area. Transportation refers to the physical movement of goods between two geographic points. Students interested in transportation will typically accept employment with a carrier (motor, rail, water, or air) or with the logistics and transportation department of a business that purchases transportation services from carriers.

**MARKETING**

Marketing is an activity that is directed toward identifying what the customer wants with the objective of delivering superior value to that customer. Companies that strive to focus on their customers understand the importance of such aspects of marketing as advertising, distribution, selling, pricing, product development, and marketing research. Marketing provides career opportunities at the heart of the free enterprise system. Typically, a career in marketing begins in either consumer or industrial sales or retailing, and may ultimately expand to positions in advertising, brand management, sales management, promotion management, marketing research, distribution, and other related areas.

It is beneficial for students interested in a marketing career to include courses in accounting, business law, economics, finance, logistics and transportation, management, and statistics, as well as a broad array of courses in arts and sciences, in their educational backgrounds. In particular, courses in the social sciences provide students with the background for understanding the forces that shape consumer preferences.

**STATISTICS**


Associate Professors: P.A. Dahbalak, Ph.D. Georgia State; S.F. Gardial, Ph.D. Houston; M.A. Moon, Ph.D. North Carolina (Chapel Hill); R.C. Reizenstein (Chair), Ph.D. Cornell; J.O. Rents, Ph.D. Georgia.

Assistant Professor: K.B. Kahn, Ph.D. Virginia Polytechnic Institute; M.B. Myers, Ph.D. Michigan State.

Instructor: M.E. Collins, M.B.A. Middle Tennessee State.

**PUBLIC ADMINISTRATION**

Public Administration is a joint program sponsored by the Department of Economics and the Department of Political Science. It is designed for students interested in public sector management, the formation of public policy, or the interface between the public and private sectors. The program combines general education in business principles with specific courses in government. Students choose electives to focus their interest or expertise.

Public administration majors find careers in city management, tax administration, budget analysis, and in the functional areas of government such as education, health, and economic development. Opportunities exist at the federal, state, and local levels of government. Many public administration majors pursue graduate-level education and training. Law schools and the Masters of Public Administration are two possible options.

**Professor:** Robert W. Mee (Head), Ph.D. Iowa State; H. Bozdogan, Ph.D. Illinois; Frank M. Guess, Ph.D. Florida State; Robert A. McLean (Emeritus), Ph.D. Purdue; William C. Parr, Ph.D. Southern Methodist; John W. Philpot (Emeritus), Ph.D. Virginia Polytechnic; Richard D. Sanders (Emeritus), Ph.D. Texas; David L. Sylwester, Ph.D. Stanford; Charles C. Thiennon (Emeritus), Ph.D. Virginia Polytechnic Institute.

**Associate Professor:** Mary G. Leitaker, Ph.D. Kentucky; Ramon V. Leon, Ph.D. Florida State; William L. Seaver, Ph.D. Texas A&M; Esteban Walker, Ph.D. Virginia Polytechnic; Mary Sue Younger, Ph.D. Virginia Polytechnic.

**Assistant Professor:** Halilima Bensmail, Ph.D. Paris VII.

**Instructor:** Charles M. Cwiek, M.S. Tennessee.

**Lecturer:** James L. Schmidhammer, Ph.D. Pittsburgh.
Adjoint:
K.O. Bowman, Ph.D. Virginia Polytechnic Institute; Edward L. Frome, Ph.D. Emory; Stephen A. McGuire, Ph.D. Kansas State.

The general perception of "statisticians" is most often associated with sporting events. The life a professional statistician, however, is much more varied and interesting than computing the average rushing yards per play. Actually, statistics is the science of learning from data, and all processes generate data. Statisticians determine how to collect and manage this necessary information; they interrogate the data and present the results in a clear fashion so that wise decisions can be made.

Statistics is used in various areas of business, industry, science, and government. The fields of opportunity for statisticians are numerous—e.g., economics, finance, market research, e-commerce, engineering, manufacturing, transportation, education, medicine, psychology, agriculture, and computer and social sciences.

There are two basic types of statisticians: applied and theoretical. The focus of the undergraduate program at UT is on applied statistics. Applied statisticians help to improve processes and solve real-world problems. They may forecast economic or population growth, evaluate results of a new marketing program or the effectiveness of a new drug, identify quality control issues in manufacturing, or design experiments to help engineers and scientists determine the best design for a jet airplane.

Prospective statisticians must have a strong aptitude for mathematics, a solid computing background, and an earnest curiosity to explore the practical application of statistics. The skills you will learn as a statistics major at UT will enable you to understand and convey the scope and power of statistical thinking—resulting in significant contributions toward solutions to a variety of important jobs. Well-paying jobs are available at the B.S., M.S., and Ph.D. levels.
COURSE LOAD
The maximum number of hours an undergraduate may take without special permission is 19 hours. Permission to take more hours must be obtained from the dean or the associate dean for undergraduate studies with the recommendation of the student’s advisor and department head or school director.

REQUIREMENTS FOR ALL CURRICULA

CORE AREAS
All students in the College assume the following core areas:
- Overview/Survey
- Writing
- Theory and Research
- Free Speech, Law and Ethics

Each department designates a course (or courses) to fulfill each of the five majors.

Satisfactory/No Credit Option
This option applies only to general elective courses with the exception of field experience courses. No course that is part of the specific requirements of the College of Communications or a student’s major department can be taken under this option. For example, social science and humanities electives required by the various departments cannot be taken S/NC.

Courses evaluated as “satisfactory” will count as hours toward graduation but not for calculating the grade point average. A student who wishes to take a S/NC course must indicate this at the time of registration. Under no circumstances may a student change from S/NC to regular credit or from regular credit to S/NC after the deadline for adding courses.

MINORS
Minors are offered in Broadcasting, Journalism/Public Relations, and Speech Communication. An interdisciplinary Communications minor is also available.

A minor in Broadcasting consists of 18 hours as follows: Communications 100, Broadcasting 275, Broadcasting 310 or 320, and Broadcasting electives (any three courses).

A minor in Journalism or Public Relations consists of 18 hours from the following: Journalism 200, Communications 400, plus 12 hours in journalism or public relations approved by the School of Journalism minor advisor.

A minor in Speech Communication consists of Speech Communication 100 plus 18 additional hours of Speech Communication courses, at least 12 of which must be at the 300 level and above. Speech Communication 445, 491, 492, 493 may not be included toward requirements for the minor.

An 18 hour interdisciplinary minor in Communications for non-majors is available that consists of either Communications 100 or Speech Communication 100; two 200-level sequence introduction courses (Advertising 250, Broadcasting 275, Journalism 200, Public Relations 270, Speech Communication 260); and three upper division courses across two sequences in which the 200-level introductory courses have been taken. Students seeking an Interdisciplinary minor should see the College of Communications undergraduate associate dean.

HONORS PROGRAM IN SPEECH COMMUNICATION
The Speech Communication Department offers an honors program that provides an intense educational experience designed to assure the participating student a superior and challenging undergraduate education. Speech Communication 107, the Honors version of Introduction to Speech Communication, is open to students with a 3.0 or higher cumulative GPA and a 3.25 or higher cumulative high school GPA and/or ACT composite score of 27 or better. Majors who are prospective juniors and who have a 3.0 or higher cumulative GPA and/or ACT composite score of 27 or better. Majors who are prospective juniors and who have a 3.0 or higher cumulative GPA and/or ACT composite score of 27 or better. Majors who are prospective juniors and who have a 3.0 or higher cumulative GPA and/or ACT composite score of 27 or better. Majors who are prospective juniors and who have a 3.0 or higher cumulative GPA and/or ACT composite score of 27 or better.

Application forms are available in the department office. To graduate with Honors, students must meet all requirements for the Speech Communication major.
ADVERTISING

Professors:
Roxanne Howland, Ph.D. Illinois; Ronald E. Taylor (Head), Ph.D. Illinois.

Associate Professors:
Eric Haley, Ph.D. Georgia; Maria G. Hoy, Ph.D. Oklahoma State.

Assistant Professors:
Margaret Morrison, Ph.D. Georgia; Sally McMillan, Ph.D. Oregon.

Emeritus Professor:
Richard Joel, M.A. Wisconsin.

Freshman
English 101, 102 ................................................ 6
Communications 100 ............................................. 3
1Foreign Language ................................................ 6
Anthropology 130 ................................................ 3
2Natural Science ................................................ 8
Mathematics 119 or 123, 125 .................................. 6
Science Elective .................................................. 9
Advertising 250 ................................................... 3
History 241, 242 ................................................... 6
2English Literature ............................................... 6
Economics 201 .................................................... 4
Statistics 201 ....................................................... 3
Political Science 101 or 102 ................................. 3
Accounting 201 ................................................... 3
Journalism 280 .................................................... 3

Junior
Psychology 110 ................................................... 3
Advertising 340, 350 ............................................. 6
Advertising 360 ................................................... 3
Speech 240 ......................................................... 3
Marketing 301 ..................................................... 3
Marketing 310 ..................................................... 3
Management 301 ................................................ 3
Social Science Elective ........................................... 3
General Elective .................................................. 3

Senior
Psychology 360 ................................................... 3
Advertising 380, 450 ............................................. 4
Advertising 470, 480 ............................................. 6
Communications Electives ................................. 6
General Electives ................................................ 6

Total: 124 hours

1Six hours of intermediate foreign language is required.
2Natural Science Electives are any two courses from: Astronomy 161, 162; Biology 101, 102; Botany 110, 120; Chemistry 100, 110 or 120, 130; Geography 131, 132; Geology 101,102, or 103.
3Mathematics Electives: 110, 115, 119, 123, 125.

NOTE: If courses in these areas are taken, at least some general elective hours must be used for courses given in the College of Arts and Sciences. Between general electives and professional electives, at least 14 hours must be taken from the College of Arts and Sciences.

JOURNALISM

Professors:
Paul G. Ashdown, Ph.D. Bowling Green; Dorothy A. Bowles, Ph.D. Wisconsin (Madison); Edward Caudill, Ph.D. North Carolina; James A. Crook (Emeritus), Ph.D. Iowa State; Mark Littmann (Chair of Excellence), Ph.D. Northwestern; Mark Miller, Ph.D. Michigan State; Michael W. Singletary, Ph.D. Southern Illinois; Dwight L. Teeter, Jr., Ph.D. Wisconsin (Madison).

Associate Professors:
Daniel Foley, M.S.J. Northwestern; Robert B. Heller, M.S. Syracuse; Jerry L. Morrow, Ph.D. Toledo; Sammie Lynn Puett, (Emeritus) M.S. Tennessee.

Assistant Professors:
Lisa T. Fall, Ph.D. Michigan State; Bonnie P. Riechert, Ph.D. Tennessee; Candace L. White, Ph.D. Georgia.

BROADCASTING

Professors:
Barbara A. Moore (Head), Ph.D. Ohio; Norman R. Swan, Jr., Ph.D. Missouri.

Associate Professor:
Benjamin J. Bates, Ph.D. Michigan.

Assistant Professors:
Catherine A. Luther, Ph.D. Minnesota; Mark D. Harmon, Ph.D. Ohio.

Emeritus Professors:
Darrel W. Holt, Ph.D. Northwestern; Herbert H. Howard, Ph.D. Ohio.


## JOURNALISM CONCENTRATION

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<th>Credit</th>
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<td>Math Elective</td>
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<td>History 241, 242</td>
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<td>Foreign Language or General Electives</td>
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<td></td>
<td>Economics 201</td>
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<td>Journalism 280 or 290</td>
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<td>Speech 210</td>
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<td>Communications 300</td>
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<td>Journalism 360</td>
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<td>Political Science Electives</td>
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<tr>
<td>Senior</td>
<td>Communications 400</td>
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<td></td>
<td>Journalism 420</td>
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<td>Humanities Elective</td>
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Total: 124 hours

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## PUBLIC RELATIONS CONCENTRATION

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<tr>
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<td>Math 119 or 123</td>
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<td>Economics 201</td>
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<td>Statistics 201</td>
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<tr>
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<td>Foreign Language or General Electives</td>
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<td>Marketing 301</td>
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<td>Senior</td>
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Total: 124 hours

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## SPEECH COMMUNICATION

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<td>Mathematics Elective</td>
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<td>Psychology 110</td>
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<td>Natural Science</td>
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<td>History 241, 242</td>
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<td>Math 115 or Statistics 201</td>
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<tr>
<td>Junior</td>
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<td>Advanced Composition Elective</td>
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Total: 124 hours

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1. Six hours of intermediate foreign language is required.
2. Natural Science Electives are any two courses from: Astronomy 161, 162; Biology 101, 102; Botany 110, 120; Chemistry 100, 110 or 120, 130; Geography 131, 132, Geology 101, 102, or 103.
3. Mathematics Electives: Math 110, 119, or 125
4. Humanities Electives: Art; Classics; English; Foreign Language; Journalism 444, 456; Music; Theatre; Philosophy; Religious Studies.
6. Social Science Electives: Anthropology; Geography; Economics; History; Political Science; Psychology; Sociology; Child and Family Studies; African and African-American Studies; Women’s Studies; Speech Communication; Information Sciences; Journalism 460.
The College of Education prepares teachers, school administrators, pupil personnel specialists, and other professionals for non-school settings. At the undergraduate level, teacher education remains a major function of the College even though students are now required to complete one year of post-baccalaureate level work before qualifying for a teacher license.

Prior to the establishment of the College of Education in 1926, courses for teachers were first taught in 1903. Since that time, the College has increasingly fulfilled its responsibility to prepare competent preservice graduates, as well as to provide professional growth experiences for inservice educators.

The College of Education's approximate 85 faculty reside in six academic departments. The College's Office of Teacher Education and Licensure coordinates educational licensure programs throughout the College of Education and collaborates with other colleges within the University where professional educators are prepared (see Collaborative Programs section). In addition, the Office of Teacher Education has been responsible for overseeing a series of teacher education reforms which include increased admission standards, strengthened general education, redesigned professional education, and the creation of student/faculty mentoring teams.

In addition to teacher education programs, the College of Education has several non-teacher education majors at the undergraduate level. These majors include: Exercise Science, Human Services, and Sport Management.

Exercise Science graduates attend programs in physical therapy, cardiac rehabilitation, and biomechanics, and are employed in fitness, out-patient rehabilitative, and athletic-training settings.

The College of Education holds membership in the American Association of Colleges for Teacher Education and the Holmes Partnership. Furthermore, all school licensure and school-related degree programs are fully accredited by the National Council for Accreditation of Teacher Education, the Southern Association of Colleges and Schools, and the Tennessee State Department of Education. All degree programs which prepare non-school based professionals are accredited by the Southern Association of Colleges and Schools.

The faculty of the College of Education is committed to performing three major functions: (1) to provide professional preparation for teachers, administrators, and school service personnel and non-school based professionals at the undergraduate and graduate levels; (2) to collaborate with school personnel, educational agencies, community agencies, professional groups, and others interested in the evaluation and improvement of educational opportunities, programs, and services; and (3) to promote and conduct investigations which are designed to improve professional education and enhance student/client learning. In performing these functions, it is believed that students should attain a broad cultural background in the arts and sciences, demonstrate mastery of professional knowledge and skills, and have a thorough knowledge of their content field. Through a carefully planned program of combined academic and direct experiences, the prospective professional acquires a depth and breadth of knowledge and understanding which is superior to that of the typical college graduate in cultural and citizenship appreciation as well as in professional and scholarly accomplishment.

The Claxton Complex and the Health, Physical Education, and Recreation Building are functional facilities which are designed for the education of teachers and other professionals. These buildings include science laboratories, seminar rooms, the Instructional Services Center, the Reading Center, the Curriculum Laboratory, the Computer Laboratory, the Bureau of Education, Research and Service, as well as a number of interest centers.

COLLABORATIVE PROGRAMS

Faculty members of the College of Education collaborate with faculty in the colleges cited below in preparing teachers and educational specialists. Students interested in pursuing teacher or educational specialist licensure in these fields earn their baccalaureate degree in the colleges cited and complete licensure requirements at the conclusion of either the fourth or fifth academic year, depending upon program requirements. Students are referred to the offices indicated below and to Steps I-IV of the licensure requirements cited in this section of the catalog for further information:

College of Agricultural Sciences and Natural Resources, Agriculture Education, Agriculture and Extension Education—201 Morgan Hall;


College of Arts and Sciences, Art Education—Art Department Art and Architecture Building, 1715 Volunteer Boulevard; Elementary Education, Secondary Education: English, Foreign Languages, Mathematics, Science, Social Science—College of Education Advising Center, Claxton Complex A332; Music Education—Music Department, 211 A Music Building, 1741 Volunteer Boulevard; Speech and Hearing Education—Audiology and Speech Pathology Department, 457 South Stadium Hall;

College of Social Work, School Social Worker—College of Social Work, 221 Henson Hall.
PROGRESSION TOWARD DEGREE COMPLETION AND/OR LICENSURE IN TEACHING FIELDS

Progression toward completion of a degree and/or licensure in a teaching field requires acceptance to the Teacher Education Program by a board of admissions. The admissions process begins at the time of matriculation to UT whether the student enters as a freshman or transfer student.1

STEP I: ADMISSION TO TEACHER EDUCATION

MINIMUM REQUIREMENTS

Applicants will be evaluated by a board of admissions upon attainment of the following minimal criteria:

1. Academic Achievement: Applicants will be required to earn a minimum 2.7 undergraduate cumulative GPA (2.5 GPA in Agriculture Education; the following programs may have different standards and students should contact the respective program advisor for details: Business/Marketing Education, Home Economics Education, Teacher Education Standards Committee. If this standard is not met: The applicant's disposition will be determined by the Teacher Education Standards Committee.

Waivers will be granted as follows:

(a) Applicants who have attained an ACT minimum composite score of 21 (a minimum composite score of 22 on the Enhanced ACT) or who have attained a minimum combined verbal and mathematics score of 920 on the SAT or a 1020 on the RSAT shall be exempt from the SAT.
(b) Applicants who have earned a bachelor's degree from an accredited institution.
(c) Music Education - at least one additional hours of 200 level or above math; (b) Science Education, (c) Music Education - at least one semester of study in music at the 200 level and Music Theory 210; (d) English Education and foreign language education require at least 9 semester hours of 300 level (or above) courses in English or foreign language, respectively, and a 3.0 cumulative average in those respective fields.

If this standard is not met: The applicant will take the PPST: Pre-Professional Skills Test (PPST). The applicant will attain the minimum scores established by the State Board of Education on the Pre-Professional Skills Test. Waivers will be granted as follows:

1. Admission to the Teacher Education Program and enrollment in student teaching or internship: (a) 2.7 undergraduate cumulative GPA minimum (2.5 GPA in Agricultural Education; the following programs may have different standards and students should contact the respective program advisor for details: Business/Marketing Education, Family and Consumer Sciences Education, Technology Education, and Music Education), and (b) 2.8 GPA in professional education courses. It is important to note that letter grades of “D” and “F” in professional education courses must be repeated.

2. Field Study: Each student’s performance in field study will be reviewed by College faculty and school-based professionals. Students whose progress is judged inadequate will be required to either repeat courses, participate in remedial activities, or change to a more appropriate major.

To facilitate communication and proper guidance, all students will be assigned to a mentoring team consisting of appropriate College faculty.

STEP II: PROGRAM PROGRESSION

Each student’s progress will be reviewed each semester following admission to the Teacher Education Program and a determination will be made as to the student’s eligibility to advance to the next level of preparation. Particular attention will be given to the following variables:

1. Academic Achievement: The following minimum GPA’s as guidelines during the period between admission to the Teacher Education Program and enrollment in student teaching or teaching internship: (a) 2.7 undergraduate cumulative GPA minimum (2.5 GPA in Agricultural Education; the following programs may have different standards and students should contact the respective program advisor for details: Business/Marketing Education, Family and Consumer Sciences Education, Technology Education, and Music Education), and (b) 2.8 GPA in professional education courses. It is important to note that letter grades of “D” and “F” in professional education courses must be repeated.

3. Deaf students are not required to submit to the speech and hearing screening if they are pursuing licensure to teach deaf students. However, such applicants must inform the Director of Teacher Education, Claxton Complex 337, of their intentions.

STEP III: PROGRESSION TO STUDENT TEACHING OR INTERNSHIP

Students seeking authorization to enroll in student teaching or internship must apply at least one calendar year prior to the term of intended student teaching or internship. Making application to enroll in the internship may occur prior to admission to the Teacher Education Program. Students should apply at least one calendar year prior to the term of actual internship regardless of their status in the Teacher Education Program. Students who choose to delay their enrollment in the internship program are only guaranteed a new placement if they inform the Office of School Based Experiences and their program faculty mentor at least one calendar year prior to the term of intended internship.

The following are the general prerequisites for student teaching or internship. Prerequisites for specific programs (e.g., Art Education, Elementary Education) are available in the Office of School Based Experiences or from academic advisors:

1. Admission to the Teacher Education Program no later than the term preceding student teaching or internship.
2. Completion of field studies required in the program curriculum.
3. Classification as a senior-level student (i.e. at least 90 semester hours passed) for student teachers and a baccalaureate degree for interns.
4. Possession of the following minimum grade point averages: (a) 2.7 undergraduate cumulative GPA (2.5 GPA in Agriculture Education; the following programs may have different standards and students should contact the respective program advisor for details: Business/Marketing Education, Early Childhood Education, Home Economics Education, Technology Education, Trades Industry Education, and Music Education), and (b) 2.5 GPA in major, and (c) 2.8 GPA in professional education courses (i.e., grades of “D” and “F” must be repeated).

5. Recommendation by the student’s faculty mentoring team to enroll in student teaching or internship.
In addition, any record established by the student in the Office of Student Conduct will be reviewed by the Teacher Education Standards Committee.

Students should note that the most important criterion in placing student teachers or interns in the public schools is the potential value of the placement to the student's professional development. Therefore, the College cannot guarantee the students' preferences regarding specific geographic placement will be granted.

Student teaching or internship is evaluated on a satisfactory/no credit basis.

STEP IV: LICENSURE

Students must attain the following minimum requirements to qualify for the College's recommendation for licensure:

1. Academic and professional achievement: Only those students who perform satisfactorily in student teaching or internship will be recommended for licensure. Students who perform unsatisfactorily may be provided another opportunity to succeed. (Such students may be required to participate in remedial courses and/or activities prior to re-enrolling in student teaching or internship.)

2. Additional academic requirements include attainment of the following minimal levels of academic achievement: (a) 2.5 undergraduate cumulative GPA and specific teaching field (major) courses, and (b) 2.8 GPA in professional education courses (“D” and “F” course grades must be repeated).

2. PRAXIS TESTS: Professional Assessments for Beginning Teachers: All candidates for licensure are required to attain minimum scores as determined by the State Board of Education. Complete details regarding specific tests required and minimum passing scores can be obtained in the Education Advising Center, Claxton Complex A332.

Complete details regarding the NTE are available in the Education Advising Center, Claxton Complex A332.

Applications for teacher licensure should be completed early in the final semester before graduation. Application forms may be obtained in the Education Advising Center, Claxton Complex A332.

Applications for teacher licensure should be completed early in the final semester before graduation. Application forms may be obtained in the Education Advising Center, Claxton Complex A332.

It is important to note that Tennessee regulations stipulate that applicants for initial teacher licensure must be recommended by an approved teacher education institution.

PROGRESSION TOWARD DEGREE COMPLETION IN NON-TEACHING FIELDS

EXERCISE SCIENCE PROGRESSION

Progression to the Exercise Science Major requires a minimum undergraduate cumulative GPA of 2.5 after a minimum of 45 hours of coursework and completion of ES 100 Orientation to Exercise Science, Chemistry 120, and Physics 221.

1. Any professional course, taken before or after progression into the Exercise Science Program, must be passed with a minimum letter grade of “C.” No professional courses with a grade below “C” will be counted toward the major. Professional courses are: BCMB 230, Exercise Science 325 Athletic Training Techniques, 332 Applied Anatomy, 350 Disease and Injury: Epidemiologic and Demographic Perspectives, 411 Adapted Physical Activity, 414 Fitness Testing and Exercise Prescription, 422 Biomechanics of Human Movement, 480 Physiology of Exercise and all professional electives.

2. Students admitted into the Exercise Science Major must maintain a minimum cumulative GPA of 2.5 thereafter to remain in good academic standing. Students with less than a 2.5 GPA for two consecutive semesters will be dropped from the program.

3. Students must have a minimum cumulative 2.5 GPA to be able to register for, and complete, ES 411 Adapted Physical Activity, 414 Fitness Testing and Exercise Prescription, 422 Biomechanics of Human Movement, and 480 Exercise Physiology.

HUMAN SERVICES

The standards which must be met for progression and retention in Human Services are professional in nature, as well as academic, because the program in Human Services prepares students for entry into service professions. Students who wish to pursue a major in Human Services must earn a grade of “C” or higher in the introductory course before progressing to upper division work in the major.

Students whose average for courses taken in the major falls below 2.5 must regain this required minimum average by the end of the subsequent semester in order to be retained in the major. A Board of Review will meet once each semester to interview students who wish to progress into the major, and to review the work of students who are not meeting the academic and/or professional standards of the program. Students who wish to do so may ask to be interviewed while taking the introductory course, and if they meet the standards for progression will be allowed to progress to upper division work upon completion of that course with a “C” or higher. Students who in the judgment of the members of the Board are not meeting the professional standards of the program will not be retained in the major. Applications for Fall/Spring field sequence must be submitted at the beginning of the preceding Spring semester, and students who fail to meet the standards for professional conduct during the course of their field work will not be retained in the major. (Note that any decision affecting progression or retention may be appealed to the head of the Counseling, Deafness, and Human Services Department.) Requests for information about the program, an appointment with the Board of Review, and an application for the field practicum sequence should be directed to the program secretary in Claxton Complex A204.

SPORT MANAGEMENT PROGRESSION

Students must complete an application upon completion of the following minimum criteria:

1. application to the Sport Management major;
2. 30 semester hours;
3. minimum 2.5 cumulative GPA.

Board of Admissions

The Board of Admissions is made up of the faculty on the Sport Management Program Area Committee and will meet periodically throughout the semester to review applications.

The Board of Admissions will base admissions decisions upon applicants’ academic qualifications, oral and written communication, and expressed interest in sport management.

ADMISSION DECISIONS

The Sport Management Program is committed to recruiting and preparing the strongest possible candidates for the sport management profession. The admissions criteria summarized above are minimum expectations. Applicants should be aware that admission decisions are made by the faculty in Sport Management and that selection is competitive, based upon available faculty resources and field placements.

MINORS

Teaching Minors

Students who are earning a baccalaureate degree in the College of Arts and Sciences and who are also seeking teacher licensure in Elementary Education, Secondary Education, Foreign Language Education, Mathematics Education, Music Education, Science Education, or Social Science Education are urged to earn a minor in either elementary or Secondary Education. Students who do not earn a minor as a part of their undergraduate studies will be required to complete the equivalent of a minor as a prerequisite to entering the fifth year of professional study.

Students should note that courses taken to satisfy the minor will not fulfill teacher licensure requirements.

Dance Minor

Students interested in a minor in Dance are referred to the College of Education’s Curricula section of this catalog.

Dance Minor

The intention to complete a minor must be declared at the time of application for a major. Any courses taken to satisfy the minor will not fulfill teacher licensure requirements.

APPROVED FOREIGN LANGUAGE, MULTICULTURAL, AND INTEGRATED ELECTIVES

FOREIGN LANGUAGE Greek (Classics)—any course offered by this department including 111, 112, 251, 252; French—any course offered by this department including 111, 112, 150, 211, 212, 217, 218; German—any course offered by this department including 101, 102, 108, 150, 201, 202, 208; Italian—any course offered by this department including 111, 112, 211, 212; Portuguese—any course offered by this department including 111, 112, 211, 212; Spanish—any course offered by this department including 111, 112, 211, 212; Asian Language/Asian Studies—any course offered by this department including 121, 122, 221, 222, 131, 132, 231, 232, 141, 142, 241, 242, 151, 152, 251, 252, 161, 162, 261, 262; Russian—any course offered by this department including 101, 102, 201, 202; Spanish—any course offered by this department including 111, 112, 150, 211, 212, 217, 218; MULTI-CULTURAL STUDIES African and African-American Studies—any course offered by this department including 201, 202, 314, 315, 343, 352, 353, 364, 371, 373, 420, 421, 429, 431, 445, 450, 452, 461, 473, 480, 493; Asian Studies—any course offered by this department including 101, 102, 319, 471; Cultural Studies 291, 364; Dance 480, 490; Latin-American Studies—any course offered by this
department including 251, 252, 311, 312, 313, 319, 355, 360, 361, 401, 450, 455, 471, 472, 473, 474, 475, 479; Music 310, 350, 390; Women’s Studies 324, 383, 360, 422, 432, 483; INTEGRATIVE ELECTIVE University Studies—any University Studies course.

**Satisfactory/No Credit Courses**

Teacher Education students may include a maximum of 20 semester hours in non-directed electives taken on a Satisfactory/No Credit basis in the total hours required for graduation. S/NC may not be used in required courses or in controlled electives, except where the course is offered only on a S/NC basis (such as teaching internships and field experiences).

**NOTE:** Students are advised to consult the University’s degree requirements as stated in the front section of this catalog as well as the requirements for the College or unit.

**Grades in Major Courses**

Students seeking baccalaureate degrees in Education (i.e., BS Education) shall be required to earn grades of “C” or higher in all courses included within a major; courses in which lower grades are earned must be repeated.

**Course Load**

Permission to enroll in more than 19 hours during a semester or 12 hours during summer term must be obtained from the Director of Undergraduate Student Services, Claxton Complex A332. A normal semester course load in the College is 16-18 hours.

**Course Substitutions**

It is sometimes necessary and advisable for students to substitute other courses for those required in a particular curriculum. This is particularly true of students who transfer to The University of Tennessee College of Education from another college or university. The general test is whether the course content is similar or, perhaps, more appropriate to that individual’s needs.

To initiate a substitution request, the student should first meet with his/her advisor. If the advisor and student agree that the substitution is an appropriate one, the substitution request form should be forwarded to the Office of the Associate Dean for Undergraduate Studies, Claxton Complex 338. Approved petitions are forwarded to the Dean of Admissions for final approval and for filing in the Records Office.

Professional education courses taken at junior or community colleges may be substituted for lower division (100/200 level) courses or may be used as electives. These courses may not be substituted for upper division (300/400 level) professional education courses.

**Counseling, Deafness, and Human Services**

**Professors:**
J.L. Cassell, Ph.D. Kansas; C.R. Colvin, Ed.D. Virginia; Kathleen L. Davis, Ed.D., Georgia; Lawrence M. DeRidder (Emeritus), Ph.D., Michigan; Mark A. Hector, Ph.D., Michigan State; Schuyler W. Huck, Ph.D., Northwestern; P.F. Kronick, Ph.D. Tennessee; T. McClam, Ph.D. South Carolina; J. H. Miller (Emeritus), Ed.D. Auburn; S.W. Mulkey, Ph.D. Florida State; Marla P. Peterson, Ph.D., Ohio State; William A. Poppen, Ph.D., Ohio State; Charles L. Thompson, Ph.D., Ohio State; Olga M. Welch (Head), Ed.D. Tennessee; M.R. Woodside, Ed.D. VPI.

**Associate Professors:**
D.L. Ashmore, M.S. Tennessee; J. Davis, Ph.D. New Mexico; Teresa A. Hutchens, Ph.D., Georgia; M.K. Warden, Ph.D. Tennessee.

**Assistant Professor:**
Amy Skinner, Ph.D. Mississippi State.

**Instructors:**
M. Griffin, M.S. Tennessee; A. Kirby, M.S. Tennessee; M. Koltz, M.S. Illinois; C.C. LaCava, M.S. Tennessee; T. Osborne, M.S. Tennessee; B. Simmons, M.S. Tennessee.

**Lecturer:**
W.H. Byrd, Jr., M.S. Tennessee.

**Educational Administration and Cultural Studies**

**Professors:**
J.T. DeSensi (Head), Ed.D., North Carolina (Greensboro); Clinton B. Allison, Ph.D., Oklahoma; Anand Malik, Ed.D., Columbia; Joan Paul, E.D., Alabama; W.J. Morgan, Ph.D., Minnesota; C.A. Wrisberg, Ph.D. Michigan; Richard Wisniewski, Ed.D., Wayne State; Grady Bogue, Ed.D Memphis State; W. Lee Humphreys (Adjunct), Ph.D. Union Theological Seminary; Malcolm McInnis, Ph.D. Florida State; Norma T. Mertz, Ed.D. Columbia; Gerald C. Ubben, Ph.D. Minnesota, Grady Bogue, Ed.D Memphis State; W. Lee Humphreys (Adjunct), Ph.D. Union Theological Seminary; Malcolm McInnis, Ph.D. Florida State; Norma T. Mertz, Ed.D. Columbia; Gerald C. Ubben, Ph.D. Minnesota.

**Associate Professor:**
Jeffrey P. Aper, Ph.D. VPI; Cynthia Norris, Ed.D. Tennessee; Barbara Thayer-Bacon, Ph.D. Indiana University; Handel K. Wright, Ph.D. Toronto.

**Assistant Professor:**
Leslee A. Fisher, Ph.D. Berkely.

**Adjunct Professors:**

**Adjunct Associate Professors:**

**Visiting Associate Professor:**

**Educational Psychology**

**Professors:**
R. Steve McCallum (Head), Ph.D. Georgia; J.J. Bellon (Emeritus), Ed.D. California (Berkeley); Ralph G. Brockett, Ph.D. Syracuse; Donald J. Dickinson (Emeritus), Ed.D. Oklahoma State; Thomas George, Ed.D. Tennessee (Knoxville); Katherine H. Greenberg, Ph.D. George Peabody of Vanderbilt; John M. Peters, Ed.D. N.C. State; C.H. Skinner, Ph.D. Lehigh; R.L. Williams, Ph.D. George Peabody.

**Adjunct Professors:**
Sherry K. Bain, Ph.D. University of Southern Mississippi; D. Tzuriel, Ph.D. George Peabody.

**Associate Professor:**

**Adjunct Associate Professors:**
J.H. Morton, Ph.D. Tennessee (Knoxville); L.R. Waldrington, Ph.D. Tennessee; C.I. White, Ph.D. Tennessee (Knoxville).

**Adjunct Assistant Professors:**
R.J. Carlini, Ph.D. Tennessee (Knoxville); O.H. Oliveira, Ph.D. Tennessee (Knoxville); D.L. Peccolo, Ph.D. Tennessee (Knoxville); C. D. Thomas, Ph.D. Tennessee (Knoxville); L.C. Velazquez, Ed.D. Tennessee (Knoxville); M. K. Warden, Ed.D. Tennessee (Knoxville); J.D. Wasserman, Ph.D. Miami; M.F. Ziegler, Ed.D. Columbia (New York).

**Exercise Science and Sport Management**

**Professors:**
E.T. Howley (Head), Ph.D. Wisconsin; P. Beltel (Emeritus), Ed.D. North Carolina (Greensboro); N.E. Lay (Emeritus), Ph.D. Florida State; W.P. Liemohn, Ph.D. Iowa; A.J. Kozar (University Professor), Ph.D. Michigan; T.C. Namey, M.D. Washington (St. Louis); I.R.H. Rockett, Ph.D. Brown; H.B. Watson (Emeritus), Ph.D. Michigan; H. Welch (Emeritus), Ph.D. Florida.

**Associate Professor:**
D.R. Bassett Jr., Ph.D. Wisconsin; R.E. Jones, Ph.D. Toledo; D.R. Kelley, Ph.D. Georgia State; D.L. Thompson, Ph.D. Virginia.

**Assistant Professors:**
INSTRUCTIONAL TECHNOLOGY, CURRICULUM, AND EVALUATION

Professors:
- M. Everett Myer (Head), Ph.D., Florida
- Edward L. Counts, Ed.D., Texas A&M (Commerce); Donald J. Dessart, Ph.D., Maryland
- E. Dale Doak (Emeritus), Ed.D., Colorado
- Russell L. French, Ph.D., Ohio State
- Theodore Hipple, Ph.D., Illinois
- C. E. Roeske (Emeritus), Ph.D., Ohio State

Associate Professors:
- Mary Jane Connelly, Ed.D., Violin; A. D. Grant, Ph.D., Wisconsin
- Blanche O’Bannon, Ed.D., Memphis State

Assistant Professor:
- Aileen Nonis, Ph.D., Virginia

Adjunct Assistant Professors:
- Mary Ann Blank, Ed.D., Tennessee
- Judy Boser, Ph.D., Tennessee
- Mike Burke, Ph.D., Tennessee
- Martha P. Craig, Ph.D., Tennessee
- Jean Derco, Ed.D., Tennessee
- Cheryl Kershaw, Ed.D., Julie Little, Ed.D., Tennessee
- Margaret Ribble, Ph.D., Tennessee
- Sharon Yarbrough, Ed.D., Tennessee

THEORY AND PRACTICE IN TEACHER EDUCATION

Professors:
- K. M. Estill Alexander (Emeritus), Ed.D., Kentucky
- Susan M. Benner, Ed.D., Columbia
- William G. Brozo, Ph.D., South Carolina
- M. A. Christiansen (Emeritus), Ph.D., Kansas
- Laurence J. Coleman, Ph.D., Kent State
- A. R. Davis, Ph.D., Ohio State
- Charles H. Hargis, Ed.D., Colorado State
- George W. Harris Jr. (Emeritus), Ph.D., Michigan
- Amos J. Hatch, Ph.D., Florida
- Phyllis Huff (Emerita), Ph.D., Ohio State
- H. N. Hull (Emeritus)
- E. S. George Peabody
- K. J. Jost, Ed.D., Oklahoma
- J. L. Lindsey, Ph.D., Mississipi
- Verna M. Long, Ph.D., Missouri
- G. Glennon Roll, Ed.D., George Peabody
- W. Jean Schindler, Ph.D., Kent State
- Thomas N. Turner, Ed.D., Pennsylvania State
- J. P. Watkins (Emeritus), M.S., Tennessee
- P. Davis-Wiley, Ed.D., Houston

DANCE MINOR

Hours Credit
- Core Courses: 3
- Dance 480: 3
- Dance 490: 3

AND

OPTION I: PERFORMANCE
- Dance 101 or 201: 1
- Select from Dance 310*, 320*, 330*, 340, 410**, 420*, 430**: 10
- Dance 440: 2
- Dance 445: 2
- Dance 495: 3

Total: 21 hours

*Course may be repeated for up to 12 credit hours.
**Course may be repeated for up to 16 credit hours.

ELEMENTARY EDUCATION MINOR

Students interested in becoming Elementary school teachers (K-Grade 8) earn a BA or BS degree in the College of Arts and Sciences (see Pre-Teaching Programs for Prospective K-9 Teachers). While completing requirements for the baccalaureate degree, students are encouraged to take a minor in Elementary Education:

Hours Credit
- Instructional Technology, Curriculum, and Evaluation 486: 3
- Theory and Practice in Teacher Education 351: 1
- Theory and Practice in Teacher Education 356: 1
- Library and Information Science 330: 3
- Art Education, Music Education, Health Education, or Physical Education Methods (Choose two or more areas): 5-6
- Educational Psychology 210: 3
- Education 400: 2
- Education 401: 3

Undergraduate Total: 27-28 hours

The following courses are taken during the post baccalaureate, Professional Year:

Professional Year
- Education 574: 2
- Education 575: 12
- Education 591: 4
- Art Education 530: 3
- Art Education 540: 3

Graduate Total: 24 hours

NOTE: Teacher licensure is granted at the successful completion of the Professional Year; 12 additional hours may be taken to complete the Master's Degree. For details, see the Graduate Catalog.
**ENGINEERING COMMUNICATION AND PERFORMANCE MINOR**

**Hours Credit**

**Required Courses**
- Counselor Education and Counseling Psychology 206 ........................................... 3
- Counselor Education and Counseling Psychology 306 ........................................... 3
- Counselor Education and Counseling Psychology 406 ........................................... 3

Select two of the following courses:
- Psychology 360 ........................................... 3
- Management 440 ........................................... 3
- Human Resource Development 471 ........................................... 3
- Speech Communication 420 ........................................... 3
- Speech Communication 440 ........................................... 3

Total: 15 hours

**EXERCISE SCIENCE**

**Hours Credit**

**Freshman**
- Exercise Science 100 ........................................... 1
- English 101, 102 ........................................... 6
- Mathematics 123-125 or 141-142 or 151-152 ........................................... 6-8
- Chemistry 120, 130 ........................................... 8
- Psychology 110 ........................................... 3
- Humanities Elective ........................................... 3
- Foreign Language, Multicultural, or Integrative Elective ........................................... 3

1Proficiency in Two Activities

**Sophomore**
- Physics 221, 222 ........................................... 8
- BCMB 230 ........................................... 5
- Nutrition 100 or 300 ........................................... 3
- Health 310 ........................................... 3
- Speech 210, 240 or 270 ........................................... 3
- Humanities Elective ........................................... 3
- Foreign Language, Multicultural, or Integrative Elective ........................................... 3
- History Elective ........................................... 3

2Proficiency in Two Activities

**Junior**
- Exercise Science 325, 332, 350 ........................................... 9
- Cultural Studies in Education 290 ........................................... 3
- Cultural Studies in Education 291, 321, or 372 ........................................... 6
- Computer Science 100 ........................................... 3
- Social Science Elective ........................................... 3
- History Elective ........................................... 3

3Professional Electives ........................................... 6

**Senior**
- Exercise Science 411, 414, 422, 480 ........................................... 12
- Health 425 or 435 or 465 ........................................... 3
- English 295 or 360 ........................................... 3
- Humanities Elective ........................................... 3
- Professional Electives ........................................... 3
- CPR Certification ........................................... 12

Total: 127-129 hours

1Proficiency in at least four activities. Proficiency: passing an activity course with a minimum grade of C or participation in an intercollegiate varsity sport. See advisor.

2Exercise Science students must take 2 of the 3 following Cultural Studies in Education courses: 291, 321 and/or 372.

3Professional elective courses passed with a minimum C grade. See advisor for appropriate courses.

4Exercise Science students must have cumulative minimum GPA of 2.5 to register for and complete these courses.

5Evidence of current CPR certification at time of graduation.

**HUMAN SERVICES**

**Hours Credit**

**Freshman**
- English 101, 102 ........................................... 6
- Natural Science Electives ........................................... 8
- Mathematics Electives ........................................... 3
- History (Non-U.S.) Electives ........................................... 6
- Humanities and Arts Electives ........................................... 6
- Social Science Elective ........................................... 3

**Sophomore**
- Human Services 220, 330 ........................................... 6
- Psychology 330 ........................................... 3
- History (Non-U.S.) Electives ........................................... 6
- Humanities or Arts Electives ........................................... 6
- Computer Science 100 ........................................... 3
- Social Science Elective ........................................... 3
- Elective ........................................... 3

**Junior**
- Human Services 380, 390 ........................................... 6
- Psychology 360 ........................................... 3
- Professional Electives* ........................................... 6
- Electives ........................................... 6

Total: 121 hours

1The following professional Electives will help you to focus your study in a specific area of interest in Human Services. You must take three courses from one of these areas listed below. At least two of these courses must be 300 or above. ADMINISTRATION: Health 325, 375, Human Ecology 425, Psychology 440, Social Work 250, Sociology 414; CHILDREN AND ADOLESCENTS: Child and Family Studies 211, 213, Health 305, Psychology 300, Sociology 351; CRIMINOLOGY: Psychology 424, Recreation and Leisure Studies 250 or 450, Sociology 350, 351, 352, 451, 455, 459; DEAF EDUCATION: Rehabilitation and Deafness 415, 416, 423, 425, 426, 521; FAMILY: Child and Family Studies 220, 205, 320, 345, 360, 420, 430, Health 430, Sociology 311; GERONTOLOGY: Child and Family Studies 312, Public Health 305, Sociology 414, 415, Health 406, 406, 435, Human Ecology 585; HEALTH AND SEXUALITY: Health 200, 300, 400, 420, Child and Family Studies 240, Counselor Education and Counseling Psychology 410, Psychology 430, 434, Public Health 300, Sociology 375; SUBSTANCE ABUSE: Health 225, 405, 435.

**HUMAN SERVICES: EDUCATIONAL INTERPRETING CONCENTRATION**

**Hours Credit**

**Freshman**
- English 101, 102 or 103 ........................................... 6
- Natural Science Electives ........................................... 8
- Mathematics Electives ........................................... 3
- History (Non-U.S.) Electives ........................................... 6
- Humanities and Arts Electives ........................................... 6
- Social Science Elective ........................................... 3

**Sophomore**
- Human Services 220, 330 ........................................... 6
- Psychology 330 ........................................... 3
- History (Non-U.S.) Electives ........................................... 6
- Humanities or Arts Electives ........................................... 6
- Computer Science 100 ........................................... 3
- Social Science Elective ........................................... 3
- Elective ........................................... 3

**Junior**
- Human Services 380, 390 ........................................... 6
- Psychology 360 ........................................... 3
- Rehabilitation and Deafness 340, 350 ........................................... 6
- English 360 ........................................... 3
- Rehabilitation and Deafness 431, 432 ........................................... 6
- Human Services 400 ........................................... 2

**SECONDARY EDUCATION MINOR**

Students interested in becoming Secondary school teachers earn a BA or BS degree in the College of Arts and Sciences (e.g., English, mathematics, etc.). While completing requirements for the baccalaureate degree, students are encouraged to take a minor in Secondary Education.

**Hours Credit**

**Science Education 352** ........................................... 1
**Instructional Technology, Curriculum, and Evaluation 355** ........................................... 3
**Education 400** ........................................... 2
**Education 401** ........................................... 2
**Educational Psychology 210** ........................................... 3
**Instructional Technology, Curriculum, and Evaluation 486** ........................................... 3

Undergraduate Total: 24 hours

**HUMAN SERVICES: MODIFIED AND COMPREHENSIVE CONCENTRATION**

**Hours Credit**

**Freshman**
- English 101, 102 ........................................... 6
- Natural Science Electives ........................................... 8
- Math 201, 202 ........................................... 6
- Art/Music/Theater Elective ........................................... 3
- Anthropology 130 or 230 ........................................... 3
- Foreign Language Intermediate Level Competence ........................................... 6

**Sophomore**
- Human Services 220 ........................................... 3
- Psychology 330, 340 ........................................... 6
- Foreign Language Intermediate Level Competence or Elective ........................................... 6
- History (Non-U.S.) Electives ........................................... 6
- Speech 210 or 220 ........................................... 3
- Educational Psychology 210 ........................................... 3
- Political Science/Economics Elective ........................................... 3
- Elective ........................................... 3

**Junior**
- Human Services 380, 390, 420, 430 ........................................... 12
- English 360 ........................................... 3
- Educational Psychology 460 ........................................... 3
- Human Services 400 ........................................... 6
- Human Services 441 ........................................... 6
- Special Education 419 ........................................... 6

Undergraduate Total: 129 hours

The following courses are taken during the post baccalaureate, Professional Year:

**Professional Year**
- Education 574, 574 ........................................... 14
- Theory and Practice in Teaching Education 510, 591 ........................................... 10

Graduate Total: 24 hours

**College of Education**
The following courses are taken during the post baccalaureate, Professional Year:

**Professional Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 574</td>
<td>2</td>
</tr>
<tr>
<td>Education 575</td>
<td>12</td>
</tr>
<tr>
<td>Education 591</td>
<td>4</td>
</tr>
<tr>
<td>English Education 461</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Education 454, Foreign Language/ESL Education 454, English Education 459, Mathematics Education 485, Science Education 496</td>
<td>3</td>
</tr>
</tbody>
</table>

Graduate Total: 24 hours

Note: Teacher licensure is granted at the successful completion of the Professional Year; 12 additional hours may be taken to complete the Master’s Degree. For details, see the Graduate Catalog.

**SPECIAL EDUCATION: EDUCATION OF THE DEAF AND HARD OF HEARING CONCENTRATION**

**Undergraduate Total: 125-129 hours**

**SPORT MANAGEMENT**

The Sport Management major is designed for students interested in working in the sport industry. The program combines Sport Management and Sport Studies with a minor in Business Administration. The program includes a semester-long internship experience.

**Hours Credit**

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101, 102</td>
<td>6</td>
</tr>
<tr>
<td>Art, Music, or Theatre Elective</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 110 or 130</td>
<td>3</td>
</tr>
<tr>
<td>Interdisciplinary Studies Electives</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Sociology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Activity or Recreation Therapy Elective</td>
<td>1-2</td>
</tr>
<tr>
<td>Mathematics 110-115</td>
<td>6</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech 210, 220, or 240</td>
<td>3</td>
</tr>
<tr>
<td>Literature Elective</td>
<td>3</td>
</tr>
<tr>
<td>Human Services 220 or 330</td>
<td>3</td>
</tr>
<tr>
<td>Psychology Elective</td>
<td>3</td>
</tr>
<tr>
<td>History 251, 252</td>
<td>6</td>
</tr>
<tr>
<td>Biological Science Elective</td>
<td>4</td>
</tr>
<tr>
<td>Natural Science Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Physical Education Activity or Recreation Therapy Elective</td>
<td>1-2</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Technology, Curriculum, and Evaluation 488</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy/Religious Studies 345</td>
<td>3</td>
</tr>
<tr>
<td>Political Science or Economics Elective</td>
<td>3</td>
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<tr>
<td>Educational Psychology 210</td>
<td>3</td>
</tr>
<tr>
<td>Health 305 or 306</td>
<td>2</td>
</tr>
<tr>
<td>Interdisciplinary/Cultural Studies</td>
<td>6</td>
</tr>
<tr>
<td>Education 400, 401</td>
<td>5</td>
</tr>
<tr>
<td>Educational Methods (see advisor)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Rehabilitation and Deafness 223, 410, 415, 416, 419, 425</td>
<td>19</td>
</tr>
<tr>
<td>Audiology and Speech Pathology 303 and 473</td>
<td>6</td>
</tr>
<tr>
<td>Rehabilitation and Deafness 424</td>
<td>6</td>
</tr>
<tr>
<td>Theory and Practice in Teacher Education 310 (3), 320 (3)</td>
<td>6</td>
</tr>
<tr>
<td>Audiology and Speech Pathology 494</td>
<td>3</td>
</tr>
</tbody>
</table>

Undergraduate Total: 125-129 hours

**Total: 130-133 hours**

1 Business minor requirement.
2 Practicum courses in Sport Management are required prior to enrolling in internship.
3 Admission to and retention in the Sport Management Major is contingent upon achieving and maintaining a 2.5 GPA.
4 A 2.5 GPA is required for internship.
College of Engineering

Jerry E. Stoneking, Dean
Fred T. Gilliam, Associate Dean, Academic Affairs
Fred D. Tompkins, Associate Dean, Administration
Walter N. Odom, Director, Cooperative Engineering and Professional Practice
James T. Pippin, Director, Engineering Diversity Programs

Engineers solve problems. To do so, they apply science, mathematics, and creativity to invent, design, test, build and operate engineering systems that will meet the needs of society. In the latter half of the 20th century, engineers developed the personal computer, the space shuttle, artificial hearts and many other “high-tech” products. The opportunities to use technology for the benefit of 21st century society will be even greater.

Engineers use the same problem solving strategies whether designing a bridge, trouble shooting a computer chip problem or developing a more efficient automobile engine. This commonality of approach makes it easy for an engineer to move from one specialization to another, and it happens frequently. The engineer’s can-do, problem solving outlook is another, and it happens frequently. The college and industry join together to offer a broader and richer preparation for postgraduate employment.

The college, in cooperation with industrial sponsors, established the Minority Engineering Scholarship Program in 1973. The program goal is to increase significantly the number of qualified minority engineering graduates.

The college has eleven major undergraduate curricula in which a student may specialize: aerospace engineering, biomedical engineering, chemical engineering, civil engineering, computer engineering, electrical engineering, industrial engineering, materials science and engineering, mechanical engineering, and engineering physics.

Biosystems engineering is based in the College of Agricultural Sciences and Natural Resources with facilities located in the Agricultural Campus. The biosystems engineering curriculum is offered cooperatively by the College of Agriculture and the College of Engineering. Details of the curriculum may be found in the College of Agricultural Sciences and Natural Resources section of this catalog.

FACILITIES

Most of the college’s facilities are on the southeastern corner of The Hill. Administration, Civil and Environmental Engineering, and Biomedical Engineering are in Perkins Hall; Electrical and Computer Engineering are in Ferris Hall; Industrial Engineering and the Interdisciplinary Engineering Research Centers are in East Stadium Hall; Nuclear Engineering is in the Pasqua Engineering Building; Mechanical and Aerospace, Chemical, and Materials Science are in Dougherty Hall. The Engineering Fundamentals Division is located in Estabrook Hall. The Co-op Office and the Engineering Diversity Programs Office are in Perkins Hall. The Engineering Physics program is administered through the UT Physics Department in the Nielsen Physics Building.

COOPERATIVE ENGINEERING AND PROFESSIONAL PRACTICE

The five-year Cooperative Engineering Program (Co-op) is offered in order to provide an augmented engineering education that includes significant experience in industry as well as superior academic preparation. Our Cooperative Engineering Program was established in 1926. The University of Tennessee was one of the early pioneers in this valuable type of education.

Co-op work assignments differ from part-time or summer employment in that they involve regularly scheduled cycles of full-time academic terms alternating with full-time work periods, resulting in planned, career-related work terms of progressive complexity and responsibility. In introducing the student to engineering employment, the college and industry join together to offer a broader and richer preparation for postgraduate employment than can be provided by a conventional academic program. This experience in an industrial and professional environment contributes to the student’s maturity, accelerates professionalism, offers an opportunity to apply engineering course work in a real-world setting, and enables the student to define more clearly educational and career interests and objectives. All positions are paid positions, and most students are able to offset a substantial amount of their college expenses with Co-op savings.

Introduction to the Cooperative Engineering Program (for new students, transfers, second-degree students, and re-entry students) begins in the first semester at the university. Assignments are determined by employer and student. All engineering students are encouraged to visit the program office.

Candidates must be able to project a minimum of 52 weeks of Co-op experience prior to the senior year, within the regular alternating sequence, to qualify for an assignment.
Further details may be obtained from the Cooperative Engineering Program, 310 Perkins Hall, The University of Tennessee, Knoxville, TN 37996-2012. You may also contact the Co-op office via e-mail at coop@engr.utk.edu or via the program homepage at http://www.engr.utk.edu/~coop/

INTERNATIONAL ENGINEERING PROGRAM

The United States, like most countries throughout the world, can no longer thrive economically in a static market for its goods and services. To compete in the global marketplace, engineers must understand how to design and manufacture products for world-wide use. The College of Engineering works with several organizations, both on and off campus, to enable interested students to participate in significant engineering experiences abroad. Students interested in making an international experience part of their engineering education should begin exploring opportunities and develop plans during the freshman year. Language preparation to a level of substantial proficiency may be required. Thus, language preparation should be started immediately. For further information on international engineering educational programs, contact the UT Center for International Education, 1620 Melrose Avenue.

GRADUATE PROGRAM

Graduate programs leading to the degree of Master of Science are offered in eleven areas of study: aerospace engineering, chemical engineering, civil engineering, electrical engineering, engineering science, environmental engineering, industrial engineering, materials science and engineering, mechanical engineering, nuclear engineering, and polymer engineering. The degree of Doctor of Philosophy is offered in nine major subjects: aerospace engineering, chemical engineering, civil engineering, electrical engineering, engineering science, environmental engineering, industrial engineering, materials science and engineering, mechanical engineering, nuclear engineering, and polymer engineering. Information concerning graduate programs is given in the Graduate Catalog.

TAU BETA PI NATIONAL HEADQUARTERS

The college is honored to have the national headquarters of Tau Beta Pi, the National Engineering Honor Society, housed on our campus. This honor was earned in part through the untiring efforts of R.C. "Red" Matthews, who served as secretary-treasurer for the organization from 1905 to 1947. The suite of offices, located in Dougherty Hall, is occupied by Mr. J.D. Froula, secretary-treasurer, Roger Hawks, Assistant Secretary-Treasurer, and his staff.

CURRICULA IN ENGINEERING

National Accreditation

Since 1936, engineering programs at institutions of higher learning have been accredited by an organization formed by many engineering societies and known as the Accreditation Board for Engineering and Technology (ABET). ABET accreditation ensures that graduates of UT engineering programs are adequately prepared to enter and continue the practice of engineering. Accredited engineering programs at UT include aerospace, biosystems, chemical, civil, electrical, engineering science, industrial, mechanical, materials science, and nuclear. Co-op programs in the above areas are also accredited.

Accreditation criteria require each engineering degree program to design a curriculum and educational process that will achieve defined educational objectives consistent with ABET criteria and the mission of UT. The educational objectives of each degree program are presented by the department responsible for the program later in this chapter. In each case the objectives are consistent with the mission of the College of Engineering. That mission is to:

1. provide high quality education in the major engineering disciplines from the undergraduate through doctoral levels through a creative balance of academic, professional, and extracurricular programs;

2. foster and maintain mutually beneficial partnerships within UT community, other universities, industry, and local, state, and federal governments through public services, assistance, and collaborative research; and

3. to be a major contributor to our nation's technology base through scholarship and research.

In addition, the educational objectives of each degree program are also guided by and consistent with the strategic objectives of the College of Engineering. Two particularly relevant strategic objectives are "to continuously pursue excellence in teaching and learning by enhancing each student's desire to learn and that excites each student's interest in engineering and the work environment" and "to continuously provide and improve the education and working abilities that employers want our engineering graduates to have."

ABET accreditation criteria also require an assessment process to ensure that program outcomes critical to successful engineering practice are being achieved. Assessment of eleven program outcomes common to all engineering disciplines is required by ABET. Specifically, each engineering degree program must demonstrate that its graduates have:

1. an ability to apply knowledge of mathematics, science, and engineering;

2. an ability to design and conduct experiments, as well as to analyze and interpret data;

3. an ability to design a system, component, or process to meet desired needs;

4. an ability to function on multidisciplinary teams;

5. an ability to identify, formulate, and solve engineering problems;

6. an understanding of professional and ethical responsibility;

7. an ability to communicate effectively;

8. the broad education necessary to understand the impact of engineering solutions in a global/societal context;

9. a recognition of the need for and an ability to engage in life-long learning;

10. a knowledge of contemporary issues;

11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

The College of Engineering has embraced these program outcomes as valid and valuable indicators of educational program effectiveness. Thus, the College prepares students to demonstrate sufficiency and to strive for excellence in each of these areas. This goal is achieved by ensuring that instruction and other learning experiences are provided that will produce each program outcome. Engineering courses, mathematics, and science courses, and the humanities and social sciences each provide essential contributions to the achievement of this goal. Program outcomes that are critically dependent on humanities and social science courses are discussed in the General Education Requirements section to follow. Additional program outcomes selected by individual degree programs to supplement ABET outcomes are also discussed in subsequent sections.

DESIGNATION OF A MINOR

An engineering undergraduate may declare a minor in a non-engineering subject area and have the minor listed on the permanent record under the following conditions:

1. Minors must be officially approved and described in the UT catalog. No unofficial minors will be recognized. Minors exist in aerospace engineering, environmental engineering, materials science and engineering, engineering communication and performance, architecture, business administration, and in numerous departments in agricultural science and natural resources and arts and sciences.

2. Courses taken to satisfy the minor may also be used to satisfy engineering degree requirements, provided that the courses would be a part of engineering degree requirements even if no minor was declared. Completion of a minor often involves the taking of courses which cannot be used to satisfy the minimum requirement for an engineering degree.

3. A student should notify his or her advisor and major department office when beginning work on a minor. The intention to complete a minor must be declared at the time of application for a degree if the minor is to appear on the final transcript. Degree applications are handled by the UT Records Office.

COURSE LOAD

The maximum number of hours which can be taken by an undergraduate engineering student without special permission is 19. The Associate Dean for Academic Affairs must give permission to take 20 hours or more. In general, this decision is based on the student's previous performance at UT.

GENERAL REQUIREMENTS

Students are advised to consult the University's degree requirements as stated in the front section of this catalog as well as departmental requirements.

Freshman Placement Criteria. Placement criteria are in effect for the College of Engineering to promote the maximum opportunity for success among entering freshmen. A success prediction indicator (SPI) is calculated for all incoming students. The SPI is calculated by multiplying the High School GPA by 10 and adding the resulting product to the math component of the ACT. SAT scores can be converted to an equivalent ACT score to perform this calculation. A pre-requisite for the first engineering course, Engineering Fundamentals 101, is a SPI of equal to or greater than 55, with a co-requisite of Math 130 (pre-calculus) or higher.

SPI of equal to or greater than 55, with a co-requisite of Math 130 (pre-calculus) or higher.
math course. Math placement is determined by examination during orientation. Entering engineering students who do not meet the SPI pre-requisite or cannot qualify for placement in at least Math 130 have the following options:

- Attend the University of Tennessee summer session or another institution and complete a transferable math course equivalent to Math 130 (pre-calculus) with a grade of B or better and a transferable English course equivalent to English 101 with a grade of C or better. OR
- Enroll in our engineering transition curriculum that prepares students to begin EF 101 in their third semester.

Transfer Students
Transfer students, including internal UT transfers, must meet the minimum requirements stated below in order to be considered for admission to a major within the College.

1. Must have earned a minimum 2.30 cumulative average over these specific courses, or their equivalent: English 101, 102; Chemistry 120, 130; and Math 141, 142.
2. The overall record will be evaluated for quality and strength of purpose. An excessive number of withdrawals, incompletes, repeated courses, or failure may result in denial.

Any UT student desiring association with one of the departments of the College of Engineering should go to the departmental office for the desired major. An interview with the department head or his/her designee is held, with the major items of consideration being the same as for external transfer students. If association is granted, a College/Major/Advisor Change form is processed by the department to officially change the student’s academic home.

Transfer Credit
Every attempt will be made to give maximum credit for courses taken elsewhere and transferred to the college. Discussions concerning the evaluation of transfer credits should be conducted with the head of the department (or designee) into which the student is to transfer, but only after receiving the evaluation of transfer credits by the Admissions Office.

Program for Second B.S. Degree
Upon approval by the Dean of Engineering and the Committee on Degrees of a program of study recommended by the major engineering department, a student who already holds a bachelor’s degree may obtain a degree in engineering upon meeting all of the course requirements of the selected engineering program. In no case will the minimum requirement be less than 30 semester credits. The prevailing University regulations shall apply.

Satisfactory/No Credit Courses
Engineering majors may take half of the minimum hours required (9) of general education electives on a Satisfactory/No Credit (S/NC) grading basis. No other courses specified as part of the minimum degree requirements may utilize S/NC grading, unless a course is offered only on that grading basis. Students are encouraged to choose courses of interest which are not part of the minimum degree requirements, and to fully utilize the S/NC grading option for such coursework.

Correspondence Courses
A student should check with his or her major department to see what restrictions there are, if any, on the use of correspondence course credit to meet the minimum degree requirements.

General Education Electives
Engineering practice is shaped by many non-technical considerations. Economic, safety and ethical matters have long been of concern. In recent years increasing influence has been exerted by legal, political, governmental, cultural, and international factors. Courses in the humanities and social sciences serve to meet the vital need for awareness and knowledge of these influences on the engineer's profession. In addition, they support the UT general education goal to develop the basic skills, knowledge, attitudes and judgment necessary for effective citizenship, fulfilling personal interactions and an enriched personal life. Lastly, ABET accreditation requirements mandate a strong general education component as a necessary part of achieving engineering program objectives. Humanities and social science courses contribute significantly to the educational objectives of each engineering program and the program outcomes desired of every engineering graduate. In fact, certain program outcomes are critically dependent on contributions from these courses. Thus, in the College of Engineering, humanities and social science courses do more than ensure adequate breadth in the educational experience. They also complement and support engineering courses in developing skills and providing experiences critical to the practice of engineering.

Program outcomes supported by the general education component in engineering curriculum and a cluster of courses relevant to that outcome are shown below. The first two outcomes, (1) the broad education necessary to understand the impact of engineering solutions in a global/societal context and (2) a knowledge of contemporary issues, have a fundamental relationship to humanities and social science courses. All engineering students are required to take at least one course from each of these clusters. Engineering programs may specify up to two other clusters that are required in their curriculum to ensure that each program outcome is achieved by either engineering coursework, general education electives, or a combination of the two.

General education requirements in English composition, mathematics, and natural science are fully satisfied by required courses in each engineering curriculum. Electives from the humanities and social sciences, in addition to supporting selected engineering program outcomes, must also meet general education requirements for these areas of study. Thus, to ensure general education compliance, engineering students must take at least two courses from the arts or humanities clusters: one course from multicultural studies or a two course foreign language sequence; and one course from the social sciences cluster. Additional general education electives can be chosen from any cluster to provide breadth or depth as desired by the student, but a minimum of 18 semesters hours is required.

To be accepted as valid within the context of the University’s general education requirements, each course should meet the generally accepted definitions that (1) humanities are the branches of knowledge concerned with humanity and culture; (2) the arts include performance and/or analysis of the visual and written arts, music or theatre; and (3) social sciences are the studies of individual relationships in and to society. Subject areas in the humanities include history, English, philosophy, religion, and classics. The arts will include courses in music, art, theatre and creative writing. Subject areas in the social sciences include sociology, psychology, economics, anthropology, and political science. Acceptability is determined by course content, not by title or administrative home.

Examples of courses not acceptable in the engineering general education program include: (1) a language course in the student’s native language; (2) military science courses unless they are either on the approved list or officially equivalent to a course in the humanities or social sciences in another department; (3) courses whose basic content is science or mathematics; (4) engineering economy; and (5) professional courses in other fields—business, communications, etc.

A course not on the approved list must be approved by the student’s advisor, department head, and the associate dean (in this order), and the approval must be recorded on a departmental substitution form and submitted to the Records office. Transfer courses must be approved, unless a suitable UT equivalent course number has been assigned as a part of the admissions process.

A student is urged to seek guidance from his or her advisor in choosing these electives, since they are an important part of the learning experience and preparation for engineering practice. Choices should be made on the basis of personal interest and value in engineering practice. Up to 9 hours in this category may be taken on an S/NC grading basis. Credit earned by Advanced Placement or courses transferred from another university as “Satisfactory” are included in the 9 hour limit. However, if more than 9 hours of general education courses have been earned by AP or transfer credit, students may apply for a waiver of the 9 hour limit.

These requirements are not intended to inhibit in any way the selection of courses to be taken by a student while attending UT. There may be courses of interest to a student which are not included on the lists below, but would be of great value in the student's education. Students are encouraged to consult with their advisor in order to incorporate such courses into their program of study.

The requirements for the general education component of all engineering curricula are:

1. The minimum number of semester credit hours of acceptable courses is 18.
2. One course from the Engineering Practice in a Global/Societal Context Cluster.
3. One course from the Contemporary Issues Cluster.
4. Other courses or clusters as established by departmental requirements to support selected program outcomes.
5. A minimum of:
   a. two courses from the Humanities or Arts clusters;
   b. one course from the Multicultural Studies Cluster, or two foreign language courses;
   c. one course from the Social Sciences Cluster.
6. Courses may simultaneously meet more than one requirement (e.g. a multicultural course may also satisfy the Engineering Practice in a Global/Societal Context Cluster).

7. For a foreign language to be used in meeting general education requirements (a) at least two courses in the same language must be taken and (b) the language cannot be the native language of the student.

APPROVED GENERAL EDUCATION ELECTIVES

Courses included on the list below have been approved by the faculty as general education electives. Any course not on this list must be approved through the major department prior to enrollment in the course. Where such phrases as “any psychology course” are used, special topics courses in that area are specifically excluded since the content is variable. Students should seek approval from their advisor prior to enrollment in such special topics courses.

Engineering Practice in a Global/Societal Context Cluster


Contemporary Issues Cluster

African and African-American Studies 343, 364, 420, 429, 442, 473, 480, 483; Agriculture and Natural Resources 101, 333; American Studies 343, 345, 364; Anthropology 130, 320; Business Law 301; Child and Family Studies 220, 240, 420; Communications 100, 150; Geology 201, 202; History 320, 442, 446; Human Services 220; Philosophy 240, 250, 342, 344, 345, 347, 349, 354, 359, 360, 363, 374, 375, 414, 415, 442, 446, 446, 454, 456; Speech Communication 468; University Studies 311, 312, 322; Women’s Studies 220, 230, 310, 360, 375.

Multi-disciplinary Teams Cluster

Counselor Education and Counseling Psychology 206, 306; Psychology 360, 409, 440; Sociology 130, 320; Speech Communication 220, 230, 240, 300, 310, 320, 330, 420.

Professional and Ethical Responsibility Cluster

Military Science 420; Philosophy 240, 342, 344, 345, 346; Religious Studies 344, 345; University Studies 322.

Effective Communications Cluster

English 263, 295, 355, 360, 455; Information Sciences 450; Journalism 450, 456; Speech Communication 210, 220; Theatre 220, 221. Any sequence of foreign language courses.

Life-Long Learning Cluster

Cultural Studies in Education 302, 451; Philosophy 110, 111; Psychology 310.

Aesthetics in Design Cluster


Humanities Cluster

Any British or American literature course. Any foreign language literature course including those using English translations. Any course from History, Philosophy, Medieval Studies or Religious Studies. Asian Languages 311, 312, 313, 314; Cinema Studies 281, 323, 325, 334, 420, 421, 433, 465; Classics 221, 222, 253; Comparative Literature 202, 203; Women’s Studies 210, 215, 320, 383.

Arts Cluster

Architecture 111; Art 191*; Art History 172, 173, 183; Classics 232, 233; English 263, 363; Music*; Music History 110, 115, 120, 210, 220, 290, 310, 330, 340, 341, 350, 380, 390; Philosophy 350, 353; Theatre 100, 220*, 310, 311, 313.

* Courses involving skill development in the arts (Art 191; Theatre 220 or music courses that include vocal or instrumental performance) may be used as General Education Electives up to maximum of 3 semester hours.

Multicultural Studies Cluster


Social Sciences Cluster


AMERICAN HISTORY REQUIREMENT

Engineering students, regardless of national origin, must fulfill the American history requirement described elsewhere in this catalog. Those students who have not had the required year of American history in high school may choose the required six semester hours from History 221 and 222, or other courses deemed suitable by the Department of History. These hours may be counted as part of the required block of humanities and social science electives.

TECHNICAL ELECTIVES

Technical electives are to be selected with the advice and approval of the student’s major department. In some of the curricula tabulations a choice of such electives is indicated, and regulations in regard to their selection are stated.

THE VOLUNTARY ROTC PROGRAM

Engineering students may participate in the ROTC Program. Advanced ROTC courses (300 and 400 series) may be counted as technical elective credit toward an engineering degree up to a total of six (6) semester hours. Normally, Military Science courses cannot be used as humanities/social science electives. Individual departments determine the appropriate substitutions.

APPROVAL OF ELECTIVES AND SUBSTITUTIONS

Each student shall discuss with an advisor the status of the program of study no later than the beginning of the second semester prior to anticipated graduation. Any substitutions to or substitutions in the program, or electives requiring special approval, must be cleared in writing at that time, and it is each student’s responsibility to see that all necessary approvals are secured. Inattention to such matters will most likely delay graduation.

ENGINEERING FUNDAMENTALS DIVISION

Professors:

J.R. Parsons (Mechanical and Aerospace Engineering and Engineering Science), Director; R.M. Bennett (Civil and Environmental Engineering); J.H. Forrester (Mechanical and Aerospace Engineering and Engineering Science); O. Soliman (Mechanical and Aerospace Engineering and Engineering Science).

Associate Professors:

C.D. Pionke (Mechanical and Aerospace Engineering and Engineering Science); D. Raj Raman (Agricultural and Biosystems Engineering); T.H. Scott (Nuclear Engineering); J.E. Seat (NSF Research Associate Professor), Ph.D. Tennesse; T.H. Scott (Nuclear Engineering); F.E. Weber (Chemical Engineering); D.C. Yoder (Agricultural and Biosystems Engineering).

The Engineering Fundamentals Division is the academic home for all first year engineering students. Located in Estabrook Hall, the Division serves as a focus for all freshman student activities. The faculty of the Division act as academic advisors and teach the principal courses in Engineering Fundamentals. These courses are designed to prepare students for entry into the Sophomore year of every degree program in the College. Academic standards in the first year are necessarily high. To assist students with deficient academic backgrounds in the necessary math and computer skills, supplementary courses are offered as needed. No degree is awarded by the Engineering Fundamentals Division. The division co-administers (with the College of Education) the Engineering and Communication and Performance Minor for engineering students desiring addi-
tional training and certification in team facilitation and organizational communication.

New freshman students are assigned to the Engineering Fundamentals Division for academic advising and career counseling until they have completed the freshman year. Freshmen students admitted to the College of Engineering are required to designate a field of study by the end of their freshman year. As sophomores, students are assigned faculty advisors in their selected departments.

BIOSYSTEMS ENGINEERING
(See College of Agricultural Sciences and Natural Resources)

CHEMICAL ENGINEERING

Professors: J.R. Collier (Head), Ph.D. Case Institute of Technology; M.R. Aliy (Adjunct), Ph.D. Pittsburgh; P.R. Bienkowski, Ph.D. Purdue; R.M. Counce, Ph.D. Tennessee; P.T. Cummings (Distinguished Scientist), Ph.D. D. University of Melbourne (Australia); G.C. Frazier, Jr. (Emeritus), D. Eng. Johns Hopkins; J.M. Holmes (Emeritus), Ph.D. Tennessee; C.F. Moore (Distinguished Service Professor), Ph.D. Louisiana State; J.J. Perona (Emeritus), Ph.D. Northwestern, PE; J.W. Prados (University Professor), Ph.D. Tennessee; PE; J.S. Watson (Adjunct), Ph.D. Tennessee.

Associate Professors: J.S. Arnold (Adjunct), Ph.D. D. Bruns, Ph.D. Houston; J.P. Coates (Adjunct), Ph.D. University of West London; B.H. Davidson (Adjunct), Ph.D. California Institute of Technology; C.S. Daw (Adjunct), Ph.D. Tennessee; D.W. DePaoli (Adjunct), Ph.D. Idaho; J.J. Ferrada (Adjunct), Ph.D. Tennessee; M.C. Hu (Adjunct), Ph.D. Idaho; J.W. Lee (Adjunct), Ph.D. Cornell; J.J. Sirola (Adjunct), Ph.D. Wisconsin; T.W. Wang, Ph.D. Massachusetts Institute of Technology; F.E. Weber, Ph.D. Minnesota.

Assistant Professors: B.J. Edwards, Ph.D. Delaware; P.D. Frymier, Ph.D. Virginia; D.J. Keffer, Ph.D. Minnesota.

BACHELOR OF SCIENCE PROGRAM

Chemical engineering deals with the development, design, operation, and management of plants and processes for economical, safe conversion of chemical raw materials to useful products. It is a broadly based discipline with heavy emphasis on chemistry and mathematics, with supporting study in areas such as physics, materials, and humanities.

Chemical engineering graduates of the University of Tennessee possess the knowledge base, intellectual skills, and professional commitment that prepare them for innovative technical leadership, graduate study, productive service to society, and continued professional growth through lifelong learning. Preparation is based in the learning objectives identified below, regular evaluation of the achievement of these objectives, and use of evaluation results to improve the educational process.

Technical Knowledge Base: Graduates of the UT chemical engineering program demonstrate the ability to apply knowledge of mathematics, chemistry, other sciences, and engineering to identify and solve problems dealing with material and energy balances applied to chemical processes; thermodynamics of physical and chemical equilibria; heat, mass, and momentum transfer; continuous and stagewise separation operations; chemical kinetics and reactors; and process dynamics and control.

Analytical Skills: Graduates of the UT chemical engineering program demonstrate the ability to apply the following analytical skills in the solution of engineering problems: differential and integral calculus, ordinary differential equations, linear algebra, statistical methods, and numerical methods.

Problem Formulation and Solution Skills: Graduates of the UT chemical engineering program demonstrate the ability to apply a technical problem in terms that permit a solution, identify the appropriate tools to address a technical problem, make simplifying assumptions required to obtain an approximate level of rigor, identify and collect information needed to obtain the solution, and evaluate the reasonableness of the solution.

Experimental Skills: Graduates of the UT chemical engineering program demonstrate the ability to plan experiments to meet specified objectives, conduct such experiments carefully and safely, and analyze and interpret experimental data in terms of process models.

Information Technology Skills: Graduates of the UT chemical engineering program demonstrate the ability to apply computer skills in engineering problem solving. These include computation, communication, and data acquisition skills that keep pace with evolving technology.

Process Design and Synthesis Skills: Graduates of the UT chemical engineering program demonstrate the ability to formulate and solve open-ended problems that require evaluation of alternatives with respect to specified criteria; size equipment to meet process objectives; apply the principles of engineering economics to estimate capital investment and operating costs for specified process equipment and systems; develop an appropriate flowsheet to meet a process objective; calculate the material and energy balances for a given process flowsheet; employ computer-based process design tools and techniques; optimize the design of a conceptual process with respect to specified criteria that include safety, environmental impact, operability, and economics; and analyze and compare alternative designs.

Communication Skills: Graduates of the UT chemical engineering program demonstrate the ability to communicate effectively in writing, speaking, and listening in a variety of contexts. Specific skills include the ability to write effective reports, experimental procedures, memoirs, and similar documents; make effective oral presentations and critique presentations by others; prepare and use appropriate visual representations of information in both written and oral presentations; and critically evaluate technical material presented in lectures and seminars.

Teamwork Skills: Graduates of the UT chemical engineering program demonstrate the ability to function as effective team members and team leaders. The ability to work effectively with other team members; employ appropriate team facilitation procedures as needed; organize and lead a team effort; and contribute individual expertise in achieving team goals.

Lifelong Learning Skills: Graduates of the UT chemical engineering program recognize the need for and are able to engage in lifelong learning. Students will have the ability to obtain needed information from libraries and electronic data bases; the ability to use the Internet as an effective communication and research tool; the ability to use distance learning media to independently complete required assignments; and familiarity with lifelong learning resources available through professional societies.

Professional Commitment: Graduates of the UT chemical engineering program demonstrate high standards of professional and ethical responsibility. Students are required to take a course preparing them for the Fundamentals of Engineering examination, receiving a grade based on their performance on a “mock Fundamentals of Engineering examination,” and are strongly encouraged to pursue the path to registration as Professional Engineers.

Safety, Health, and Environmental Protection: Graduates of the UT chemical engineering program demonstrate an understanding of chemical process safety, including occupational safety and health and minimization of adverse environmental impact.

Understanding the Global and Societal Impact of Engineering: Graduates of the UT chemical engineering program demonstrate an appreciation for the global and societal impact of engineering decisions.

Appreciation of the Cultural Heritage: Graduates of the UT chemical engineering program demonstrate an appreciation for human cultural heritage.

The curriculum provides a central core of required courses with flexibility in the upper-division years to permit emphasis on preparation for graduate school or professional employment.

DEPARTMENTAL GRADUATION REQUIREMENTS

To graduate in chemical engineering, students must complete the published curriculum with a grade of C or better in all required chemical engineering courses.

A minimum of 18 semester hours of general education courses are required. These courses must meet the college general education requirements listed under “Curricula in Engineering.” A 3 semester-hour technical writing course must be included in the general education electives.

HONORS PROGRAM

The honors program encourages highly motivated students to experience a more rigorous preparation in chemical engineering. Admission is selective. Application to the honors program is made when the student applies for upper division status. Honors requirements are: credit for 3 of the 4 honors seminars (CHE 307, 308, 407 and 408), CHE 447, one of CHE 467, 477, 488 or 498 as a technical elective and CHEM 483 as a chemistry elective. Students interested in the honors program should consult the department’s honors coordinator.
PROGRESSION TO UPPER DIVISION

Progression of chemical engineering students to departmental upper division courses is competitive and based on capacity. Factors considered include overall grade point average, performance in selected lower division courses and evidence of satisfactory and orderly progress through the prescribed curriculum.

Upper-Division Status: A lower-division student may apply for progression to Upper-Division Status after completing CEH 200, 230, 240 and 250 with a grade of C or better in each course and an overall GPA of 2.5 or better.

Provisional Status: Students who have completed CEH 200, 230, 240, and 250 with an overall GPA of at least 2.1 may apply for provisional status. The granting of Provisional Upper-Division Status is based on the availability of space in the departmental programs after Upper-Division Status students have been accommodated. Provisional status students are required to maintain a cumulative GPA of 3.0 after two years of enrollment. Provisional status students are not granted provisional upper-division division classes if with a grade of C or better in each course (including the four required for Upper-Division Status). Permission to continue with upper-division classes depends on the minimum level of performance.

Any student with an overall GPA below 2.1 will not be admitted to upper-division Chemical Engineering courses. Students who have not been admitted to Upper-Division or Provisional Status will be dropped from upper-division course rolls.

Transfer students at the upper-division level are admitted on a Provisional Status basis only.

GRADUATE STUDY PROGRAM

Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in Chemical Engineering are offered. The University’s Graduate School operates a Resident Graduate Program at Oak Ridge and Kingsport.

See the Graduate Catalog for detailed information.

CIVIL AND ENVIRONMENTAL ENGINEERING

Associate Professors:
K.C. Chou, Ph.D. Northwestern; C.D. Cox, Ph.D. Penn State; L.D. Han, Ph.D. California (Berkeley); M. Mauldon, Ph.D. California (Berkeley); T.L. Miller, Ph.D., Tennessee; S.H. Richards, Ph.D., P.E., Tennessee; K.G. Robinson, Ph.D. VPI; R.P. Tiry (Emeritus), B.S. Marquette.

Assistant Professor:
M. Jackson, Ph.D., P.E., Oregon State.

BACHELOR OF SCIENCE PROGRAM

The department offers a Bachelor of Science degree with a major in Civil Engineering, accredited by the Accreditation Board for Engineering and Technology (ABET).

UNDERGRADUATE EDUCATION MISSION

To prepare students to enter the general practice of Civil Engineering and/or pursue graduate education, the department’s undergraduate education mission is to provide a high-quality teaching and learning environment in recognized areas of civil engineering with proficiency in environmental, geotechnical, structural, transportation, and water resources engineering.

EDUCATIONAL OBJECTIVES

To ensure a high quality and stimulating learning environment, the department strives to do the following: attract highly-qualified and motivated students, prepare a highly competent faculty, dedicated to undergraduate instruction; control class size to facilitate a high-quality learning environment; provide state-of-the-art teaching and laboratory equipment/facilities; and foster strong bonds of faculty-student interaction through seminars, extracurricular activities, personal advising and consultation.

To ensure that students have exposure to the practice of Civil Engineering, the department strives: to provide cooperative education and internships; to encourage professional society participation; to consult an external advisory board of practitioners to assist with the development of the curriculum; to provide a senior design project including meaningful engineering design experiences; to maintain national engineering accreditation; and to maintain a high passing rate on the first professional licensing examination.

The department strives to ensure graduates will compete favorably in the marketplace for opportunities in the practice of civil engineering and/or graduate education by: providing professional courses to achieve proficiency in the five areas listed in the mission statement; fostering an appreciation for professional development and life-long learning; providing an undergraduate education recognized for its excellence both statewide and nationally; and providing professional development opportunities consistent with current engineering practice.

The curriculum in Civil Engineering provides training in fundamental engineering sciences and in basic subjects in related fields. Technical electives are available in construction, environmental engineering, geotechnical, material, structures, transportation, or water resources. Students are required to maintain a cumulative grade point of at least 2.0 in all Civil Engineering and Environmental Engineering courses taken at the University of Tennessee and used to satisfy the graduation requirements. No more than six hours of Civil and Environmental Engineering courses in which a D is the highest grade earned may be counted toward graduation.

ELECTIVES

Electives are chosen to meet student career objectives and program accreditation requirements. Students must consult with their advisor and have their selections pre-approved. A student must have a GPA of 2.75 or higher or approval of the instructor to take 500-level courses for undergraduate credit.

ENVIRONMENTAL ENGINEERING MINOR

The College of Engineering offers a minor in Environmental Engineering to those undergraduate students whose academic history provides the prerequisites for the courses required by the minor. The minor requires the completion of a minimum of 21 credits in course work which builds the foundation of an environmental engineering perspective. Some of the courses used in the minor may also satisfy the requirements for a major. Students are advised that the first professional degree in Environmental Engineering at the University of Tennessee is the M.S. in Environmental Engineering which builds on the minor.

COURSE REQUIREMENTS

Choose One:
CHEM 230 Inorganic Chemistry
CHEM 310 Analytical Chemistry
CHEM 350 Organic Chemistry

Required:
MICR 210 General Microbiology

Choose Two:
CHE 200 Chemical Engineering Fundamentals
BeS 243 Material and Energy Flow in Bio Systems
CE 380 Water & Wastewater Treatment
CE 395 Hydrology or BeS 315 Soil and Water Conservation

Choose One:
GEOL 202 Earth as an Ecosystem
PHIL 346 Environmental Ethics

Choose One:
GEOL 485 or CE 485 Hydrogeology
PSS 415 Soil Hydrology

Required:
CE 486 Air and Waste Management

Students are asked to file their intent to complete the Minor with the office of the Department of Civil and Environmental Engineering, 223 Perkins Hall. The student’s home department advisor will then be supplied with the information about the Minor requirements to assist with prerequisite sequencing. A copy will be filed with undergraduate records so the Minor, once completed, will be shown on the student’s transcript.

MASTER OF SCIENCE PROGRAM

Graduate programs in Civil Engineering and Environmental Engineering leading to the degrees of Master of Science are offered to graduates of recognized undergraduate curricula.

The general requirements for the masters’ degrees are stated in the Graduate Catalog.
DOCTORAL PROGRAM

Graduate work leading to the degree of Doctor of Philosophy with a major in Civil Engineering is offered. Major fields of study include environmental engineering, geotechnical/ materials, structural engineering, transportation, and water resources.

The general requirements for the doctoral degree are stated in the Graduate Catalog.

ELECTRICAL AND COMPUTER ENGINEERING

Professors:
M.O. Pace (Acting Head), Ph.D. Georgia Institute of Technology; M. Abidi (Weston Fulton Professor), Ph.D. D. Tennessee; J.D.
Birdwell, Ph.D. Massachusetts Institute of Technology; B.K. Bose (Condra Chair of Excellence), Ph.D. Electra; D.W. Bouldin,
Ph.D. Vanderbilt, P.E.; J.S. Lawler, Ph.D. Michigan State; A. Pujol (UTSI), Ph.D.
Vanderbilt; J.M. Roberts, Ph.D. Tennessee; J.R. Roth (Weston Fulton Professor), Ph.D.
Cornell.

Emeritus Professors:
I. Alexeff, Ph.D. D. Wisconsin, P.E.; J. M. Bailey,
Ph.D. Georgia Institute of Technology; A.O. Bishop, Jr., Ph.D. Clemson; R.E. Bodenheimer,
Ph.D. Northwestern; R.C. Gonzalez, Ph.D.
Florida; J.M. Googe, Ph.D. Georgia Institute of Technology; P.E.; W.L. Green, Ph.D. Texas
A&M; J.C. Hung, Ph.D. New York, P.E.; E.J.
Kennedy, Ph.D. Tennessee, P.E.; J.F. Pierce,
Ph.D. Pittsburg, P.E.; R.W. Rochelle, Ph.D.
Maryland; F.W. Symonds, Ph.D. Nottingham;
J.D. Tillman, Ph.D. Auburn.

Associate Professors:
C.T. Abdallah, Ph.D. Georgia Institute of Technology; B.W. Bomer (UTSI), Ph.D.
D. Tennessee; P.B. Crilly, Ph.D. New Mexico
State; S.K. Islam, Ph.D. Connecticut; P.E.; J.S. Lawler, Ph.D. Mississippi State; A.
Walker, Ph.D. North Carolina State.

Emeritus Associate Professors:
J.M. Rochelle, Ph.D. Tennessee; D.
Rosenburg, Ph.D. New York; J.W. Waller,
Ph.D. Tennessee.

Assistant Professors:
P.E.; J.N. Chiasson, Ph.D. Minnesota; M.M.K.
Howald, Ph.D. Virginia Polytechnic Institute;
T.P. Montgomery Institute of Technology; G.D. Peterson, Ph.D. Washington
University; H. Qi, Ph.D. North Carolina State;
L.M. Smith (UTSI), Ph.D. Tennessee; P.W.
Smith, Ph.D. Virginia; L.M. Tolbert, Ph.D.
Georgia Institute of Technology.

BACHELOR OF SCIENCE PROGRAMS

GOALS

The goals of the B.S. degree programs in electrical and computer engineering are to: (a) prepare students for entry into the profession; (b) instill in students the capabilities required by the discipline, the recognition of the need to enhance the discipline, and the desire for lifelong learning; and (c) equip students with a general knowledge of technical and non-technical disciplines so that they are prepared for further study in other fields including professional and graduate education.

The B.S. degree programs are based on a series of integrated courses. Students advance through the program in a sequential manner guided by prerequisite and co-requisite courses in the showcase curriculum. This integrated sequentially developed program is highlighted by the systematic inclusion of the design process introduced in the sophomore year.

PROGRAM EDUCATIONAL OBJECTIVES

The program educational objectives of the Electrical and Computer Engineering programs include: (1) an understanding of the engineering sciences necessary to analyze and design complex devices and systems containing hardware and software components; (2) an understanding of mathematics through differential and integral calculus and differential equations; (3) an understanding of probability and statistics, including data analysis; (4) an understanding of linear algebra, numerical analysis, and advanced calculus; (5) an understanding of the basic sciences including chemistry and physics; (6) a progression of design projects and tasks throughout the program; (7) an orderly student progression through the program; and (8) achievement of all eleven Program Outcomes common to all engineering disciplines and the two additional department specified outcomes. See Program Outcomes below.

PROGRAM OUTCOMES

In addition to the eleven program-outcomes listed in the College of Engineering section on National Accreditation (listed on page 104), electrical and computer engineering program outcomes also include (a) experience in using organizational skills in team management and negotiation; and (b) ability to use creative and technical skills in analytical problem solving in the discipline and other engineering related fields. Both Electrical and Computer Engineering programs are under continuous assessment and improvement based on Engineering Criteria 2000. The Advisory Committee to the department, which is made up of persons from industry, government, higher education, students and recent graduates, and faculty, provides constituent input for setting program educational objectives and outcomes and establishing the requisite assessment modes for the program.

GENERAL

The courses of study for the B.S. degree in Electrical Engineering and B.S. degree in Computer Engineering are designed to provide a foundation in both the basic sciences and the specialized areas of their respective discipline. The programs also have sufficient general education electives to enhance the cultural growth of the student and develop professionals with a strong social awareness. The faculty seeks to keep classes small enough to allow effective interaction with students.

The selection of general education elective courses is left to each student but must be made in accordance with established College of Engineering Policy. Students are required to satisfy the following graduation cluster distribution requirements: Engineering in a Global/Social Context cluster (1 course), Con-
GRADUATE STUDY PROGRAM

Comprehensive course and research programs for the degrees of Master of Science and Doctor of Philosophy in electrical engineering are offered for students with career goals such as advanced design, research, and teaching. Students admitted to the graduate program are expected to have a minimum grade point average of 3.0 for all undergraduate study, and for the senior year. Students with a B.S. or B.A. degree in a field other than Electrical Engineering are required to take certain ECE undergraduate courses before beginning the graduate program. See the Graduate Catalog for complete details on the graduate program.

The ECE Department has a long-standing tradition of research excellence in analog and mixed-signal integrated circuits, computer vision, image processing, information processing, industrial plasma engineering, power electronics, and sensors. Various government agencies, laboratories, and industrial partners support research of the ECE faculty at a level of approximately $3.5M per year. The campus is located within the vicinity of the Oak Ridge National Laboratory (ORNL). The ECE Department sustains a strong link with ORNL in their efforts at advancing the nation’s energy resources, scientific knowledge, educational foundations, and economic competitiveness.

ENGINEERING PHYSICS

Lee L. Riedinger (Head)
Stuart B. Elston, Coordinator

Engineering physicists typically work in areas of applied science and emerging technology in which standard engineering practices are rapidly evolving to keep pace with advances in science; they are often involved in developing new engineering methods and principles. The goal of the Engineering Physics B. S. program is to prepare students to apply the principles and problem-solving approaches of physics to the solution of engineering problems at the frontiers between science and technology, by:

1. providing students with a thorough knowledge of mathematics, science, and engineering science with an emphasis on the principles of physics and of the derived physical, chemical, and biological sciences as appropriate to individual career goals;
2. training students in the communication, team cooperation, and problem identification and solving skills needed to practice engineering art in the modern world;
3. preparing students through example and experience to apply those principles and skills to the design and conduct of experiments, to the analysis and interpretation of measured results, and to the design of components, processes, and systems that meet specific, identified needs; and
4. instilling in students understanding and appreciation of the cultural, historical, societal, economic, and environmental contexts in which problems of engineering and science arise, and to promote commitment to seek solutions which achieve appropriate balance of cultural, social, and technical values.

The program in Engineering Physics is designed to fulfill the educational requirements for professional work in various fields of applied science which are based upon a thorough knowledge of physics. The first two years of the curriculum are concerned with fundamental courses in engineering, science, mathematics, and general education. In the upper division, the curriculum allows some choice of courses in engineering and in physics depending on the interest and career goals of the student. The undergraduate program is a complete, professional program, equipping the student for entry into a variety of work in industry and research. The program also leads to graduate work in either physics or engineering.

ENVIRONMENTAL ENGINEERING

(See Civil Engineering)

INDUSTRIAL ENGINEERING

Professors:
A.B. Badru (Head), Ph.D. Central Florida, P.E.;
W.W. Claycombe (Emeritus), Ph.D. Virginia Polytechnic Institute, P.E.;
G.W. Garrison (UTSI), Ph.D. North Carolina State; H.L.
Loveless (Emeritus), M.S. North Carolina State, P.E.; J.A. Bontadelli (Emeritus), Ph.D. Ohio State, P.E.

Associate Professors:
C.H. Aikens III, Ph.D. Tennessee, P.E.; M.L.
Hailey (UTSI), Ph.D. Texas Tech., P.E.; J.C.
Hungerford, Ph.D. Ohio State; D.F. Jackson,
Ph.D. Tennessee, P.E.; K.E. Kirby, Ph.D.
Tennessee; H.R. Liggett, Ph.D. North Carolina State; R.S. Sawshney, Ph.D. Tennessee.

Assistant Professors:
R.E. Ford, Ph.D. Tennessee; P.E.; T.A. Kress,
Ph.D. Tennessee.

The undergraduate curriculum in industrial engineering provides a strong background in both fundamental engineering principles and the analytic methods necessary for solving the multi-faceted problems associated with the production, maintenance, and delivery of goods and services. In particular, this curriculum emphasizes the knowledge and skills necessary to design integrated systems of people, materials, equipment, and energy wherever they are found, such that the overall system functions at an optimal level and such that the needs of the human components of the system are adequately met.

GOALS

The goals of the Industrial Engineering undergraduate program are to prepare students to contribute to the profession of Industrial Engineering and to prepare them for further study, including professional and graduate education.

OBJECTIVES

The objectives of the Industrial Engineering Program include enabling the students to obtain:
(a) An understanding of fundamental engineering principles, mathematics, science, and statistics.
(b) An understanding of and an ability to apply the following concepts to the multi-faceted problems associated with the production, maintenance, and delivery of goods and services: fundamental human factors which influence engineering design, the economic analysis of alternative design choices, introductory economics and accounting, quality control techniques, manufacturing processes and materials, production and inventory system design and control, the mathematical modeling and simulation of complex systems, and the design and installation of information acquisition and control systems.
(c) The ability to communicate effectively, both orally and in writing, to function on multidisciplinary teams, to have a knowledge of pertinent contemporary issues, and to recognize the need for a commitment to life-long learning.

This curriculum emphasizes the knowledge and skills necessary to design integrated systems of people, materials, equipment and energy, such that the overall systems functions at an optimal level and such that the needs of human components of the system are met. The solid, broad base in engineering, combined with education in applying engineering methodology to traditionally non-engineering problem areas as provided through the Industrial Engineering curriculum, leads to participation by Industrial Engineers in an unlimited range of fields; including, among others, retail distribution, banking, health care delivery, corporate management, municipal management, food industry, as well as traditional areas of manufacturing.

OUTCOMES

The eleven program outcomes listed in the College of Engineering section on National Accreditation are the accepted outcomes of the Industrial Engineering Department.

UNIVERSITY OF TENNESSEE GENERAL EDUCATION REQUIREMENTS

Industrial Engineering students are required to take Economics 201 and two English electives. They must select the remainder of their humanities/social science elective courses to satisfy the University of Tennessee General Education Requirements in accordance with the established College of Engineering Policy. An Industrial Engineering advisor will assist the student in selecting courses to meet these requirements.

GRADUATE STUDY PROGRAMS

The Department of Industrial Engineering offers a graduate program leading to the Master of Science degree with a major in Industrial Engineering, concentrations in traditional industrial engineering, engineering management, manufacturing systems engineering, and product development and manufacturing. The Ph.D. with a major in Engineering Science is available through the Department of Engineering Science and Mechanics with a specialization in Industrial Engineering.

Students who enroll in the Master of Science degree may select a concentration in either Industrial Engineering, Engineering Management, or Manufacturing Systems Engineering. In manufacturing, a dual degree program leading to an MBA and MSIE is available. Admission is open to graduates of ABET—accredited undergraduate curricula in engineering, or to graduates of other technical curricula who satisfy prerequisites depending
on their academic backgrounds and industrial experiences. Policies concerning prerequisite requirements will be determined by the Industrial Engineering faculty.

NOTE: Any 400-level course required in the Bachelor of Science in Industrial Engineering program at UT may not be used for graduate credit in the M.S. degree program.

**INDUSTRIAL ENGINEERING AND MANUFACTURING SYSTEMS ENGINEERING**

Under the Industrial Engineering and Manufacturing Systems Engineering Concentration, students may select either the thesis or non-thesis option. The thesis option requires 24 hours of coursework and 6 hours thesis. The non-thesis option requires 30 hours of course work plus a 3-hour industrial design project.

Depending upon a student's background and career objectives, graduate work in Industrial Engineering enables the student to select an area of specialization from operations research, human factors engineering, quality engineering, manufacturing and reliability engineering, or general industrial engineering. In addition to the concentration in manufacturing systems engineering, a dual degree program, requiring a total of 67 semester hours of coursework, is available in manufacturing, and leads to an MBA and an MS degree.

It is also possible in either concentration for a student to select minors in engineering, mathematics, psychology, business, computer science, statistics, or economics.

**ENGINEERING MANAGEMENT**

The Engineering Management Concentration has an additional admission requirement of two years’ industrial experience as a practicing engineer or scientist, or current full-time employment in an appropriate engineering or applied science position. The program is non-thesis and requires 33 hours of course work plus a 3-hour capstone project.

**MATERIALS SCIENCE AND ENGINEERING**

**BACHELOR OF SCIENCE PROGRAM**

Materials Science and Engineering is concerned with the science and technology needed to develop and apply materials for the benefit of society. The undergraduate program is designed to prepare students to undertake materials science and engineering careers or to enter graduate programs in this or related disciplines. In order to accomplish this overall goal, the specific educational objectives of the program for the degree of B.S. in Materials Science and Engineering are:

1. To provide students with a knowledge of the fundamentals of appropriate physical and chemical sciences, mathematics, and engineering sciences, and to demonstrate the applications of these principles to solve engineering problems with an emphasis on the materials processing, structure, properties, and performance. This knowledge base includes the development of analytical and experimental skills.

2. To provide students with experiences in design and materials selection such that they can design components, systems, or processes with consideration of economic, safety, environmental, and social issues.

3. To develop professional skills in such areas as written and oral communication, problem-solving, and working in diverse teams that prepare graduates to practice materials engineering in contemporary and global environments.

4. To provide students with a general education component that complements the technical content, for the appreciation of cultural and social values, for understanding the impact of engineering solutions on society, and for personal development.

The field of Materials Science and Engineering is quite broad, encompassing metallic, ceramic, and polymeric materials, as well as composites made from combinations of materials. Consequently, the curriculum contains a central core of courses that are applicable to all materials types with flexibility in the upper division years to permit concentration and in-depth coverage of specific materials categories. By judicious choice of electives the student may get a broad perspective or may develop a specialty area.

A minimum of 18 semester-hours of general education courses are required by all engineering degree programs in order to meet the UT general education goals, as discussed above. The major in Materials Science and Engineering specifically requires that Economics 201 and one course from the Effective Communication Cluster be included as a part of this group. Graduation in materials science and engineering requires a minimum grade point average of 2.00 for all departmental courses.

**PROGRESSION TO UPPER-DIVISION PROGRAMS**

Progression of students to departmental Upper-Division courses is competitive. Factors considered include overall grade point average, performance in selected lower-division courses and evidence of satisfactory and orderly progress through the prescribed curriculum.

**Upper-Division Status**

A Lower-Division student formally applies for Upper-Division Status after completing 50 semester hours of Lower-Division engineering curriculum course work with an overall GPA of at least 2.4. This must include Materials Science and Engineering 201.

**Provisional Status**

Students who have completed 50 semester hours of Lower-Division engineering curriculum course work with an overall GPA between 2.0 and 2.4 may apply for provisional status. The granting of Provisional Upper-Division Status is based on the availability of space in the departmental programs after Upper-Division Status students have been accommodated. Provisional students are required to demonstrate their ability to perform satisfactorily in upper-division courses by attaining a minimum GPA of 2.0 in at least 8 hours of 300-level required courses specified by the department. Further progression to upper-division courses is dependent upon this minimum level of performance.

**Transfer Students**

At the Upper-Division level students are admitted on a Provisional Status basis only. Any student presenting more than 28 hours of Lower-Division engineering curriculum course work by transfer credit is considered to be a transfer student.

**MINOR IN MATERIALS SCIENCE AND ENGINEERING**

A minor in Materials Science and Engineering (MSE) is offered through the College of Engineering to those undergraduate students who have met the prerequisites for the courses required by the minor. The minor requires completion of a minimum of 18 semester hours in course work which develops a foundation in MSE and allows concentration in MSE areas to be selected by the students (e.g., metallurgy, polymers, ceramics, composites, or electronic materials). Some of the courses used for the MSE minor may also satisfy requirements for the student’s major.

Students may enroll in the minor program by completing a form at the office of the Department of Materials Science and Engineering, 434 Dougherty Engineering Building. A copy of the completed enrollment form and information on the minor requirements will be forwarded to the student’s home department advisor. A copy of the form also will be filed with the Office of Records and Certification so that, upon completion, the minor will be shown on the student’s transcript.

**COURSE REQUIREMENTS**

Required courses:

- Materials Science and Engineering 201 and 380.

Choose at least one:

- Materials Science and Engineering 410, 402, 340, 360, and 472.

Choose at least three, at least one of which must be at the 400 level:

- Any of the Materials Science and Engineering 300-400 courses;
- Civil and Environmental Engineering 321 and 421;
- Chemical Engineering 330 and 447;
- Industrial Engineering 330;
- Mechanical Engineering 336 and 466;
- Engineering Science 321, 322, 323, 423, 426, and 473;

**Associate Professors:**

William T. Becker, Ph.D., Illinois; Thomas T. Meek, Ph.D., Ohio State.

**Assistant Professor:**

Kevin Kli, Ph.D., Delaware.
Chemistry 350-360, 369, 430, 450, 473-483, 479-489, 484, and 490; Physics 342,411-412, and 431-432; Other courses in this category may be acceptable, but must be approved in advance by the Department of Materials Science and Engineering.

GRADUATE STUDY PROGRAMS

Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy with a major in Science and Engineering or Polymer Engineering are offered.

Detailed information about graduate programs in Materials Science and Engineering and the requirements for either M.S. or Ph.D. degrees are given in the Graduate Catalog.

MECHANICAL AND AEROSPACE ENGINEERING AND ENGINEERING SCIENCE


Associate Professors: J.A. M. Boulet, Ph.D. Stanford; J.S. Freeman, Ph.D. Wisconsin; W.R. Hamel, Ph.D. Tennessee; G.S. Iannelli, Ph.D. Tennessee; M. Karsa, Ph.D. Electro Polymere (Canada); G. Kwieckie, Ph.D. West Virginia; J.E. Lyne, M.D., Ph.D. North Carolina State; M.S. Madhukar, Ph.D. Drexel; K. Nguyen, Ph.D. Colorado; C.D. Pionke, Ph.D. Georgia Tech, P.E.; N. Yu, Ph.D. California (San Diego).

Associate Professor (Emeritus): S.E. Becker, Ph.D. North Carolina State, P.E.

Assistant Professors: R.L. Kress, Ph.D. Arizona, P.E.; M. Zheng, Ph.D. University of Calgary (Canada).

GENERAL

The department offers a B.S. in Mechanical Engineering, Aerospace Engineering, and Biomedical Engineering. At the graduate level the M.S. and Ph.D. degrees are offered in Mechanical Engineering, Aerospace Engineering, and Engineering Science. The mission of the department is to provide a broad base integration of courses and experiences that prepare graduates to practice their profession successfully, to apply their skills to solve current engineering problems collaboratively, and to help advance the knowledge and engineering practice in their fields. Further information can be found on the department’s web site: http://www.engr.utk.edu/maes/

BACHELOR OF SCIENCE PROGRAMS

Mechanical Engineering has two main stems. (1) thermal/fluids science and (2) machine science. Historically, both are derived from the sciences associated with the generation of mechanical power and the transmission of this power through various machine elements. Today, fundamental concepts are applied to various power units such as steam turbines, gas turbines, and internal combustion engines.

Mechanical Engineering is a versatile and broadly based engineering discipline. The foundation is in the basic sciences and requires an understanding of such subject areas as solid and fluid mechanics, thermodynamics, heat transfer, structures, vibrations, mechanical design, manufacturing processes, and instrumentation. Design projects throughout the program develop student skills in handling open-ended problems. Because of the broad scientific foundation and design training in this program, graduates are found in nearly every industry and at different levels of research, design, and management.

The educational objectives of the Mechanical Engineering program are:
• To educate students thoroughly in methods of analysis, including mathematical and computational skills appropriate for application to engineering problems;
• To develop the skills pertinent to the design process, including skills needed for formulation of problems, analysis, synthesis, and skills pertinent to effective communication and collaborative work;
• To teach students to use modern experimental and data analysis techniques for engineering application; and
• To prepare students for lifelong learning, nourish creative talents, and provide understanding of professional and ethical responsibilities.

Aerospace Engineering uses the basic sciences and mathematics to develop the foundation for the design, development, production, testing, and applied research associated with aerospace vehicles. These vehicles include aircraft, spacecraft, and missiles. Auxiliary and propulsion systems are also an integral part of this education. These include guidance, control, environmental, ramjet, rocket, turbo-jet, and piston engine systems. Emphasis in the senior year is directed toward these topics, and the program culminates in a major aerospace design project.

An agreement among southern states for sharing academic programs allows legal residents of some states to enroll in certain programs at UT (Knoxville campus) on an in-state tuition basis. The undergraduate program in Aerospace Engineering is available on an in-state basis to students from Arkansas, Kentucky, Louisiana, and South Carolina.

A coursework program leading to a minor in Aerospace Engineering for students in other engineering degree programs is also offered. The educational objectives of the Aerospace Engineering program are:
• To provide students with a comprehensive education that includes in-depth instruction in aerodynamics, structures, flight mechanics, orbital mechanics, flight propulsion, and the design of aerospace systems;
• To prepare students for professional careers in Aerospace Engineering by developing the skills pertinent to problem solving, analysis, design, and those personal skills required for teamwork and effective communication;
• To provide adequate opportunities to develop and cultivate lifelong learning skills, individual professionalism and ethics, and to nourish creative talents.

The Biomedical Engineering degree curriculum integrates selected engineering sciences and design methods with life science course work. The program prepares students for careers in a variety of health care related professions including work for medical device manufacturers and regulatory governmental agencies. The course content of the biomedical engineering curriculum complements the departmental strengths in mechanical engineering and includes a comprehensive coverage of engineering materials and biomechanics applications. Effective courses are available to allow students to specialize their curriculum to areas of particular current interest in the market such as cell culture and tissue engineering applications. The biomedical engineering program also allows students to meet medical school admission requirements with an appropriate selection of technical electives.

The educational objectives of the biomedical engineering program are:
• To provide students with a solid foundation in mathematics, the basic and engineering sciences and engineering design methods;
• To provide students with a comprehensive integration of engineering methods of problem solving and design within the biological sciences;
• To develop the skills needed for work in the medical device industry including a thorough coverage of engineering materials, biomaterials, biomechanics, medical device design and work in interdisciplinary teams;
• To provide essential laboratory experience with commonly used biomedical devices and systems and to provide coverage of methods for the design of experiments in medical and life science applications;
• To provide a biomedical technology-based engineering background for students desiring admission to medical school with admission requirements being met through the appropriate selection of elective course work.
ACADEMIC COMMON MARKET

An agreement among state for sharing academic programs allows legal residents of some states to enroll in certain programs at UT (Knoxville campus) on an in-state tuition basis. Aerospace Engineering is available on an in-state basis to students from Arkansas, Kentucky, Louisiana, and South Carolina. Biomedical Engineering is available on an in-state basis to students from Alabama, Arkansas, Kentucky, Maryland, Mississippi, South Carolina, and West Virginia.

PROGRESSION TOWARD GRADUATION

The freshman year curriculum is common to all engineering majors. The sophomore curriculum is nearly identical for all students in the department. The first two years are considered to be lower division and the two remaining years upper division. Upon completion of the lower division courses the student must apply for progression to the upper division in order to continue in the department. Students allowed to progress may be awarded Full Status or Provisional Status. Factors considered include overall grade point average, performance in lower division engineering and math courses, and evidence of orderly progression through the lower division curriculum.

Full Status

A Lower Division student may apply for progression to Upper Division after completing 47 semester hours of Lower Division engineering curriculum course work with an overall GPA of at least 2.4.

Provisional Status

Students who have completed 47 semester hours of Lower Division engineering curriculum course work with an overall GPA between 2.0 and 2.4 may apply for Provisional Status. The granting of Provisional Status is based on the availability of space in departmental programs after Full Status students have been accommodated. Provisional Status students are required to demonstrate their ability to perform satisfactorily in Upper Division by attaining a minimum GPA of 2.0 in the first 12 semester hours of 300 level required engineering courses. Award of Upper Division Full Status is dependent upon this performance.

Students with an overall GPA less than 2.0 in 47 hours of Lower Division engineering curriculum course work will not be admitted to Upper Division. Students who have not progressed to Upper Division will be dropped from departmental class rolls.

Transfer Students

Students transferring more than 26 hours from another institution are considered Transfer Students. Students transferring 47 hours or more will be admitted to Upper Division, if eligible, with Provisional Status.

Loss of Full Status

Full Status students are expected to maintain a overall GPA of 2.0 and a GPA of 2.0 in departmental courses. Failure to maintain these levels of performance will result in a review of the student’s progress and possible loss of Full Status.

Graduation Requirements

A minimum cumulative GPA of 2.0 in all departmental courses taken at UT is required for graduation. This is in addition to the University’s graduation requirements.

GRADUATE STUDY PROGRAMS

Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy with a major in Mechanical Engineering or Aerospace Engineering are available to graduates of other curricula who satisfy the necessary prerequisite courses. The general requirements for advanced degrees are summarized in the Graduate Catalog.

Graduate programs leading to the degrees of Master of Sciences and Doctor of Philosophy with a major in Engineering Science are available to graduates of recognized curricula in engineering. Graduates of recognized curricula in mathematics, computer science or one of the physical or biological sciences may also qualify for admission depending upon their background. Each applicant is advised as to any prerequisite courses needed to enter a program. Program options include solid and fluid mechanics (with emphasis toward computational techniques), biomedical engineering, artificial intelligence applications, composite materials and fracture mechanics. Interdisciplinary programs are arranged to meet individual student needs or interests. The student’s program of study must be approved by his or her advisory committee, and must comply with the requirements of the Graduate School.

NUCLEAR ENGINEERING

Professors

H.L. Dodds (Head), Ph.D. Tennessee; P.E.; J.T. Mihalczko (Part-time), Ph.D. Tennessee; L.F. Miller, Ph.D. Texas A&M; P.E.; R.E. Uhrig (Distinguished Professor) Ph.D. Iowa State; P.E.; B.R. Upadhyaya, Ph.D. California; P.E.

Professors (Emeritus): T.W. Kerlin, Ph.D. Tennessee; R.E. Perez, Ph.D. Madrid; P.N. Stevens, Ph.D. Northwestern, P.E;

Research Professors: F.R. Myatt, Ph.D. Tennessee; T.E. Shannon, Ph.D. Tennessee

Associate Professors: P.O. Groer, Ph.D. Vienna (Austria); J.W. Hines, Ph.D. Ohio State; R.E. Pevey, Ph.D., Tennessee; P.E.; T.H. Scott, Ph.D. Florida; P.E.; A.E. Ruggles, Ph.D. Rensselaer; L.W. Townsend, Ph.D. Idaho.

GENERAL

Nuclear Engineering is the engineering discipline that deals with the application of nuclear and atomic processes for the benefit of mankind. Radiological Engineering is a specialty of Nuclear Engineering that focuses on biological applications. Some examples of Nuclear and Radiological Engineering are production of electric power with essentially no air pollution, production of radioisotopes for medical and industrial uses, and development of radiation based methods for the diagnosis and treatment of cancer.

The mission of the Nuclear Engineering Department is to:

1. Produce high quality nuclear and radiological engineering graduates from undergraduate through the doctoral level in order to help meet the manpower needs of our state, region, nation, and the international community.
2. Conduct nuclear and radiological engineering related research to help meet the needs of society.
3. Perform service for industry, government, professional organizations, and the public in areas related to nuclear and radiological engineering.

Additional information about the Department and its programs is available on the Department’s web site at www.engr.utk.edu/ nuclear.

BACHELOR OF SCIENCE PROGRAM

The program for the B.S. degree in Nuclear Engineering is nationally accredited by the Accreditation Board for Engineering and Technology (ABET) which is described earlier in this catalog. The educational objectives of the B.S. program are to:

1. Provide students with fundamental knowledge in mathematics, computer science, the basic sciences, and the engineering sciences that is necessary to solve state-of-the-art problems in nuclear and radiological engineering.
2. Provide students with a real-world design and analysis experience in nuclear and radiological engineering that shall include environmental, societal, safety, and economic considerations.
3. Provide students with appropriate skills in oral and written communication, teamwork, laboratory work, problem solving and the use of modern engineering tools that will prepare them to work productively in a contemporary and global environment.
4. Provide students with a diverse general education in the humanities, ethics, and social sciences to complement their technological education in order to understand and appreciate the importance of each in society and in personal development.
5. Foster a genuine desire for life-long learning in students.

Students majoring in Nuclear Engineering take courses in the basic sciences, engineering fundamentals, mathematics, computer science, humanities, and special areas of nuclear engineering including fission system design and safety; radiation transport and shielding; heat transfer and fluid flow; instrumentation and controls; fuel cycle and waste management; and health physics. Nuclear Engineering students may concentrate in Radiological Engineering by substitution of three courses. The Radiological Engineering concentration also satisfies most of the requirements of pre-med, pre-vet, and pre-dentistry programs.

MASTER OF SCIENCE PROGRAM

A graduate program leading to a degree of Master Science is available to graduates of recognized undergraduate curricula in engineering, physics, chemistry, or mathematics. Each applicant will be advised as to the necessary prerequisite courses before entering the program. The general requirements of the masters’ degree are summarized in the Graduate Catalog.
DOCTORAL PROGRAM
A program leading to the Ph.D. degree is available in nuclear engineering. For details, see the Graduate Catalog.

ACADEMIC COMMON MARKET
An agreement among states for sharing academic programs allows legal residents of some states to enroll in certain programs at UT (Knoxville campus) on an in-state tuition basis. The undergraduate program in Nuclear Engineering is available on an in-state basis to students from Alabama, Arkansas, Delaware, Kentucky, Louisiana, Mississippi, South Carolina, Virginia and West Virginia.

CURRICULA
Course requirements for the various engineering curricula are listed on the following pages. The numbers in the columns indicate the number of semester hours of credit for each course. Individual course prerequisites should be strictly adhered to, even if courses are not taken in the semester indicated. Although the requirements for each degree can be completed in four academic years (five for the cooperative program), the quality of the learning experience is much more important than the speed with which the curricula are completed.

Questions about individual courses should be directed to the department responsible for the course; questions about a particular curriculum should be directed to the major department.

Prerequisites
Before registering for any engineering course, a student should make certain that any necessary background work has been completed. In addition to specific prerequisites listed, it is assumed that a student taking sophomore engineering courses has completed all freshman courses, whether specifically listed as a prerequisite or not. When this is not the case, a student should seek advice from the advisor or department responsible for the course in question before registration so as to minimize the chances of academic difficulty. Students who do not have prescribed prerequisites may be dropped from a course at any time during a semester when the lack of prerequisites is discovered.

FRESHMAN YEAR
The following freshman year curriculum is common to all engineering programs except Engineering Physics. (Engineering Physics students should see the curriculum that follows.)

AEROSPACE ENGINEERING

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
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<tbody>
<tr>
<td>Sophomore</td>
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<tr>
<td>Mathematics 231, 241</td>
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<tr>
<td>Mathematics 200</td>
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<td>Physics 231, 232</td>
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<td>Engineering Science 231, 321</td>
<td>6</td>
</tr>
<tr>
<td>Materials Science and Engineering 201</td>
<td>3</td>
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<tr>
<td>Mechanical Engineering 331</td>
<td>3</td>
</tr>
<tr>
<td>Economics 201</td>
<td>4</td>
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<td>General Education Elective</td>
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<tr>
<td>Junior</td>
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<tr>
<td>Mechanical Engineering 332, 363, 391</td>
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<tr>
<td>Aerospace Engineering 345, 351, 363, 370</td>
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<tr>
<td>Electrical and Computer Engineering 301, 302</td>
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<tr>
<td>Engineering Science 341</td>
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<td>General Education Electives</td>
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<td>Senior</td>
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<tr>
<td>Mechanical Engineering 344, 451, 402</td>
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<tr>
<td>Aerospace Engineering 426, 429</td>
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<td>Aerospace Engineering 422, 424, 425</td>
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<tr>
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CIVIL ENGINEERING

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<td>Physics 231, 232</td>
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<tr>
<td>Math 241, 231, 200</td>
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<td>Engineering Science 231, 321</td>
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<tr>
<td>Biomedical Engineering 271</td>
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<tr>
<td>Biology 130, 140</td>
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<tr>
<td>Junior</td>
<td></td>
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<tr>
<td>Technical Electives</td>
<td>6</td>
</tr>
<tr>
<td>Electrical and Computer Engineering 301</td>
<td>3</td>
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<tr>
<td>Engineering Science 341</td>
<td>3</td>
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<tr>
<td>Biomedical Engineering 300</td>
<td>3</td>
</tr>
<tr>
<td>Materials Science and Engineering 473</td>
<td>3</td>
</tr>
<tr>
<td>Economics 201</td>
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<tr>
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<tr>
<td>Biomedical Engineering 301, 310, 346</td>
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<tr>
<td>Philosophy 345</td>
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<td>Biomedical Engineering 455, 430, 431</td>
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<td>Engineering Electives</td>
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<tr>
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<td>Biomedical Engineering Elective</td>
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<tr>
<td>General Education Electives</td>
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CHEMICAL ENGINEERING

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<td>Mathematics 200, 231, 241</td>
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<td>General Education Electives</td>
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<td>Junior</td>
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<tr>
<td>Chemical Engineering 301, 310, 340, 360, 380</td>
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<td>Chemistry</td>
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<td>Chemistry Option</td>
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<td>Chemistry 320, 360, or 483</td>
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<tr>
<td>Technical Writing Elective</td>
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COMPUTER ENGINEERING

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<td>Mathematics 231, 251</td>
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<tr>
<td>Physics 231</td>
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<tr>
<td>Computer Science 102</td>
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<tr>
<td>Electrical and Computer Engineering 201</td>
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<td>Electrical and Computer Engineering 202, 251</td>
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<tr>
<td>Computer Science 140</td>
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<tr>
<td>Mathematics 241</td>
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<td>Junior</td>
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<tr>
<td>Electrical and Computer Engineering 310, 311, 331</td>
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<tr>
<td>Computer Science 302</td>
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<tr>
<td>Mathematics 300</td>
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<td>Computer Engineering 400, 401, 440</td>
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<td>Computer Engineering 351</td>
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<tr>
<td>Computer Science 360</td>
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<td>Computer Engineering Senior Electives</td>
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<tr>
<td>Electrical and Computer Engineering 452</td>
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ELECTRICAL ENGINEERING

Sophomore
Electrical and Computer Engineering 201, 205 .................. 6
Mathematics 231 .................................................................. 9
Mathematical and Computer Engineering 301 .................. 3
Physics 231 ........................................................................... 3
Electrical and Computer Engineering 202, 251 .................. 7
General Education Elective .................................................. 3
Mathematics 241 ................................................................. 3
Physics 232 ........................................................................... 4

Junior
Electrical and Computer Engineering 310, 311, 331, 341, 351 .................................................. 15
General Education Elective .................................................. 3
Electrical and Computer Engineering 312, 321, 332, 342, 395 .................................................. 13
General Education Elective .................................................. 3
General Education Electives ................................................. 6
Senior
Electrical and Computer Engineering 400 ......................... 5
Electrical Engineering Senior Electives .............................. 13
General Education Electives ................................................. 9
Mechanical Engineering 331 .............................................. 3
Nuclear Engineering 342, Engineering Science 231 or Material Science and Engineering 410 .................................................. 3

Total: 134 hours

1At least one General Education course must be from the Professional and Ethical Responsibility cluster.
2The electrical engineering senior electives must meet the depth and breadth requirements. The depth requirement is met by taking two courses in one of the core areas: systems (EE 411, 412), power (EE 421, 422), electronics (EE 431, 432), communications (EE 441, 442), and computer systems (EE 451, 452). The breadth requirement is met by taking courses in other core areas, or courses in other fields, in computer vision, power electronics, and emerging technologies. Electives are approved by the student's faculty advisor.

ENGINEERING PHYSICS

Freshman
English 101, 102 ................................................................. 6
Mathematics 141, 142 ........................................................... 6
Engineering Fundamentals 101, 102 .................................... 12
Physics 137, 138 ................................................................. 10

Sophomore
Mathematics 231, 241 .......................................................... 7
Computer Science 102 ......................................................... 4
Chemistry 120, 130 ............................................................. 8
Physics 240, 232 ................................................................. 6
General Education Electives ................................................ 9

Junior
Physics 311, 312 ................................................................. 6
Physics 361, 461 ................................................................. 6
Physics 421 .......................................................................... 4
Engineering/Technical Electives ........................................... 9
General Education Electives ................................................ 9

Senior
Physics 411, 412 ................................................................. 6
Physics 431, 432 ................................................................. 6
Engineering/Technical Electives ........................................... 12
Electives .............................................................................. 6

Total: 134 hours

1Transfer students from other departments may substitute Engineering Fundamentals 102 for Physics 137, Physics 231 for Physics 138, and Physics 232 for Physics 240.
2A total of 12 hours of engineering electives plus 9 hours of technical electives are required. Engineering electives should form a coherent group of courses taken in the College of Engineering. Technical electives may be taken in physics, engineering, math, other physical sciences, or astronomy.

INDUSTRIAL ENGINEERING

Sophomore
English Electives ................................................................ 6
Math 200, 231, 241 ............................................................ 7
Physics 231 ........................................................................... 3
Engineering Science 231 .................................................... 3
Industrial Engineering 202 ............................................... 3
Accounting 201 ................................................................. 3
Statistics 251 ....................................................................... 3
Materials Science and Engineering 201 .................................. 3

Junior
Electrical and Computer Engineering 301 ......................... 3
Industrial Engineering 300, 301, 304, 310 ............................ 3
Economics 201 ................................................................. 15
Nuclear Engineering 342 .................................................... 3
General Education Elective .................................................. 3
Technical Elective ............................................................... 3

Total: 132 hours

MATERIALS SCIENCE AND ENGINEERING

Sophomore
Materials Science and Engineering 201, 290, 291 ................... 4
Physics 231, 232 ................................................................. 7
Mathematics 200, 231, 241 ............................................... 8
Chemical Engineering 200, 240 ......................................... 6
General Education Electives ................................................. 6

Junior
Materials Science and Engineering 290, 291 .................................. 4
Chemistry 473 ..................................................................... 3
Electrical and Computer Engineering 301 ........................... 3
Engineering Science 321 .................................................... 3
General Education Electives ................................................. 6

Senior
Materials Science and Engineering 290, 291 .................................. 4
Materials Science and Engineering Elective .......................... 3
Technical Elective ............................................................... 3
General Education Electives ................................................. 6

Total: 133 hours

1General Education courses must include Economics 201 and one course from the Effective Communications Cluster in addition to the requirements described under Approved General Education Electives.
2MSE electives: 422, 429, 443, 444, 470, 472, 474, 475, 494, 495, 496
3Students must enroll in 290 and 291 every year beginning with the sophomore year.

MECHANICAL ENGINEERING

Sophomore
Mathematics 241, 231, 200 .................................................. 8
Physics 231, 232 ................................................................. 7
Engineering Science 231, 321 ............................................. 6
Materials Science and Engineering 201 .............................. 3
Mechanical Engineering 331 ............................................. 3
Economics 201 ................................................................. 3
General Education Electives ................................................. 2

Junior
Mechanical Engineering 391, 344, 363, 366, 345, 332, 365 .................................................. 21
Electrical and Computer Engineering 301, 302 ................. 6
Engineering Science 341 .................................................... 6
General Education Electives ................................................. 6

Senior Mechanical Engineering 402, 451, 466, 475, 449, 431 .................................. 14
Mechanical Engineering 451 and 469 ............................... 6
or 456 and 479 ................................................................. 6
Technical Elective ............................................................... 3
Technical Elective (to be selected from ES 452, AE 351, IE 300) .................................................. 3
General Education Electives ................................................. 6

Total: 135 hours

NUCLEAR ENGINEERING

Sophomore
Mathematics 200, 231, 241 .................................................. 8
Physics 231, 232 ................................................................. 7
Nuclear Engineering 200, 203 ............................................. 4
Electrical Engineering 301 .................................................. 3
Computer Science 102 ....................................................... 4
General Education Electives ................................................. 9

Junior
Physics 341 ......................................................................... 3
Nuclear Engineering 301, 304, 342, 351, 360, 431, 470 .................................................. 21
Materials Science and Engineering 201 .................................. 3
General Education Electives ................................................. 3

Senior
Industrial Engineering 405 ............................................... 3
Mechanical Engineering 402 ............................................. 1
Nuclear Engineering 400, 403, 404, 406, 472 .......................... 14
Technical Elective ............................................................... 6
General Education Electives ................................................. 6

Total: 129 hours

NUCLEAR ENGINEERING: RADIOLOGICAL ENGINEERING CONCENTRATION

Sophomore
Mathematics 200, 231, 241 .................................................. 8
Physics 231, 232 ................................................................. 7
Nuclear Engineering 200, 203 ............................................. 4
Electrical Engineering 301 .................................................. 3
Computer Science 102 ....................................................... 4
General Education Electives ................................................. 9

Junior
Physics 341 ......................................................................... 3
Nuclear Engineering 301, 304, 342, 351, 360, 431, 470 .................................................. 18
Biology 140 ......................................................................... 4
Biochemistry and Cellular and Molecular Biology (GMB) 236 .......................... 5
General Education Electives ................................................. 3

Senior
Industrial Engineering 405 ............................................... 3
Mechanical Engineering 402 ............................................. 1
Nuclear Engineering 400, 403, 404, 406, 472 .......................... 14
Chemistry 251, BCOM 310, or Chemistry 350 .......................... 3
Technical Elective ............................................................... 3
General Education Electives ................................................. 6

Total: 132 hours

1General Education Electives must include one course from the Communications Cluster and one course from the Professional and Ethical Responsibility Cluster.
2Technical electives are selected from upper division mathematics and engineering courses and must be pre-approved by the department.
3General Education Electives must include one course from the Communications Cluster and one course from the Professional and Ethical Responsibility Cluster.
4Technical electives are selected from upper division mathematics and engineering courses and must be pre-approved by the department.
The College of Human Ecology helps students bring together information from the social and natural sciences to address issues faced by individuals, families, and communities through the lifespan. Human Ecology is the interactive relationship between human beings and their environment, whether that environment is the home, workplace, community, or leisure activity. While studying in any of the specialized program areas, students use an interdisciplinary approach to help people function effectively by integrating sensitivity for human needs with technical skills. In this way students are well prepared to enter the professional career areas with the knowledge and skills pertinent to some of the most relevant human problems in today's society. The College is accredited by The American Association of Family and Consumer Sciences; the Teacher Education programs are NCATE approved; the dietetics program is approved by the American Dietetic Association; the Recreation and Tourism Management program is approved by the National Recreation and Park Association/American Association for Leisure and Recreation.

All departments of the College conduct basic and applied research much of which is supported by grants, contracts, or by the Agricultural Experiment Station. The diverse instructional and research facilities feature state-of-the-art equipment: closed-circuit television for observing children in Child Development Labs; an accredited small animal laboratory and cell and molecular biology facilities for nutrition research; a quantity foods demonstration facility for hotel and restaurant administration; the only non-woven textile processing laboratory with melt-blown and spun-bonding lines on a college campus in the world, and a newly renovated microcomputer laboratory.

Eighty-five full-time faculty staff five departments in Child and Family Studies; Health and Safety Sciences; Human Resource Development; Nutrition; and Consumer and Industry Services Management.

UNDERGRADUATE STUDY IN HUMAN ECOLOGY

Curricula in the following majors lead to a Bachelor of Science degree in Human Ecology:
• Child Development;
• Community Health Education;
• Family Studies;
• Human Resource Development;
• Nutrition;
• Recreation and Tourism Management.

The curricula in the following majors lead to a Bachelor of Science in Service Management:
• Hotel and Restaurant Administration;
• Retail and Consumer Sciences.

COLLEGE POLICIES

Degree requirements for all majors within the College of Human Ecology:
1. Comply with all University degree requirements as stated under “Academic Policies” in the Undergraduate Catalog.
2. Meet all requirements specified by the major.
3. Complete at least 48 credit hours in courses numbered 300 or above.
4. Earn a minimum grade of C in all major-prefix courses. Individual majors may require a C or above in additional specified courses. See curriculum and progression information for details.

All students in the College take Child and Family Studies 220—Marriage and the Family: Roles and Relationships or Retail and Consumer Sciences 341—Family and Consumer Behavior; and Human Ecology 410—Human Ecological Systems. These courses help students understand the nature of the profession and its role in serving individuals and families in the environments in which they live and to integrate this knowledge into their areas of specialization.

TRANSFER STUDENTS

Freshmen students (those who have completed fewer than 30 hours) may enter the College of Human Ecology if their cumulative grade point average is at least a 2.0. Transfer students (those with 30 or more hours completed) from other institutions or from other colleges within the University may transfer to the College of Human Ecology if their cumulative grade point average is at least a 2.3. See “Progression Requirements” for details about specific major requirements.

MAXIMUM COURSE LOADS

Course loads over 19 hours must be approved by the Dean’s office prior to registration. The maximum course load in Summer Term is 12 hours. Overloads in any semester are normally not approved for a student whose grade point average is below a 3.0.

SATISFACTORY/NO CREDIT GRADING

The Satisfactory/No Credit grading option applies only to non-specified elective hours. No course that is part of the specified requirements of the student’s major can be taken under this option unless the course is only offered S/NC.

ADVISING

Students typically are assigned to a faculty advisor in the major after completing 30 hours of credit. New transfer students are advised initially by the college Advising Center and then are assigned faculty advisors. Students meet with academic advisors each semester. These conferences are designed to help students achieve academic success by identifying career choices, attaining a balance between general education and professional studies, and identifying problems and potential solutions early in the academic program.

SELECTION OF GENERAL EDUCATION ELECTIVES IN HUMAN ECOLOGY CURRICULA

Some curricula may specify particular courses to fulfill the University’s general education requirements. Unless specified by the major, the following courses will be acceptable.

Natural Science Electives: Any two courses from those areas listed below:
• Astronomy, Biology, Botany, Chemistry, Geography, Geology or Physics.

Social Science Electives: Courses chosen from Psychology, Sociology, Anthropology, Political Science, African American Studies, Medieval Studies, Women’s Studies, University Studies, or Economics.
For progression into Early Childhood Education for Teacher Licensure (Pre-K-4), students must meet the following criteria:

**STEP 1:**
1. Attain a cumulative GPA of at least 2.3/4.0 (transfer hours included) for admission to CFS 350.

**STEP 2:**
1. Complete at least 60 semester hours.
2. Attain a minimum grade of C in all required CFS courses and Education courses.
3. Earn a cumulative GPA of at least 2.7/4.0 (transfer hours included) for admission to Teacher Education.
4. Successfully complete an interview, which includes evaluation of written and oral communication skills, with the Early Childhood Education Review Panel or the Board of Admissions in the College of Education during the first methods course CFS 350. (See Admissions Requirements under College of Education.)

For progression into Student Teaching, students must meet the following criteria:

**STEP 3:**
1. Progress into the major.
2. Complete CFS 110, 211, 350, and 351.
3. Complete at least 30 hours (senior standing).
4. Complete an application to student teach (during CFS 350).
5. Attend a minimum of C in all required CFS courses and Education courses.
6. Earn and maintain a cumulative GPA of at least 2.7/4.0.
7. Successfully complete participation experiences and satisfactory evaluations in CFA 350 and 351.

Note: Students are expected to exhibit written and oral communication skills appropriate to the program. If these skills are not exhibited, students may choose to participate in remedial activities through the University Hearing and Speech Center, or may be referred by a course instructor.

**COMMUNITY HEALTH EDUCATION**
For progression into Community Health Field Experience H483, students must meet the following criteria:
1. Earn a grade of C or better in Chemistry 100, 110; EEB 230, 240; Psychology 110, 210, and 430; all Health (H) and Public Health (PH); and Safety courses.
2. Attain a cumulative GPA of 2.3 for credit hours attempted at UT.
3. Complete an application/interview with the instructor prior to the end of the fifth week of the semester preceding the field experience.

**FAMILY STUDIES MAJOR**
For progression into the Family Studies major, students must meet the following criteria:
1. Complete at least 15 semester hours in Family Studies.
2. Attend a minimum grade of C in all required CFS and HE courses.
3. Attend and maintain a cumulative GPA of at least 2.8/4.0 (transfer hours included).
4. Successfully complete an interview, which includes evaluation of written and oral communication skills, with the Family Studies Review Panel during CFS 345 or CFS 360 or the Board of Admissions to Teacher Education in Home Economics.

**HUMAN RESOURCE DEVELOPMENT MAJOR**
1. Students must achieve and maintain a minimum of a 2.3 overall GPA for progression into and retention in the major.
2. Students must achieve a GPA of 2.7 in order to enroll in Human Resource Development 479.

**NUTRITION MAJOR**
Students should apply for progression after completing NTR 302 and CHM 350 and prior to entering NTR 313. Applications for progression are available in the departmental office.

**STEP 1:**
1. Cumulative grade point average 2.3 or greater for at least 30 semester hours.
2. Grade of C or better in all Retail and Consumer Sciences and/or Hotel and Restaurant Administration courses.
3. Complete 300 post-secondary school hours of industry related work for the chosen major. A list of appropriate work experiences is available in the departmental office.
4. For graduation, students must earn a grade of C or better in all Retail and Consumer Sciences and/or Hotel and Restaurant Administration courses.
Within the curricula, undergraduate majors meet objectives: to enhance their foundation for learning; to obtain a broad, general education; and for most, to prepare to enter a specialized career field within the profession or graduate study. This course of study has been constructed to provide a series of educational experiences from broad survey courses to advanced courses of specialized knowledge and from early applied experiences, such as observation and participation, to a professional experience in work settings.

Early Childhood Education Teacher Licensure

Students interested in meeting the requirements for Early Childhood Education licensure (Pre-K—grade 4) in the State of Tennessee are encouraged to determine their interest in licensure very early in their college careers and to seek appropriate advising. Teacher licensure is granted upon successful completion of the fifth year (Professional Year). 12 additional hours may be taken to complete the Master's degree. For details contact the Human Ecology Advising Center or the Child and Family Studies Department.

**CHILD DEVELOPMENT MAJOR**

This major is designed to meet the educational needs of undergraduates whose career plans focus on early childhood education. Closely related opportunities may be found in agencies delivering services to young children and their families, programs that include children with disabilities, and other programs that recognize the distinct developmental needs of children. The child development major is composed of two concentrations that share a common core of general education, college and departmental requirements, but include courses and field experiences that are distinct and lead to different sets of employment or graduate studies opportunities.

One concentration is called Early Childhood Administration. It is designed for undergraduates who have a strong interest in child care and want to seek high level administrative positions in corporate, public, or privately operated programs that serve young children and their families. The other concentration is called Early Childhood Development. Undergraduates who do not have an interest in teaching young children or serving as administrators in child care programs, but want a broad-based knowledge of child development and some experience working directly with children and families should pursue this concentration. It not only includes opportunities for hands-on experience, but also contains an applied research component that can be integrated with the field experience. In this way the concentration better prepares undergraduates who want to seek admission to a graduate studies program.

**EARLY CHILDHOOD ADMINISTRATION**

<table>
<thead>
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<th>Hours</th>
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<td>Freshman</td>
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<tr>
<td>Child and Family Studies 110, 211 .......................................</td>
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<td>Psychology 110 ........................................................................</td>
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<td>3</td>
</tr>
<tr>
<td>Child and Family Studies 220, 350 .........................................</td>
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</tbody>
</table>
**EARLY CHILDHOOD DEVELOPMENT**

**Freshman**
- College and Family Studies 110, 211 .......................... 6
- English 101, 102 .................................................. 6
- Health 310 ......................................................... 3
- Psychology 210 .................................................. 3
- Elective ................................................................... 6-8

**Sophomore**
- College and Family Studies 213, 220, 350 ................. 10
- History Elective ..................................................... 6
- Humanities Elective .............................................. 3
- Human Resource Dev 210 ..................................... 3
- Nutrition 100 ....................................................... 3
- Psychology 210 .................................................. 3
- Speech 220 .......................................................... 3

**Junior**
- Anthropology 320 ................................................ 3
- College and Family Studies 351,352, 420 ................. 10
- Early Childhood Education 350, 420, 427 ............... 4
- Foreign Language Elective ..................................... 3
- Foreign Language Elective ..................................... 3
- Health 310 ......................................................... 3
- Human Ecology 410 ............................................. 3
- Human Resource Development 210 ....................... 3
- Information Science 330 ....................................... 3
- Psychology 310 .................................................. 3

**Senior**
- College and Family Studies 455, 471, 481 ................. 15
- Psychology 330 .................................................. 3
- Restricted Elective .............................................. 6
- Elective ................................................................... 6-8

**Total: 124 hours**

**DUAL LICENSURE: EARLY CHILDHOOD EDUCATION/EARLY CHILDHOOD SPECIAL EDUCATION**

**Freshman**
- Child and Family Studies 110 .................................. 3
- Child and Family Studies 211 .................................. 3
- Child and Family Studies 213 .................................. 3
- English 101, 102 .................................................. 6
- History Elective ..................................................... 3
- Human Resource Development 210 ....................... 3
- Humanities Elective .............................................. 3
- Math 110 or 201 ................................................... 3
- Math 115 or 202 ................................................... 3
- Sophomore
  - Child and Family Studies 220 ............................... 3
  - Child and Family Studies 350 ............................... 4
  - Child and Family Studies 351 ............................... 4
  - Elective ................................................................... 3
  - History Elective ..................................................... 3
  - Natural Science Electives ...................................... 8
  - Social Science Electives ........................................ 6

**Junior**
- Child and Family Studies 411 .................................. 3
- Child and Family Studies 412 .................................. 3
- English 201, 202 ................................................... 6
- History Elective ..................................................... 3
- Human Resource Development 210 ....................... 3
- Humanities Elective .............................................. 3
- Math 110 or 201 ................................................... 3
- Math 115 or 202 ................................................... 3
- Sophomore
  - Child and Family Studies 220 ............................... 3
  - Child and Family Studies 350 ............................... 4
  - Child and Family Studies 351 ............................... 4
  - Elective ................................................................... 3
  - History Elective ..................................................... 3
  - Natural Science Electives ...................................... 8
  - Social Science Electives ........................................ 6

**Total: 125 hours**

**EARLY CHILDHOOD EDUCATION (PRE-K–GRADE 4) TEACHER LICENSURE 5-YEAR PROGRAM**

**Freshman**
- Child and Family Studies 110 .................................. 3
- Child and Family Studies 211 .................................. 3
- Child and Family Studies 213 .................................. 3
- English ............................................................... 6
- History Elective ..................................................... 3
- Human Resource Development 210 ....................... 3
- Humanities Elective .............................................. 3
- Math 110 or 201 ................................................... 3
- Math 115 or 202 ................................................... 3
- Sophomore
  - Child and Family Studies 220 ............................... 3
  - Child and Family Studies 350 ............................... 4
  - Child and Family Studies 351 ............................... 4
  - Elective ................................................................... 3
  - History Elective ..................................................... 3
  - Natural Science Electives ...................................... 8
  - Social Science Electives ........................................ 6

**Junior**
- Child and Family Studies 205, 210, 220, 240 ............... 11
- History Electives .................................................. 6
- Human Resource Development 210 ....................... 3
- Natural or Physical Sciences ................................. 6
- Restricted Electives ............................................... 6

**Total: 125 hours**

**FAMILY STUDIES MAJOR**

The Family Studies major is designed for students whose educational and career goals are focused on studying and working with individuals and families within educational programs and community services. The major is designed to accommodate special interests or strengths of students and allows for flexibility and individualization. All students take a basic core with individualization taking place within the pods selected by the student. The student may design a program in consultation with an advisor, making selections from the recommended pods, channeling the course of study in a particular direction so that all students graduating with a Family Studies major will have depth in family knowledge, a broad integrative perspective and means for application. The course work is basically course work focusing on a concept that relates to the study of the family. Course work to support the concepts comes from many areas across the university. Pods are referred to as restricted electives within the curriculum description and will constitute a minimum of 36 credit hours for each student’s program. Choices for pods are: Adulthood and Aging, Business, Families and Youth at Risk, Family and Community Services, Family Studies Internship, Health and Wellness, Human Development, Instram-and Program Information, Life Management, Mass Media, Interactional and Conflict Resolution Skills, Multi-Cultural, Professional Development, Public Policy, Research, Women and Families.

**Hours Credit**
- Freshman
  - Electives .......................................................... 6
  - English 101, 102 .................................................. 6
  - Mathematics 110, 119 ......................................... 6
  - Humanities Electives ........................................... 6
- Sophomore
  - Child and Family Studies 205, 210, 220, 240 .......... 11
- Hours Credit
  - History Electives .................................................. 6
  - Natural or Physical Sciences .................................. 6
- Total: 125 hours
CONSUMER AND INDUSTRY SERVICES MANAGEMENT

Professors:

Associate Professors:
G. Bhat, Ph.D. Georgia Tech; M.L. Blanton, Re.D. Indiana; C. Costello, Ph.D. Tennessee; A. Fairhurst, Ph.D. Oklahoma State; Ken L. Krick, Re.D. Indiana.

Research Associate Professors:
M. Dever, Ph.D. Kansas State; P. Noriega, D.B.A. NOVAP; Tsai, Ph.D. Tennessee.

Assistant Professors:
R. Chopra, Ph.D. North Carolina State; R. Paige, Ph.D. Iowa; L. Lin, Ph.D. Kansas State; C. Pfaffenberg, Ph.D. Tennessee; A. Young, Ph.D. Minnesota.

The mission of the Department of Consumer and Industry Services is to provide nationally and internationally recognized interdisciplinary programs that prepare professionals and serve organizations in the public and private sectors through teaching, research, and technology transfer.

HOTEL AND RESTAURANT ADMINISTRATION

The Hotel and Restaurant Administration concentrations focus on meeting the middle- and upper-level management needs of the food and lodging industry. It is a program that assists students in getting the breadth of knowledge, responsibility and creativity to meet the changing environment of complex management problems in industry. A business minor is built into the degree requirements.

The Hotel and Restaurant Administration concentrations require extensive field experience. The curriculum provides a strong base in management and computation. The general education electives help students to sharpen their analytical, conceptual, and communications abilities. Graduates may start as management trainees in restaurants, foodservice, hotels, support industries, or in tourism operations with subsequent upward mobility into management or staff positions.

HOTEL AND RESTAURANT ADMINISTRATION

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<tbody>
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<td>Hours</td>
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<td>Speech 240 ..................................................................... 3</td>
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<td>Retail and Consumer Services 341 .................................. 3</td>
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<td>Hotel and Restaurant Administration 210 ................................ 3</td>
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</table>

Junior

History Elective ......................................................... 3
Marketing 301 ............................................................. 3
Management 301 .......................................................... 3
Finance 301 ................................................................ 3
Business Elective ......................................................... 3
Hotel and Restaurant Administration 326, 311, 323, 341, 376, 390 ......................................................... 16
Hotel and Restaurant Administration 420 ......................................................... 6
Senior

Human Ecology 410 ....................................................... 3
Hotel and Restaurant Administration 410, 425, 445 ......................................................... 9
Hotel and Restaurant Administration Electives ......................................................... 3
Hotel and Restaurant Administration 480 ................................................................ 12
Total: 128-130 hours

1Hotel and Restaurant Administration electives: select 3 hours from the following courses: HRA 211, 324, 335, HE 310, RCS 411
2Select any 3 upper division credits from courses offered by the College of Business Administration.

HOTEL/TOURISM MANAGEMENT

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<td>Math 119 or 123, and 125 ................................................... 3</td>
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<td>Hotel and Restaurant Administration 119 ......................................................... 3</td>
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<td>Electives ................................................................... 3</td>
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</table>

Sophomore

History Elective ......................................................... 3
Accounting 201, 202 .......................................................... 6
Statistics 201 ................................................................ 3
Economics 201 ............................................................. 3
Psychology 110 ............................................................. 3
Speech 240 ..................................................................... 3
Total: 128-130 hours

1Hotel and Restaurant Administration electives: select 4 hours from the following courses: Hotel and Restaurant Administration 324, 335, 341, 423, 445, HE 310
2Select any 3 upper division credits from courses offered by the College of Business Administration.

RECREATION AND TOURISM MANAGEMENT

The professional disciplines that comprise Recreation and Tourism Management (RTM) prepare students for management and leadership positions in many commercial recreation, sport and tourism enterprises. The RTM curriculum is one of only two programs in the state of Tennessee that is accredited in General Recreation and Park Association’s Council on Accreditation.
RECREATION AND TOURISM MANAGEMENT: COMMERCIAL RECREATION AND TOURISM MANAGEMENT CONCENTRATION
(Accredited in General Recreation and Therapeutic Recreation by NRPA/AALR)

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<td>Humanities Electives</td>
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<td>Advertising 250 or Journalism 201 or 280</td>
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<td>1Child and Family Studies 223 or Retail and Consumer Sciences 341</td>
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<tr>
<td>2Retail and Consumer Administration 324, 335, 423, 425; Forestry 321, 423; Retail and Consumer Sciences 411</td>
<td>2Retail and Consumer Administration 324, 335, 423, 425; Forestry 321, 423; Retail and Consumer Sciences 411</td>
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<tr>
<td>Electives</td>
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<tr>
<td>Recreation and Tourism Management 410, 430, 470</td>
<td>Recreation and Tourism Management 410, 430, 470</td>
</tr>
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<td>Recreation and Tourism Management 490</td>
<td>Recreation and Tourism Management 490</td>
</tr>
<tr>
<td>Human Ecology 410</td>
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</tbody>
</table>

Total: 128 hours

1Courses must be in addition to those specified for the major and must be selected from: Business Administration; Child and Family Studies; Health, Leisure and Safety Sciences; Hotel and Restaurant Administration; Human Resource Development; Human Services; Rehabilitation and Deafness; Sociology; and Psychology.

HEALTH AND SAFETY SCIENCES

Professors:
- D. E. Smith (Interim Head), Ph.D. Oklahoma State; Jun Ho Borek, Ph.D. California (Los Angeles); Charles B. Hamilton, Ph.D. Oklahoma; Robert H. Kirk, H.S.D. Indiana; Bill C. Wallace, Ed.D. Colorado State.

Associate Professors:
- Robert J. Pursley, Ph.D. Iowa; Paula C. Zemel, Ph.D. Wayne State.

Assistant Professors:

Instructor:
- Rosa Emory Thomas (Adjunct) MPH, North Carolina.

The department fosters development of pre-professional and professional competencies by those interested in the disciplines of health education/promotion, public health, and safety. The Health and Safety Sciences academic programs emphasize health promotion (lifestyle behaviors) and health protection (regulatory, environmental, and safety) strategies for improving individual and community well-being directly relating to two University of Tennessee thematic areas of strength, Health and Biomedical Sciences and Children and Families. The faculty are committed to the educational value of community-based service learning, applied research, and community outreach. For more information: http://hsa.hec.utk.edu.
COMMUNITY HEALTH EDUCATION

The Community Health Education program prepares students to work in a variety of settings that focus on health promotion and disease prevention among individuals, families, and their communities. Toward this end, the Program includes traditional classroom experiences as well as community experiences, both of which revolve around a socio-ecological perspective for health promotion. This perspective assists students in developing an ability to foster voluntary change in health behavior through a combination of educational, political, and social interventions. The Program is designed to prepare entry-level health education specialists. Typical employment settings include local health departments, voluntary health agencies and worksites.

HUMAN RESOURCE DEVELOPMENT

Professors:

Billie Collier (Interim Head), Ph.D. Tennessee; E.W. Brewer, Ed.D. Tennessee; C.P. Campbell (Emeritus), Ed.D. Maryland; G.D. Cheek (Emeritus), Ph.D. Kansas State; C.B. Coakley (Emeritus), Ph.D. Wisconsin; D.G. Craig (Emeritus), Ed.D. Cornell; J.O. DeJonge, Ph.D. Iowa State; R.W. Haskel (Emeritus), Ph.D. Purdue; G.C. Petty, Ph.D. Missouri.

Associate Professors:

R. Hanson (Emeritus), Ph.D. Purdue; J.H. McNinis (Emeritus), Ph.D. Florida State; V.J. Stout, Ed.D. Tennessee.

Assistant Professors:

S.J. Bartley, Ph.D. Tennessee; V. Kupritz, Ph.D. Virginia Tech; D. Lim, Ph.D. Illinois; R. Pierce, Ph.D. Ohio State.

The Human Resource Development Department offers teacher licensure and credentialing programs for professionals in the integrated use of training and development, organization development, and organizational effectiveness.

The B.S. degree teaching options in HRD have the general focus of preparing students for licensure and careers as secondary and postsecondary teachers of business/marketing education, family and consumer sciences education, and technology education.

The B.S. degree option in training serves individuals who wish to work as industrial training specialists, supervisors, managers, and persons employed in other industry-related occupations. The program is designed to develop the expertise needed by those in the private sector involved in training and human resource development.

FAMILY AND CONSUMER SCIENCES EDUCATION

A teacher education program for secondary vocational family and consumer sciences teachers is available within the College. Undergraduate students should follow the Teacher Education Concentration for Family and Consumer Sciences Education in the Department of Human Resource Development. Potential teachers must meet teacher education requirements of the College of Education and apply to be admitted to Teacher Education (see College of Education). Teacher licensure is granted at the successful completion of the fifth year or Professional Year. Fifteen additional hours may be taken to complete the Master’s Degree. For details, see the Graduate Catalog.

Students who have a B.S. degree and want family and consumer sciences teacher licensure may obtain a list of the prerequisite course work for entering the professional year.

Individuals interested in careers with the Extension service may follow the Family and Consumer Sciences Education curriculum in Human Resource Development, or may follow the Family Studies curriculum in the Department of Child and Family Studies.

HUMAN RESOURCE DEVELOPMENT

Professors:

Billie Collier (Interim Head), Ph.D. Tennessee; E.W. Brewer, Ed.D. Tennessee; C.P. Campbell (Emeritus), Ed.D. Maryland; G.D. Cheek (Emeritus), Ph.D. Kansas State; C.B. Coakley (Emeritus), Ph.D. Wisconsin; D.G. Craig (Emeritus), Ed.D. Cornell; J.O. DeJonge, Ph.D. Iowa State; R.W. Haskel (Emeritus), Ph.D. Purdue; G.C. Petty, Ph.D. Missouri.

Associate Professors:

R. Hanson (Emeritus), Ph.D. Purdue; J.H. McNinis (Emeritus), Ph.D. Florida State; V.J. Stout, Ed.D. Tennessee.

Assistant Professors:

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The B.S. degree option in training serves individuals who wish to work as industrial training specialists, supervisors, managers, and persons employed in other industry-related occupations. The program is designed to develop the expertise needed by those in the private sector involved in training and human resource development.

TEACHER EDUCATION CONCENTRATION

(Business/Marketing, Family and Consumer Sciences, Technology)

Hours Credit

Freshman

English 101, 102 .............................................. 6
1Mathematics Electives ................................... 6
2Natural or Physical Science Electives ............... 6-8
Human Resource Development 210 .................. 3
Psychology 110 .................................................. 3
3Teaching specialty courses ......................... 3
Sophomore

History Electives ........................................... 6
Economics 201 ................................................. 4
Child and Family Studies 213 ......................... 3

1Child and Family Studies 220 or Retail and Consumer Sciences 341 ......................... 3
2Teaching Specialty Courses ....................... 9
Junior

Human Resource Development 201 .................. 2
Human Resource Development 320, 325 .......... 6
3Teaching Specialty Courses ....................... 15
4Electives .................................................. 9
Senior

Human Resource Development 330, 452 ........... 6
4Education 400, 401 .................................. 5
Human Ecology 410 ..................................... 3
3Teaching Specialty Courses ....................... 15
4Electives .................................................. 4

Undergraduate Total: 124 hours

The following courses are taken during the post baccalaureate, Professional Year:

Professional Year

Human Ecology 574 ................................... 2
Human Ecology 575 ................................... 12
Human Ecology 591 ................................... 1
Human Resource Development 504, 521, 522 .... 9

Graduate Total: 24 hours

1Students seeking licensure in Business and Marketing Education must take Math 125 and one other math course.

2Students seeking licensure in Family and Consumer Science Education must take Chemistry 102, and CFS 220. Technology Education students are encouraged to take Physics.

3Family and Consumer Science Education: CFS 211, 240,312,345,360,420,430; Nutr 100,302; HRA 101; TS 220; RCS 341,350; Speech 210. (42 hours).

4See department for a list of suggested electives.

5Requires admission to Teacher Education.

(Note: Students must earn at least a grade of C in teaching specialty courses and required HRD courses.)

TRAINING AND DEVELOPMENT CONCENTRATION

Hours Credit

Freshman

English 101, 102 .............................................. 6
Mathematics Electives ....................................... 6
Natural or Physical Science Electives ............. 6-8
Human Resource Development 210 ................. 3
Psychology 110 .................................................. 3
Electives ...................................................... 3
Sophomore

History Electives ........................................... 6
Humanities Electives ...................................... 6
Economics 201 ................................................. 4
Child and Family Studies 220 or Retail and Consumer Sciences 341 ......................... 3
1Support Courses ................................. 12
Junior

Human Resource Development 320, 325 .......... 6
Human Resource Development 420, 455 .......... 6
1Support Courses ................................. 12
2Electives .................................................. 6
Senior

Human Resource Development 330, 452 .......... 6
Human Resource Development 471, 473, 475 .... 9
Human Ecology 410 ..................................... 3
Human Resource Development 429 .................. 3
1Support Courses ................................. 11
2Electives .................................................. 6

1Total: 125 hours
Training and Development Support Courses:
Courses must be in addition to those specified for the major and must be selected from:
- Business Administration electives, Speech (210, 220, 320, 330, 420, 440), Psychology (320, 360, 409, 430, 434, 440), Public Relations 270, Nutrition 100, Health (330, 375, 410), Public Health 410, Recreation electives, Child and Family Studies electives, Retail and Consumer Sciences electives, or Hotel and Restaurant Administration electives. At least three areas must be represented with a maximum of 9 hours from any one area or courses must focus on a specialized technical area for which training and development programs exists in business and industrial settings. Approval for this requirement is not assumed and is contingent upon petition to the department. HRD 350 and 351 may substitute for some or all of this requirement. (Junior standing required for petitioning.)

See department for a list of suggested electives.

NUTRITION

This major is designed for students interested in basic and applied sciences. Students are expected to acquire advanced education in chemistry, biology, food science, and behavioral sciences. The B.S. in Nutrition is currently granted approval status by the Commission of Accreditation/Approval for Dietetics Education of the American Dietetic Association, 216 Jackson Boulevard, Chicago, Illinois 60606-6995, (312) 899-4876. These requirements are regarded as the basic education component for the preparation of persons entering the dietetic profession. The generalist emphasis of this program prepares individuals to enter the dietetic profession in general dietetics and includes nutrition, foodservice systems management, management theory and principles and communication sciences including computer and statistical applications. Graduates are prepared to enter accredited dietetic internships. An internship experience completes academic and practice requirements for eligibility as a member of The American Dietetic Association and qualifies the graduate to apply for the Registration Examination to become a Registered Dietitian (R.D.). Students may receive more information from the department about R.D. requirements. R.D.s work as members of health care teams in acute care hospitals and community-based settings, home health care programs, college and university foodservice facilities, wellness clinics and private practice. Extension Service and food companies are also avenues of employment.

Hours Credit

Freshman
Chemistry 120, 130 ......................................................... 8
English 101, 102 ............................................................ 6
History-prefix Elective .................................................. 3
Child and Family Studies 210 ................................... 3
Math 119 or 123, and 125 .......................................... 6
Psychology 110 ............................................................. 3
Nutrition 100 ............................................................... 3

Sophomore
Hotel and Restaurant Administration 210, 321 ........... 4
Nutrition 201, 302 ......................................................... 4
Chemistry 350 ........................................................... 3
Economics 201 ............................................................ 4
Human Resource Development 210 .......................... 3
Microbiology 210 ......................................................... 3
Statistics 201 ............................................................. 3
Biochemistry and Cellular and Molecular Biology 230 .................................................. 5
Electives ..................................................................... 3

Junior
Accounting 201 ............................................................ 3
Elective ......................................................................... 3
History Elective ............................................................ 3
Humanities Elective ...................................................... 3
Hotel and Restaurant Administration/Retail and Consumer Science 341 .................................................. 3
Nutrition 310, 312, 313, 314 ..................................... 16
Speech 240 ................................................................. 3

Senior
Human Ecology 410 ..................................................... 3
Elective ......................................................................... 6
Hotel and Restaurant Administration 326, 341 .............. 4
Humanities Elective ...................................................... 3
Nutrition 303, 410, 412, 415, 416, 420 ...................... 17

Total: 129 hours

1 Credit for these courses must be earned at the University of Tennessee.
College of Nursing

Joan L. Creasia, Dean
Carol Seavor, Associate Dean
Maureen Gröer, Associate Dean
Johnnie Mozingo, Chair of Undergraduate Program
Beth Barrett, Director of Student Services

Professors:

Associate Professors:

Assistant Professors:
A.J. Brown, M.S. Alabama-Birmingham; M.L. Brown, Ph.D. Tennessee; S. Chen, Ph.D. Utah; P. du Mont, Ph.D. Tennessee; G.W. Evans, M.S.N. Tennessee; N. Gaylord, Ph.D. Tennessee; C. Heinrich, Ph.D. Rutgers; S.M. Helton, M.S. Texas Woman’s; M. Kollar, Ph.D. Tennessee; M. Naile, Ph.D. Tennessee; M.A. Pierce, M.S.N. Tennessee; J. Powell, Ph.D. Wisconsin.

Instructors:

The College of Nursing at the University of Tennessee was established in July 1971 in response to a long-recognized and well-established need for nurses prepared at the collegiate level. The undergraduate program combines the unique resources of the UT campus with those of the university’s comprehensive teaching hospital and other health care agencies in a manner that enables both faculty and students to participate fully in all facets of the health care delivery system. The program is accredited by the National League for Nursing Accrediting Commission that may be contacted for information about tuition, fees, and length of program at 61 Broadway, New York, New York 10006, phone 1-800-669-9656. The program is also unconditionally approved by the Tennessee Board of Nursing.

The baccalaureate nursing program has as its central focus the person, health, environment, and nursing. General education courses, nursing courses, and electives are organized in a manner designed to promote and develop creative thinking and other cognitive, affective, and psychomotor processes that are essential for effective nursing practice and for full and meaningful involvement as a contributing member of society. A broad base of general education, a thorough study of human behavior, an emphasis on health maintenance, health promotion, and health restoration, and a strong family and community orientation are essential components of baccalaureate education in nursing. By maintaining a high quality relevant program that is responsive to the increasing complexity of health care delivery, the ever-changing health needs of society, and the changing and expanding role of the nurse, graduates of the program are able to: (1) assume beginning leadership positions in nursing in a variety of settings; (2) work collaboratively with other health professionals; (3) function as socially conscious and contributing citizens; and (4) pursue advanced education on either a formal or an informal basis.

GENERAL REQUIREMENTS

In order to obtain a Bachelor of Science in Nursing degree students are required to successfully complete eight semesters of full-time study or the equivalent in part-time study. One-hundred twenty-three semester hours are required for graduation. The program also accommodates registered nurses who hold associate degrees in nursing or who are graduates of diploma nursing programs. All upper division courses, with the exception of 202, 314, 351, 406, and 480, are restricted to students who have been approved for progression. (See Progression Policies and Procedures.)

PROGRESSION POLICIES AND PROCEDURES

Current standards are available from the Director of Student Services, College of Nursing, room 203. Students, including registered nurses, who are admitted as nursing students in their freshmen or sophomore years must apply for progression to the upper division prior to their junior year.

1. During the spring semester of the year the student expects to meet all lower division course requirements, she/he must complete a Petition for Progression form and submit it to the college’s Student Services Office. Applicants for upper division nursing should submit their Petition for Progression with transcripts for all colleges attended no later than January 20. Students will be selected on the basis of: (a) cumulative GPA for courses completed; (b) cumulative GPA for required science, social science, math, and English courses; (c) number of course withdrawals and repetitions; (d) grade improvement over time; (e) probability of completing all lower division requirements prior to the following fall; and (f) the availability of space.

2. If a student is selected for progression but fails to successfully complete all lower division requirements (except for humanities, history, and multicultural/integrative studies electives) prior to the fall semester, the student will not progress and must submit another petition for progression the following year.

3. Registered nurses must be licensed to practice in the state of Tennessee.

GRADING AND CONTINUATION POLICIES

1. The minimum acceptable grade for all courses in the curriculum is a C.

2. No nursing course may be repeated more than once. If a D, F, or NC grade is
earned on the second attempt the student will be required to withdraw from the program.
3. Any student who receives a grade of D, F, or NC for more than one nursing course will be required to withdraw from the program even if the previous course for which D or F was awarded has been repeated with a grade of C or higher.
4. If a student receives an incomplete (I) in a nursing course, the I must be removed prior to enrolling in any course for which the uncompleted course is a prerequisite.
5. If a student's clinical performance for any nursing course is found to be unsatisfactory, the course for that course will be an F regardless of any other grades earned in other components of the course. If the unsatisfactory clinical performance is characterized by unethical, unprofessional, or unsafe behavior, behavior that actually or potentially places the client in jeopardy, the student will be required to withdraw from the program.
6. Requirements for competence in cardiopulmonary resuscitation are included in the Undergraduate Student Handbook.

APPROVED ELECTIVES
The BSN program includes 6 hours in humanities (Philosophy 345 and elective) and 6 hours in multicultural or integrative studies. Courses in the following areas are accepted to satisfy elective requirements.

HUMANITIES

MULTICULTURAL OR INTEGRATIVE STUDIES
Anthropology 100-499; Architecture 406; Child and Family Studies 220, 240; Comparativa Literature 100-499; Economics 100-499; Geography 100-499; Health 100-499 (excluding 230, 310, 325); Human Services 100-499; Nursing; and Pracicum Experience 3 (restricted to upper-division nursing students only), 470, 480; Political Science 100-499; Psychosocial Studies 450; Psychology 330; Recreation and Tourism Management 110, 425; University Studies 100-499; Sociology 415; Foreign Language (intermediate level or higher): Chinese 231, 232; Classics 261, 264 (Greek), 251, 252 (Latin); Japanese 251, 252; Arabic 221, 222; Hebrew 241, 242; Persian 261, 262; French 211, 212, 217, 218; German 201, 202; Italian 211, 212; Portuguese 211, 212; Russian 201, 202; Spanish 211, 212, 217, 218.

HISTORY REQUIREMENTS

NURSING SUBSTITUTIONS
Math 115 or any statistics course; Math 110 or any other college math course; Any two semesters of history; Child and Family Studies 210 or Psychology 300; Chemistry 100-110 or 120-130; Microbiology 210 or 310 with 319 lab.

GERONTOLOGY MINOR
An interdisciplinary undergraduate Gerontology minor is available and requires 12 hours from the following: CFS 312: Families in Middle and Late Adulthood (3); HLTH 406: Death, Dying, and Bereavement (3); HLTH 465: Aging and Health (3); Sociology 415: Sociology of Aging (3); University Studies 321: Aging and Society (3); and Pracicum Experience (3), taken by registering for Nursing 470: Special Topics.

HEALTH AND INSURANCE REQUIREMENTS
Students must meet specific physical examination and immunization requirements as specified by state law and by the rules and regulations set forth by the various clinical agencies. All non-nurse students must participate in the college’s group professional liability insurance program. All registered nurses must provide proof that they have appropriate professional liability insurance coverage. Specific information concerning these requirements will be provided to the students at appropriate times by the nursing faculty and/or the Director of Student Services.

COURSE LOAD
The maximum credit hours per semester for which a nursing student may register without special permission is 19.

THE BACHELOR OF SCIENCE IN NURSING CURRICULUM

<table>
<thead>
<tr>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Freshman</td>
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<tr>
<td>English 101, 102</td>
</tr>
<tr>
<td>Mathematics 110 or higher</td>
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<tr>
<td>Mathematics 115 or any Statistics Course</td>
</tr>
<tr>
<td>Chemistry 100-110 or 120-130</td>
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<tr>
<td>Humanities</td>
</tr>
<tr>
<td>Psychology 110</td>
</tr>
<tr>
<td>Sociology or Anthropology</td>
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<tr>
<td>Multicultural or Integrative Studies</td>
</tr>
<tr>
<td>Sophomore</td>
</tr>
<tr>
<td>Biochemistry and Cellular and Molecular Biology 240</td>
</tr>
<tr>
<td>Biochemistry and Cellular and Molecular Biology 230 or Ecology and Evolutionary Biology 230</td>
</tr>
<tr>
<td>Microbiology 210</td>
</tr>
<tr>
<td>Nutrition 300</td>
</tr>
<tr>
<td>Child and Family Studies 210</td>
</tr>
<tr>
<td>Multicultural or Integrative Studies</td>
</tr>
<tr>
<td>History</td>
</tr>
<tr>
<td>Philosophy 345</td>
</tr>
<tr>
<td>Junior</td>
</tr>
<tr>
<td>Nursing 311, 319, 333, 341, 351, 361, 381, 382</td>
</tr>
<tr>
<td>Senior</td>
</tr>
<tr>
<td>Nursing 403, 406, 421, 451, 452, 461, 482, 490</td>
</tr>
</tbody>
</table>

Total: 123 hours

The following courses are open to all university students: 202, 314, and 480.

RN TRACK FOR BACHELOR OF SCIENCE IN NURSING
1. RNs must complete the same non-nursing requirements as other students. They are exempt from the sophomore level N201 Introduction to Nursing course and will be given proficiency credit based on RN status. (S/NC).
2. Students will take the NLN ACE examinations prior to starting upper division coursework. If a decision score of 100 is achieved (per section) the student will receive proficiency credit for four of the major clinical requirements exclusive of Community Health. Courses for which credit can be obtained in this manner include 361, 403, 461, and 421, and are indicated with a double asterisk. (S/NC).
3. All students take the Community sequence 382 and 482.
4. RN-BSN students can elect to challenge N333 Health Assessment by taking the NLN Physical Assessment Examination and passing a "hands on" lab demonstration of assessment skills. Indicated with an asterisk. (S/NC).
5. Proficiency credit can be obtained in several other courses by passing instructor-made exams or preparing a portfolio as specified by the faculty. These courses include N319 Pathophysiology of Health Deviations, N351 Pharmacology I, N406 Pharmacology II, and N451 Professional Leadership Issues II (indicated by an asterisk). Eligibility for challenge of N451 Professional Leadership Issues II is based on documented employment in a nursing leadership position for at least one-year within the last five years. Challenge of N451 carries an S/NC grade. All credit not designated as S/NC carries a letter grade.
6. The entire upper-division nursing curriculum can be completed in one calendar year. Students not enrolled in nursing courses for two consecutive semesters, excluding summer, will be administratively withdrawn from the program. Those seeking re-entry must reapply to the College of Nursing. Students already accepted into the Masters' Program may be exempted from the Multicultural/Integrated Studies (3 hours) and Nursing Electives/Independent Study (5 hours) if they have 123 undergraduate hours. Students accepted for the Masters' Program can begin part time graduate level study while in the final semester of the undergraduate program.

More information about the RN-BSN track can be obtained from the College of Nursing Student Services Office or from the faculty advisors for registered nurses.

GRADUATE
General requirements for the Master of Science in Nursing degree are given in the Graduate Catalog.
Social work is a helping profession which focuses on providing skilled intervention in the prevention and amelioration of individual and societal problems. It is a challenging and rewarding career involving the application of knowledge, skills, and professional values to assist individuals, families, groups, and communities in reaching their potential. The primary mission of the undergraduate social work program is to develop generalist social workers who are strategic thinkers, life-long learners, and opinion shapers. It is the purpose of the College to provide an education which enhances individual and career development and fosters involvement on behalf of social and economic justice.

The program prepares students for social work careers in such diverse areas as schools, youth programs, family service agencies, nursing homes, courts, mental health centers, and welfare agencies. The degree provides graduates a competitive advantage in many jobs, the possibility of up to one year’s standing for social work careers in such diverse areas as schools, youth programs, family service agencies, nursing homes, courts, mental health centers, and welfare agencies. The degree provides graduates a competitive advantage in many jobs, the possibility of up to one year’s standing for

The satisfactory/no credit option is not permitted in the major. The minimum acceptable grade for all social work courses is a C. Courses, other than field, in which a D or F is achieved may be repeated once. Field courses must be completed with a C or better, and may not be repeated.

A student receiving an incomplete (I) in any social work course must remove the incomplete before enrollment in subsequent field practice.

The maximum credit hours per semester allowed for any student is 19. Special permission must be obtained for any over load.
PROGRESSION REQUIREMENTS

Students admitted to the University may request a faculty advisor from the College of Social Work. Students in the College must move through Initial and Full Progression. The following factors identify progression criteria for all social work students:

INITIAL PROGRESSION*
1. Successful completion of Social Work 200 and 250 with a grade of C or better.
2. Cumulative grade point average of 2.0 or above.
3. Successful completion of a minimum of 60 semester hours. Initial progression must be completed prior to enrollment in any 300-level social work courses.
4. Favorable review of the student’s application for entry into the junior level social work courses by the faculty admissions committee.
   The application requires an essay that discur the student’s interest in and preliminary understanding of the profession.
5. Completion of fifty (50) clock hours in community service at one public/private social service agency. The community service is to take place after enrollment in a higher education institution and in the twenty-four month period prior to application for initial progression.

FULL PROGRESSION
1. Successful completion of junior level social work courses with a grade of C or better.
2. Cumulative grade point average of 2.0 or above.
3. Successful completion of a minimum of 90 semester hours. Full progression must be completed prior to enrollment in 400-level social work courses.
4. Favorable approval by the BSW faculty prior to entry into senior level classes. This process will include a review of the student’s performance in junior field practice.
   Full progression is based on the recognition that social work has an intensive field component in which students demonstrate aptitude and ability to work with other people. While review is ongoing, full progression provides an additional opportunity to review the students’ potential for entry-level practice.

*Initial progression is also determined by the number of available field practice slots in social service agencies and classroom space. If the number of students who fulfill the above criteria exceeds the number of students that can be accommodated, students will be selected on the basis of cumulative GPA for courses completed, the grades received in SW 200, 250, evaluation of community service, and writing skills demonstrated in the application essay.

CURRICULUM

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
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<tbody>
<tr>
<td>6</td>
<td>English 101, 102</td>
</tr>
<tr>
<td>5</td>
<td>Mathematics 110 or Math 119</td>
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<tr>
<td>3</td>
<td>Anthropology 130</td>
</tr>
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<td>3</td>
<td>Political Science 101</td>
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<tr>
<td>3</td>
<td>Women’s Studies 220, 453, 375, or 382</td>
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<tr>
<td>3</td>
<td>Information Sciences 310</td>
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<td>Humanities (Literature Package)</td>
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<td>6</td>
<td>Psychology 220</td>
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<td>6</td>
<td>Social Work 200, 250</td>
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<td>Economics 201</td>
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<th>Hours Credit</th>
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<tbody>
<tr>
<td>9</td>
<td>Social Work 312, 313, 314</td>
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<td>3</td>
<td>United States Studies</td>
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<td>Foreign Studies</td>
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<td>Math 115 or Psychology 388</td>
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<td>Child and Family Studies 220</td>
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<tr>
<td>6</td>
<td>Social Work 412, 416</td>
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<tr>
<td>12</td>
<td>Social Work 480, 481</td>
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<tr>
<td>2</td>
<td>Social Work 460</td>
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<tr>
<td>3</td>
<td>Regional Studies</td>
</tr>
<tr>
<td>11</td>
<td>Electives</td>
</tr>
</tbody>
</table>

Total: 124 hours
Established in 1971, the School of Information Sciences provides a graduate program for the preparation of librarians and other information professionals for work in all types of information environments. The program of study offers the Master of Science degree. In addition, the School of Information Sciences provides elective courses at the undergraduate level.

**UNDERGRADUATE PROGRAM**

The School of Information Sciences offers undergraduate courses that reflect the overall mission of the school: to educate people to live, work and flourish in an information society through excellence in teaching, research, and public service in library and information science.

The undergraduate courses support a heightened awareness of today's information-rich environment. Increasingly, college graduates must understand the nature of information: sources, value, creation, organizing principles, transfer, and uses in society. Those who thrive in the information society must know how to identify and respond to their information needs. First as students, and then as professionals and citizens, graduates need to apply techniques and technologies in the search, retrieval, and evaluation of relevant information to meet their information needs. They must prepare to use a rapidly increasing array of information systems and technologies to seek and to manage information resources. These abilities, which add value to any field of study, constitute information survival skills in the twenty-first century. Graduates need to know when they can help themselves and when they should seek assistance from various information professionals.

The undergraduate courses are planned for the following groups of people:

1. Students who wish to develop a better understanding of the role of information in society.
2. Students whose academic major stresses understanding and use of information in society.
3. Students whose academic major and/or minor requires significant use of research libraries.
4. Students who are prospective candidates for the graduate program in library and information science.

For information about undergraduate courses, contact the School of Information Sciences.

**GRADUATE PROGRAM**

The School of Information Sciences offers a graduate professional degree program accredited by the American Library Association. Information concerning the graduate program is given in the *Graduate Catalog*.

**COMPUTER FACILITIES**

The School of Information Sciences provides a teaching demonstration computer laboratory at Temple Court. The laboratory includes a large-screen display system and more than 20 networked computers. The laboratory is designed to reflect the current computing environment. The laboratory serves as a classroom for undergraduate and graduate courses offering hands-on instruction in information technology. Equipment is available for individual use when the laboratory is not reserved for class instruction. The computers are connected to the SIS Local Area Network (LAN). In addition, the computers are connected to the campus ethernet network from which they access all the increasingly important communications and information resources of the Internet. Networked laser printing is included in the laboratory.

The advanced laboratory is designed to serve the research and curriculum needs of the school. Equipment includes high-end Macintosh Quadra, and IBM PC computers. The advanced laboratory provides a web server, high-level database and information retrieval software, and multimedia authoring and display tools.
The University Honors program is carefully designed to give academically outstanding students a special undergraduate honors experience comprising special courses, seminars, mentoring programs, senior research projects and other features. Students are invited to become University Honors students prior to enrolling at the University. Prospective University Honors students are selected on the bases of previous academic performance, demonstration of an eagerness to be active learners and leaders, and extracurricular activities. The University Honors Program is administered by the Director and Assistant Director with consultation by the University Honors Council which includes faculty and representatives of the University Administration.

University Honors Scholars are expected to pursue the highest levels of intellectual and personal achievement as members of the campus community. In addition to required work in their respective colleges, they are required to complete a minimum of four honors courses by the end of the sophomore year and a contract honors course in the student’s major during the junior year; successfully complete a one credit hour honors seminar each term in residence (summer not included); develop a positive relationship with a faculty mentor; have an extensive conference with a member of the University Honors staff each year; and complete the senior honors seminar and a senior honors project of merit and originality. Failure to meet the above requirements can result in removal from the program and loss of scholarship assistance.

ELIGIBILITY

Students who are the recipients of designated merit scholarships or who are transferring from other honors programs affiliated with the National Collegiate Honors Council are eligible to participate in the University Honors Program. Those awards are typically made to entering freshmen or transfer students and include competitive and guaranteed scholarships. Competitive scholarships include Honors Scholarships (Oldham, Whittle, and Manning Scholarships) and University Scholarships (Benham, Holt, Neyland, and Roddy). Competitive scholarships awarded by academic colleges include the Haslam (Arts and Sciences, Business Administration) and the McClanahan (Agricultural Sciences and Natural Resources). Criteria for selection of these awards include academic performance, academic and professional promise, involvement in school and community activities, and originality and creativity in the application essays. For all of these awards, the Application for Undergraduate Admission and Entering Freshmen Academic Scholarship Application must be submitted prior to November 1 of a student’s senior year in high school (for entering freshmen) or of a transfer student’s final year prior to attending the University of Tennessee. Recipients of Honors Scholarships and University Scholarships are Honors Scholars in the University Honors Program, and recipients of Haslam and McClanahan Scholarships are eligible to apply to become Honors Scholars.

Guaranteed scholarships available to entering freshmen, which include the Presidential, Tennessee Math Contest, African American Achiever, and Bicentennial, require submission of the completed Application for Undergraduate Admission prior to January 15 of the student’s senior year in high school. These awards are made primarily on the basis of students’ high school grades and test scores. All recipients of these guaranteed scholarships who have a minimum high school GPA of 3.5 and an ACT score of 27 (SAT of 1210) are invited to apply to join the University Honors Program as Honors Scholars.

The University’s most prestigious competitive scholarship awards are the Honors Scholarships which honor and recognize the generosity and leadership of friends and graduates of the University of Tennessee.

The Oldham Scholarships are funded by a generous gift from Mr. and Mrs. Dortch Oldham. Mr. Oldham is a retired entrepreneur in the publishing industry. Each year, approximately three Oldham Scholarships are awarded to outstanding high school seniors.

Those students may pursue any academic major and are selected on the bases of leadership experience and skills, academic achievement, and citizenship. Students receive a substantial four-year scholarship that includes annual travel grants and a summer travel stipend.

The Whittle Scholarships are made possible by a gift to the University by Chris Whittle, a 1969 alumnus. Each year, approximately ten outstanding high school seniors will be invited to be Whittle Scholars. These students may pursue any major and are selected on the bases of leadership experience and skills, academic performance and potential, and extracurricular activities and community service. Whittle Scholars receive a substantial four-year scholarship that includes a stipend for an additional semester of study or internship abroad.

The Manning Scholarship honors 1998 alumnus Peyton Manning. Each year, an outstanding high school senior will be selected to be the Manning Scholar. That student may pursue any major and is selected on the bases of leadership experience, academic performance, and extracurricular activities and community service. Manning Scholars receive a substantial four-year scholarship that includes a stipend for an additional semester of study or internship abroad.

RETENTION IN THE UNIVERSITY HONORS PROGRAM

Scholars are selected on the bases of past academic performance; extracurricular activities, and their potential for academic excellence. As University Honors Scholars, they are expected to adhere to the written policies and requirements of the University Honors Program and are encouraged to enroll in courses that will stimulate and challenge them as well as broaden their horizons. As a result, the University Honors Program will not be concerned if grades in occasional courses fall below the superior range. However, University Honors Scholars are expected to maintain a cumulative grade point average of 3.25. A student in the University Honors Program whose cumulative GPA falls below 3.25 will be allowed to continue in the Program and receive...
its benefits so long as he or she earns a 3.25 GPA or better every semester, thus eventually raising the cumulative GPA to the required 3.25. If, while the cumulative GPA is less 3.25, a student fails to earn a 3.25 or better in any semester, he or she will be removed from the program and lose all of its benefits unless the student can demonstrate extenuating circumstances to the Director of University Honors.

SENIOR PROJECT DEADLINES IN THE UNIVERSITY HONORS PROGRAM

The following is a list of deadlines for the senior project in the University Honors Program:

1. No later than the end of the third year in residence, a student should choose a UT faculty member to serve as mentor for the senior research or creative project.
2. At the beginning of the fourth or final year in residence, a student must submit a written prospectus for the senior project to his/her faculty mentor for suggestions and approval.
3. During the final year in residence, each student must complete the Senior Honors Seminar, which consists of oral presentations and written samples of the student's senior research or creative project.
4. Prior to the end of a student's final semester, he or she will be expected to present the completed project to the student's faculty mentor or committee, the student's peers, and invited guests. Upon the conclusion of the presentation, the student's faculty mentor will submit a letter to the Director of the University Honors Program certifying that the project has been completed and has been approved. One copy of the project must be filed in the University Honors Office and additional copies should be given to the student's faculty mentor and committee.

Failure to meet these guidelines will result in the delay of a student's graduation.

UNIVERSITY HONORS COURSES AND SEMINARS

Courses (3 credit hours) and seminars (1 credit hour) are offered each semester that focus on various topics, issues, and problems. Class size is generally limited to 20 students. These are taught by faculty from all ten undergraduate colleges and schools and may be repeated. University Honors courses are open to undergraduate students on the basis of high school GPA, ACT/SAT scores, UT GPA of 3.25 or better, or by professorial recommendation. University Honors seminars are required of and limited to students in the University Honors Program or by approval of the Director of University Honors. "Contract Honors" courses are required of and limited to students in the University Honors Program. Addition information is available from the University Honors Program office.
University Libraries

Barbara I. Dewey, Dean
Aubrey H. Mitchell, Associate Dean

Professors:

Associate Professors:

Assistant Professors:
Atkins, David P., M.A.L.I.S. Wisconsin; Behrend, Linda, M.S.L.S. Tennessee; Berry, Teresa, M.S.L.S. Tennessee; Johnson, Kay G., M.L.S. Pittsburg; Kracker, Jacqueline, M.S.I.S. Tennessee; Manoff, Maribeth, M.L.S. South Carolina; Mellinger, Margaret, M.S.I.S. Tennessee; Purcell, Aaron, M.L.S., M.S. Maryland; Ratledge, David, M.S.L.S. Tennessee; Read, Eleanor, M.S.I.S. Tennessee; Smith, Anthony D., M.S.I.S. Tennessee; Weber, Mary Ellen, M.L.I.S. Kentucky.

The University Libraries' own approximately 2.1 million volumes and subscribe to more than 16,400 periodicals and serial titles. The Libraries' membership in the Association of Research Libraries reflects the University's emphasis on graduate instruction and research and the support of large, comprehensive collections of library materials on a permanent basis.

The University Libraries consists of the main library (John C. Hodges Library), and four branches on the Knoxville campus (Agriculture-Veterinary Medicine Library, Map Library, Music Library, and Special Collections), and the Social Work Library in Nashville.

Research assistance is available at the reference desk in each library. Free self-searching of selected databases is also available in the reference area and remotely through the World Wide Web.

Users can search the catalog of holdings at any library branch or via the UT Libraries' Web site at www.lib.utk.edu. Materials that are not available in the UT Libraries can be requested through Interlibrary Services.

The services and facilities of the University Libraries are accessible to persons with disabilities. Adaptive equipment such as a Kurzweil Personal Reader and TDD are available at the Hodges Library.

The J ohn C. Hodges Main Library (1015 Volunteer Boulevard) is a 350,000 square-foot facility housing collections in all subject areas. The Hodges Library has over 300 graduate student carrels, and 200 faculty studies, and comfortable study space for more than 2,000 people.

The Agriculture-Veterinary Medicine Library (Room A-113, Veterinary Teaching Hospital) has a strong collection in agriculture; veterinary, comparative and human medicine; and related biological sciences. Most of the publications of the U.S. Department of Agriculture and the State Agricultural Experiment Stations and Extension Services are collected.

The Map Library (Room 15, Basement of Hoskins Library, Cumberland Avenue and 15th Street) maintains and develops a collection of sheet maps, atlases, journals, and books related to cartography. Materials in print, film, and digital formats are acquired from commercial sources as well as the Government Depository program.

The Music Library (301 Music Building) has a comprehensive collection of music and music literature, including books, scores, audio and video recordings, current periodicals, and microfilm. All materials in the Library of Congress “M” classification are located here.

Special Collections (2nd Floor, West Wing, of the Hoskins Library) is a repository of primary source materials and costly modern library materials. The University Libraries are also housed here. The Archives contain official records of the University; items published officially and unofficially by its units, departments and agencies; and other materials that document University of Tennessee life. Materials from Special Collections arepaged for library users from closed stacks for use in the Reading Room.

The Social Work Library (1720 West End Avenue, Nashville) serves College of Social Work students in field practice across the state. The library has a working collection of materials in social work and related disciplines.

The Law Library on the Knoxville campus and the libraries located on the campuses in Chattanooga, Martin, Memphis, and Tullahoma are individually administered.

Each library of the University of Tennessee is accessible to all students and faculty of the university.

1Data describe the Knoxville campus, excluding the Law Library.
The University Studies Program has three general objectives: (1) to foster interdisciplinary teaching and scholarship, especially across college boundaries; (2) to promote active and integrative learning; and (3) to nurture the scholarly and creative development of faculty, staff, and students.

In pursuit of these objectives, University Studies sponsors several activities. Faculty Colloquies are on-going, structured, interdisciplinary conversations on a topic or nexus of topics. Colloquies explore important contemporary issues which involve faculty and students from several disciplines and colleges. Advanced undergraduate and graduate students may attend by permission of colloquy coordinator.

Current colloquies include: Technology, Society; the Interdisciplinary Rhetoric Group; Psychoanalysis and the Humanities; Evolution and Culture; the Creative Group; the Critical Theory Group; Appalachian Forum; Cultural Diversity; Values in Higher Education; The Great Conversation; Spirituality and Health; and Intellectual Property. Colloquies continue as long as they have faculty involvement and new colloquies form each year.

Interdisciplinary Undergraduate Courses are innovative undergraduate offerings that are typically collaborative or team-taught. Most courses stem from the interdisciplinary Colloquy discussions. There are several honors offerings for undergraduates. In addition, University Honors students are encouraged to take a University Studies (200-level or higher) course during their first two years to help fulfill their four honors course requirement.

Centripetals are monthly faculty and staff luncheons held over the academic year designed to encourage conversation among faculty and staff about their creative and scholarly work. University Studies also works with other units across campus to facilitate visits by distinguished scholars of multidisciplinary interest. Such Visiting Scholars work with Faculty groups on specific projects, participate in interdisciplinary forums, or present special lectures.

For further information, contact:
Dr. Neil Greenberg, Chair
F239 Walters Life Science Building
PHONE: (865) 974-8177
FAX: (865) 974-2665
E-MAIL: unistudy@utk.edu
WEBSITE: http://www.bio.utk.edu/unistudy.nsf
Reserve Officers Training Corps (ROTC)

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

ARMY ROTC

Professor of Military Science and Tactics: Lieutenant Colonel Bill Woodcock, M.S. University of Southern Mississippi.

Assistant Professors: Major Shawn Bleeker, B.S. University of New Hampshire; Lieutenant Colonel Ron Borden, B.S. Northern Michigan University; Captain William Edwards, B.A. San Diego State University; Major Robert Reed, B.S. Austin Peay State University.

Senior Army Instructors: SFC Jerry Blake; MSG Richard Coffman, B.S. Shepherd College; SGT Eldridge Cunningham; SFC Michael Mansfield; SSG Stephen Randolph.

MISSION
To commission the future officer leadership of the U.S. Army and motivate young people to be better citizens.

PURPOSE
ARMY ROTC is an educational program designed to provide the college student an opportunity to earn an Army commission as a Second Lieutenant while completing the University requirements for a bachelor's degree. The program provides education and training that will develop the skills and attributes vital to the professional Army officer. Upon successful completion of the program and graduation from the University, graduates are commissioned as Second Lieutenants and enter either the active duty, Army Reserve, or Army National Guard.

ARMY ROTC AT THE UNIVERSITY OF TENNESSEE

The military program at the University of Tennessee predates that of any other state university in the country, having been introduced in 1844. In that year, Professor Albert Miller Lea, a U.S. military academy graduate, organized an infantry company. With the outbreak of the Mexican War, the entire company, as well as thousands of other Tennesseans, volunteered for service in the war. Thus, Tennessee became known as the "Volunteer State." When the University of Tennessee reopened after the War Between the States, a system of military discipline was adopted. A Code of Military Regulations was drawn up and a copy was provided each student when he matriculated. The whole institution was put under regular U.S. military academy discipline. The student body was organized into a battalion of cadets, which consisted of four companies fully officered, armed and equipped under the command of the commandant and his staff of cadet officers. The University of Tennessee remained as a Military Garrison for a period of six years, until 1877. Military Science continued to be taught, since the University was a Land Grant Institution and instruction in Military Science was required by the 1862 Act of Congress.

The National Defense Act of 1916 changed the old military organization into a ROTC unit. For the first time, the Federal Government began to pay a part of the uniform cost for basic course students; uniforms and other equipment were provided by the Government for Juniors and Seniors, and a monthly subsistence allowance was given to advanced course students.

From 1928-1930, Major (later Brigadier General) Robert R. Neyland was the Professor of Military Science and football coach at the University of Tennessee. General) Robert R. Neyland was the Professor of Military Science and football coach at the University of Tennessee. General) Robert R. Neyland was the Professor of Military Science and football coach at the University of Tennessee. General) Robert R. Neyland was the Professor of Military Science and football coach at the University of Tennessee.

Objectives of the program are to provide students with an understanding of the fundamental concepts and principles of military art and science; to develop a basic understanding of associated professional knowledge, a strong sense of personal integrity, honor, and individual responsibility, and an appreciation of the requirements for national security; and to establish a sound basis for the students’ future professional development.

ROTC draws young men and women for training from all geographical, economic, and social strata of our society as well as from the many educational disciplines required for the modern Army. The program ensures that men and women educated in a liberal and broad spectrum of American institutions of higher learning are commissioned annually into the officer corps.

THE PROGRAM

BASIC COURSE
Students entering the Basic Course register for classes at the same time and in the same manner as they enroll in their other college courses. All four classes (MS 110, 120, 210, 220) are available to any UT student as an elective course without any military obligation. Completion of the Basic Course or graduation from Basic Camp (MS 200) qualifies students for entry into the Advanced Course, which is normally taken during the last two years of college.

ADVANCED COURSE
The Course is designed to develop and mentor "leaders of character," who, upon degree completion, will accept a commission in the U.S. Army. The Advanced Course requirement is that applicants have two academic years remaining at either the undergraduate or graduate levels, or a combination of both. Students normally enter the Advanced Course during the last two years of their degree program (junior year for undergraduates, first year of masters program for graduate level students). The Advanced Course is made up of six Military Science classes (MS 310, 320, 400, 410, 420, 430) and takes two years to complete. All classes except MS 400 are offered during spring/fall semesters. MS 400 is a "paid" five-week summer camp held in Seattle, Washington.

Army ROTC develops students under the "whole person" concept. Cadets must maintain academic standards while taking on the additional responsibilities of ROTC. Advanced
course students are required to participate in organized physical fitness sessions. Students enrolled in the Advanced Course are required to be full-time students, taking at least 12 hours each semester.

PLACEMENT CREDIT AND COURSE SUBSTITUTION
Placement credit and/or course substitution may be granted by the Professor of Military Science and Tactics on the basis of previous honorable active military service, participation in a Junior ROTC program, completion of MS 200, or completion of basic training and advanced individual training. A student may request placement credit for a portion or the entire Basic Course. Military Science courses taken at other colleges or universities are transferable as approved by the Professor of Military Science and Tactics.

Military Science 200 is a "paid" five-week summer camp offered to any University of Tennessee student without any military obligation. Students completing this course receive four academic credits, qualify for the Advanced Course by receiving Basic Course credit, and can compete for two years of academic "tuition" scholarships.

REQUIREMENTS FOR ENROLLMENT AND CONTINUANCE
The general requirements for enrollment and continuance in the Army ROTC program are:

1. Basic Military Studies
   a. Be a citizen of the United States.
   b. Be physically qualified.
   c. Freshman and Sophomore standing. Student with higher standing requires consent of instructor.

2. Advanced Military Studies Cadets applying for enrollment in the Advanced ROTC program who seek a Commission must:
   a. Have successfully completed Military Science 110, 120, 210, 220 or have accounted for one of the following: Prior Military Service, ROTC Basic Military Studies—Practicum (MS 200), 3-Year High School ROTC Basic Course.
   b. Have two years remaining at the University (either undergraduate, graduate or in pursuit of additional course work).
   c. Have completed a minimum of 55 semester hours.
   d. Be under 30 years old at time of graduation and commissioning (waivable).
   e. Be enrolled as a full-time student, either at the University of Tennessee or at a nearby institution in a partnership program.
   f. Meet military screening and physical requirements.
   g. Maintain a 2.0 G.P.A.
   h. Maintain B average in Military Science Courses as a scholarship student.

NOTE: Regularly enrolled students who meet the academic prerequisites may take individual courses as electives with the permission of the department head and academic advisor.

REQUIREMENTS FOR ALL MILITARY SCIENCE COMMISSIONEES
The following Military Science (MS) Advanced Course Curriculum must be successfully completed:

- Military Science 310 (4)—Advanced Military Studies I
- Military Science 320 (4)—Advanced Military Studies II
- Military Science 400 (4)—Advanced Camp-Practicum
- Military Science 410 (4)—Command and Staff Functions
- Military Science 420 (4)—Military Ethics and Law
- Military Science 430 (3)—U.S. Military History

In addition to a baccalaureate degree, there are required and recommended courses in designated fields of study that students must complete prior to commissioning. Students must meet these prerequisites by successful completion of required and elective courses taken from the university curriculum in the required areas of concentration.

Courses in the following designated fields of study are required of students seeking a commission in the United States Army.

- a. One course in written communications.
- b. One course in human behavior.
- c. One course in math reasoning.
- d. One course in computer literacy.

Courses in management and national security studies are strongly recommended but are not required.

SPECIAL PROGRAMS
Pay and Entitlements All students enrolled in the Army ROTC program are furnished texts by the Army through the Military Property Officer. Students enrolled in the ROTC Advanced Course receive uniforms and equipment plus a monthly allowance during the academic year. While attending the ROTC summer studies each cadet receives approximately $740 for Advanced Summer Studies, $740 for Basic Summer Studies, plus meals and clothing are provided.

Army ROTC Scholarship Program The Army ROTC scholarship program offers financial assistance to outstanding young men and women in Army ROTC who are interested in the Army as a career. Each scholarship provides for free tuition, textbooks subsidy, and laboratory fees in addition to a monthly subsistence allowance for the period that the scholarship is in effect. Scholarships may be awarded for either two, three or four years. High school seniors should contact their guidance counselors early in August or September of their senior year to apply for the four-year scholarship. Two and three-year scholarship applicants should contact the Professor of Military Science for further information. Other privately financed scholarships and grants are also available to ROTC cadets.

LEADERSHIP GRANT PROGRAM
The University of Tennessee ROTC Leadership Grants are designed to attract and retain high quality/caliber students to the Army ROTC program for future positions of leadership within our service and our country. These grants are intended to complement other ROTC and University scholarships by providing funds to offset costs for such areas as: room and board; out-of-state tuition; and first year expenses for Army ROTC scholarship winners. Up to ten (10) $1,000 Leadership Grants are available each year and are available to scholarship winners and any full-time student enrolled in the AROCOT program. Awarding of these Leadership Grants will be determined by the Professor of Military Science and Tactics who will evaluate each candidate in the following areas: ACT/SAT scores; leadership activities; and recommendations from high school personnel and community leaders.

Simultaneous Membership Program The "SMP" option combines the Army ROTC living allowance with membership in the Army Reserve or Army National Guard and allows the student to receive pay from both programs. ROTC cadets serve as "officer-trainees" in direct leadership/management positions. SMP participation with National Guard or reserve forces is one weekend per month and two weeks each year.

Branch Selection The curriculum of the Army ROTC Program is designed to qualify the cadet for appointment as an officer. Selection for assignment to the various branches of the Army is based upon: the personal interests of the cadet; the major course of study; academic accomplishments; leadership potential; and the needs of the Service. Under this system a cadet may be commissioned in any branch for which he or she is qualified and in which a need for officers exists. After graduation and commissioning, the officer will attend a service school for further specialized military training which will qualify him or her for the branch to which he or she is assigned.

Extra Curricular Activities Numerous military-related activities are available to cadets throughout the school year. These include the Tennessee Rangers, Scabbard and Blade, and UT Color Guard. These organizations provide both student to student contact and a valuable opportunity to acquire military skills. Additionally, each term, a number of Field Training Exercises are conducted to develop such military skills as Small Unit Tactics.

Physical Fitness Training The Cadet Battalion conducts physical fitness training Monday-Wednesday-Friday from 6:30 a.m. to 7:30 a.m. The exercises focus on flexibility, muscular strength, and cardiorespiratory endurance. Any UT student may take the course by registering for Army Conditioning Program 130.

MILITARY SCIENCE CURRICULUM

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BASIC MILITARY STUDIES — PRACTICUM

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<tr>
<td>Junior</td>
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Total: 8 hours

Variations to these sequences of study may be approved by the Professor of Military Science on a case-by-case basis. Lower division credit hours granted by the University for military service are dependent upon time spent in service and service schools attended.

PROGRESSION REQUIREMENTS

1. Minimum semester hours/GPA for entrance into Basic Military Studies—PRACTICUM (Military Science 200): 30 semester hours/2.00 GPA.
2. Minimum average GPA for entrance into the advance course (Military Science 310, 320, 400, 410, 420, 430): 2.00.
3. Minimum GPA in Military Science Courses: 2.00.
4. Minimum overall GPA for commissioning: 2.00.
5. Semester counseling sessions with military advisor required for Advance Course and scholarship students only.

DEPARTMENT OF AIR FORCE

AIR FORCE ROTC PROGRAM

Professor of Air Force Aerospace Studies: Colonel Charles F. Schreck, Head, M.A. Webster University

Assistant Professors:
Captain Stephen Hunter, M.A.S. Embry Riddle University; Captain Patrick Stephens, M.S. Embry-Riddle University; Lieutenant Colonel Stan Shrader, M.A.S. Golden Gate University.

PURPOSE

The Air Force Reserve Officers Training Corps (AFROTC) is an educational program designed to provide the college student an opportunity to earn an Air Force commission as a Second Lieutenant while completing the University requirements for a bachelor’s degree. The program provides education that will develop the skills and attitudes vital to the professional Air Force officer. Upon successful completion of the program and graduation from the University, students are commissioned as Second Lieutenants and enter active duty.

THE PROGRAMS

The Four-Year Program: Students entering the Four-Year Program may register for the program at the same time and in the same manner as they enroll in their other college courses and there is no military obligation. During their freshman and sophomore years, students enroll in the General Military Course (GMC). They then may compete for entry into the Professional Officer Course (POC) which is normally taken during the last two years of college. Selection into the POC is highly competitive and is based on being medically qualified; physically fit; term and cumulative grade point averages; scores achieved on the Air Force Officer Qualifying Test (AFOQT); successful completion of a four-week field training course at an Air Force base; and the recommendation of the Professor of Aerospace Studies.

The Two-Year Program: The Two-Year Program consists of the Professional Officer Course (POC) for the last two years of the Four-Year Program. It is designed to provide greater flexibility to meet the needs of students desiring Air Force opportunities. The basic requirement is that applicants have two academic years remaining at either the undergraduate or graduate levels, or a combination of both. After being nominated by the Professor of Aerospace Studies, applicants seeking enrollment in the Two-Year Program are evaluated using the same criteria used for the four-year program except the length of the field training course is five weeks. Additionally, every POC applicant must agree to take and successfully complete a course in mathematical reasoning or its equivalent before graduation and commissioning. Courses previously completed may be used to satisfy this requirement.

Since the processing procedure must be completed several months in advance of intended enrollment, interested students must apply early in the fall semester of the academic year preceding the fall term in which they intend to enter the program. Application should be made in person to the Department of Aerospace Studies.

AFROTC develops students under the “whole person” concept. Cadets must maintain academic standards while taking on the additional responsibilities of AFROTC. These responsibilities include being physically fit, of good moral character, acting responsibly and with integrity. Cadets normally organize about two hours per week of physical activity outside of class requirements.

WOMEN IN AFROTC

AFROTC at the University of Tennessee has been coeducational since 1970. Women complete the same courses as men and have the same opportunities. Upon successful completion of the AFROTC program and degree requirements, women are commissioned in the Air Force as Second Lieutenants. Pay and job opportunities are equal for women and men. Virtually all career fields in the Air Force are open to women, including pilot and navigator positions.

SCHOLARSHIP PROGRAM

Air Force ROTC Scholarships are available to qualified applicants in both the Four- and Two-Year Programs. Each scholarship provides full tuition, laboratory and incidental fees, and book fee. In addition, scholarship cadets receive a non-taxable stipend ranging from $200 to $400 each month during the school year while on scholarship status.

High School Students: Competitive four-year scholarships are available to high school students who enroll in certain scientific and engineering career fields. Some scholarships are also available to students who enroll in certain non-technical majors. Four-year scholarship applications are contained in the Air Force ROTC Four-Year College Scholarship Program Application Booklet. Booklets may be obtained directly from Air Force ROTC Public Affairs, Maxwell, AFB, AL 36112 or from any high school counselor.

College students: Other scholarship opportunities exist for students already in college. These scholarships are available on a competitive basis and the student must have at least four, three, or two undergraduate or graduate years of study remaining in order to compete. Applications for these scholarships should be made directly to the Department of Aerospace Studies.

LEADERSHIP GRANT PROGRAM

The University of Tennessee AFROTC Leadership Grants are designed to attract and retain high quality students to the Air Force ROTC program for future positions of leadership within their service and our country. These grants are intended to complement other AFROTC and University scholarships by providing funds to offset costs for such areas as: room and board; out-of-state tuition; and first year expenses for 3-year AFROTC scholarship winners.

Up to ten (10) $1,000 Leadership Grants are available each year and are open to 3- and 4-Year scholarship winners and any full-time student enrolled in the AFROTC program. Awarding of these Leadership Grants will be determined by the Professor of Aerospace Studies who will evaluate each candidate in the following areas: ACT/SAT scores; AFOQT test scores; GPA; physical fitness scores; leadership activities; and recommendations from people who can attest to the applicant’s leadership experience and skills.

PAY AND ENTITLEMENTS

All cadets enrolled in AFROTC are furnished texts and uniforms. Qualified sophomores, junior, and senior cadets with a current grade point average (GPA) of 2.0 receive a $1,500 scholarship that is applied toward their tuition and books. Additionally, these cadets receive a monthly stipend ranging from $200 to $450. In addition, they are paid mileage to and from field training, plus pay commensurate with active duty rates while at field training.

ACTIVE DUTY COMMITMENTS

Commissioned graduates going into non-flying duties will be required to serve four years of active duty. Those graduates going into pilot assignments will be required to serve ten years active duty after completion of pilot training. Those graduates going into navigator assignments will be required to serve six years active duty after completion of navigator training.

This information is subject to change. For the most up-to-date information regarding AFROTC, contact AFROTC Detachment 800, 974-3041.
AIR FORCE AEROSPACE STUDIES CURRICULUM

To receive a commission as a 2nd Lieutenant in the United States Air Force through the Air Force ROTC program, a student must successfully complete a 4- or 5-week Field Training encampment and take or receive credit for the following courses. Attendance at a 5-week Field Training encampment satisfies all freshman and sophomore level course requirements.

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<tr>
<th>Course</th>
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<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>Aerospace Studies 103, 104</td>
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<tr>
<td>(Leadership Laboratory)</td>
<td>1.1 (s/nc)</td>
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<td>(Leadership Laboratory)</td>
<td>1.1 (s/nc)</td>
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<td><strong>Junior</strong></td>
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<tr>
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<td>(Leadership Laboratory)</td>
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<td><strong>Senior</strong></td>
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<td>Aerospace Studies 401, 402</td>
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<td></td>
</tr>
<tr>
<td>(Leadership Laboratory)</td>
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</table>

PROFESSIONAL DEVELOPMENT TRAINING PROGRAMS

To help cadets gain knowledge of the challenges in leadership and human relations encountered by a junior Air Force officer and to motivate them toward an Air Force career, cadets have the opportunity to participate in a variety of summer professional development training programs. Some of these programs are:

**Academy Freefall Parachute Training** A 12-day program conducted at the US Air Force Academy—successful completion of program results in cadet receiving parachutist rating.

**Air Force Academy Soaring** A 15-day program designed to give cadets the chance to experience the basic fundamentals of flight in non-powered glider operations. Cadets receive instruction in basic flight through ground school and actual flight, leading up to and possibly including cadet solo.

**Army Airborne Training** Training lasts for 24 days and is physically and mentally demanding. Upon successful completion, cadets are awarded the parachutist rating. All training is conducted at Fort Benning, Georgia.

**ASSIST** Rising sophomore cadets spend two weeks touring an active duty Air Force base and 'shadowing' junior officers in various career fields.

**British Exchange** Cadets are attached to a British University Air Squadron for 17 days of training and orientation at various Royal Air Force Bases in the United Kingdom.

**Combat Survival Training** A 20-day program incorporating combat, basic aircrew, and water survival training. Training is conducted at the US Air Force Academy, Colorado Springs, Colorado.

**Field Engineering and Readiness Lab** Provides opportunities for cadets with entry level civil engineering courses to get hands-on work experience in the Civil Engineering career field. Training consists two weeks working with Civil Engineering at an Air Force base and three weeks hands-on construction activities at the Air Force Academy, Colorado Springs, Colorado.

**Foreign Language Immersion** Provides cadets majoring in a foreign language the opportunity to receive intensive language and cultural training. Training lasts for four weeks in various overseas countries.

**Nurse Orientation Program** During a four-week internship program at Wilford Hall USAF Medical Center, Lackland AFB Texas, nursing cadets receive hands-on experience and practical knowledge of Air Force nursing.

**Operation Air Force** A three-week program of general orientation and 'shadowing' of junior officers in various career fields. Program conducted at Air Force installations throughout the United States and overseas.

**Pentagon Internship Program** A three-week program to provide cadets an opportunity to work in the Pentagon. Students selected for the program gain problem-solving experience working with both military and civilian personnel on real world issues and participate as a team member with professionals in their chosen field of study.
THE COLLEGE OF LAW

Thomas C. Galligan, Jr., Dean
John Sobieski, Jr., Associate Dean
Rachael E. Inman, Assistant Dean

The College of Law has, since 1890, continuously sought to provide high quality legal education in a University community. The college offers a professional curriculum leading to the degree of Doctor of Jurisprudence. Two dual degree programs are available in conjunction with the College of Law: the J.D.-MBA program with the College of Business Administration and J.D.-M.P.A. program with the Department of Political Science.

Information regarding admission, financial aid, academic policies, extracurricular activities, and student services is available from the Admissions Office, The University of Tennessee, College of Law, 1505 W. Cumberland Avenue, Knoxville, Tennessee 37996-1810. The completed application should be received before February 1 of the year of requested admission.

COLLEGE OF VETERINARY MEDICINE

Michael J. Blackwell, Dean
James J. Brace, Associate Dean

The College of Veterinary Medicine, established in 1974, offers a professional curriculum leading to the degree of Doctor of Veterinary Medicine (D.V.M.). The college offers graduate studies leading to the degrees of Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) with a major in Comparative and Experimental Medicine. Residency training programs in the various clinical specialties are also offered.

The Graduate Catalog contains complete information concerning the programs in the college. Forms and instructions for making application for admission may be obtained beginning June 1 from the Office of the Associate Dean, The University of Tennessee, College of Veterinary Medicine, 2407 River Drive, Room A102, Knoxville, Tennessee 37996-4550. Applications must be received by the Veterinary Medical College Application Service (VMCAS) by November 1 of the year prior to requested admission. All pre-veterinary requirements must be completed by the end of the spring term of the year in which the student plans to enroll in the college.

THE GRADUATE SCHOOL

Anne Mayhew, Vice Provost and Dean of Graduate Studies
S. Kay Reed, Assistant to the Dean

The University of Tennessee is the land-grant institution of the State of Tennessee with its main campus in Knoxville. UT is the state's largest and most comprehensive institution, and is a Carnegie One Research Extensive institution. A wide range of graduate programs leading to the Master's and doctoral degrees is available. The University offers Master's programs in 76 fields of specialization and doctoral work in 44. Approximately 6,000 graduate students are enrolled, both on and off campus.

The Graduate School administration develops procedures to implement policies formulated by the Graduate Council, and has primary responsibility for Graduate School admissions and records. Much of the day-to-day administration of graduate study is conducted by department heads or faculty advisors and committees responsible for particular programs. In addition to departmental units, numerous interdisciplinary programs, institutes and centers have been developed on campus and in locations throughout the state.

The Graduate School brings together faculty and graduate students as a community of scholars with a common interest in creative work and advanced study. Graduate programs are available to students desiring full time study toward the Master's and doctoral degrees or professional certification, those interested in continuing education for updating and broadening knowledge, and those pursuing postdoctoral research.

Complete information concerning graduate study at the University of Tennessee is available in the Graduate Catalog published annually. For a copy, write, call, or visit the Office of Graduate Student Services, 218 Student Services Building, The University of Tennessee, Knoxville, Tennessee 37996-0220, telephone 974-3251, fax 974-6541, e-mail: gsinfo@utk.edu, website: http://web.utk.edu/~gsinfo.
# MAJORS AND DEGREE PROGRAMS

<table>
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<tr>
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<th>Agricultural and Extension Education</th>
<th>M.S.</th>
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<td>Biosystems Engineering</td>
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<td>Biosystems Engineering Technology</td>
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<tr>
<td>Entomology and Plant Pathology</td>
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<td>School of Information Sciences Information Sciences</td>
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University Outreach and Continuing Education

Robert Leiter, Associate Vice Chancellor and Dean
Norvel L. Burkett, Associate Dean of Non-Credit Programs
Gayle Cooper, Assistant Dean, New College
Robert Jackson, Assistant Dean for Technology and Development
M.K. Warden, Assistant Dean for Credit Programs

The University of Tennessee is committed to its land-grant mission of public service. The institution meets that mission by extending its continuing education services and programs to students, teachers and faculty. The division offers programs using a variety of modes, helping people of all ages achieve degrees and certificates, accomplish professional development goals, and pursue recreational and intellectual interests.

Programs and courses are based upon student needs and desires, whether for self-motivated learning; for leisure and recreational programs; or for professional promotion, certification, licensure, relicensure, or mid-career changes. The Division provides these educational opportunities through program coordination and development of the six departments: Department of Conferences, Department of Distance Education and Independent Study, English Language Institute, University Evening School, Summer School and Special Programs, and UT Professional and Personal Development. Specific programs and services of each department are described on the following pages.

For more information, contact:
University Outreach and Continuing Education
1534 White Avenue
Knoxville, TN 37996-1526
Phone: (865) 974-3181
FAX: (865) 974-6629
E-mail: outreach@utk.edu
Website: www.outreach.utk.edu

DEPARTMENT OF CONFERENCES

Associate Dean of Non-Credit Programs and Director:
Norvel Burkett, Ed.D. Mississippi State University
Assistant Director: Robert Gibbs, B.S. Tennessee
Program Coordinator: Susan Davis, B.S. Tennessee
Conference Specialists:
Jeremy Easterday, B.S. Tennessee
Margaret Harris, B.S. Missouri
Barry Neal, B.S. Tennessee

UT Conferences, housed in the Conference Center Building in downtown Knoxville, provides management services to UT departments and faculty or outside groups who desire to hold a conference or meeting in Knoxville or anywhere in the United States.

Utilizing the UT Conference Center, major hotels and convention centers across Tennessee and the U.S., UT Conferences assists organizations in designing and managing programs to meet the needs of attendees. The staff provides professional guidance and management for small group meetings as well as for major conventions of several thousand delegates. Consulting and support services can include planning and budgeting, lodging, food services, promotional materials, registration, meeting site management, and all details to ensure a successful event. Some programs qualify for Continuing Education Units (CEUs), which become a permanent record maintained by the Division.

Professional groups and interested individuals can request interactive videocconferencing to locations worldwide. Arrangements can also be made to receive (downlink) programming or transmit (uplink) programming via satellite.

Additional information may be obtained from:
UT Conferences
P.O. Box 2648
Knoxville, TN 37901
Phone: (865) 974-0250
FAX: (865) 974-0264
E-mail: conferences@utk.edu
Website: www.conferences.utk.edu

ENGLISH LANGUAGE INSTITUTE

Director: Dale A. Myers, Ph.D. Florida
Assistant Director: Jan G. Hitt, M.S. Tennessee
Instructors: Anwar F. Accawi M.Ed. Tennessee
Mostafa Rahbar, M.Ed. Tennessee

The English Language Institute (ELI) is a non-credit language-study program of The University of Tennessee, Knoxville. It is designed to assist students in their pursuit of career goals or educational objectives in the United States.

The curriculum consists of eight proficiency levels: 101-108, Introductory through Pre-Academic.

Class sessions meet 3-5 periods each day with emphasis on the following:
- English Structure (Grammar)
- Listening Comprehension
- Writing/Composition (Rhetoric)
- Conversation Practice for Communicative Purposes
- Reading and Vocabulary
DEPARTMENT OF DISTANCE EDUCATION AND INDEPENDENT STUDY

Assistant Dean and Director:
Robert Jackson, MBA Tennessee

The Department of Distance Education and Independent Study, in concert with academic departments at UT, offers internet-based, web-delivered classes, certificates and degrees. Information Services, Nuclear Engineering, and the College of Business offer flexibly-delivered Masters degrees, while the Department of Statistics and the Department of Counseling, Deafness, and Human Services offer credit certificate programs. Other undergraduate and graduate classes and programs are in development and a variety of individual courses in many disciplines are available. Current course availability can be found on the Web at anywhere.tennessee.edu.

The department provides services and support for faculty, students, and industry interested in flexibly-delivered education. It also provides the support infrastructure for UT New College.

The department also administers the program of Independent Study by correspondence for all campuses of the University. The program includes undergraduate college credit courses, high school courses (for credit or for college entrance requirements), and non-credit courses. College credit correspondence courses are based on regular UT campus courses, and the credit is recorded on the student’s UT transcript. High school courses are based on the curriculum frameworks of the Tennessee Department of Education. Non-credit courses can be taken to meet personal or professional education goals. The courses utilize videotapes, audiotapes, CD-ROMs, and web-delivery as well as traditional print materials. The program is open to UT students and to anyone who has the educational preparation required for a particular course. UT students must have the approval of their college advising center before they enroll in college credit courses. With the cooperation of a UT instructor, independent study through directed readings may also be arranged through this department for courses not listed in the Independent Study catalog (available online at: anywhere.tennessee.edu).

The Internet eLearning Institute provides certificate programs, professional development courses, and training for information technology professionals or individuals wanting expertise in internet technology. Courses are offered over the world wide web in the areas of e-Commerce, web databases, webmastering, network systems engineering, administrative technology, technical sales, and instructional technology.

For information and registration forms, contact the Distance Education Program at: Distance Education and Independent Study 1534 White Avenue Knoxville, TN 37996-1525 Phone: (865) 974-9311 or (800) 670-8657 FAX: (865) 974-6629 E-mail: DistEducation@utk.edu Website: www.anywhere.tennessee.edu

NEW COLLEGE

Assistant Dean:
Gayle Cooper, Ph.D. Tennessee

University of Tennessee New College will lead Tennessee economic development and improve quality of life by providing exemplary education beyond campus borders. UT New College offers academic programs off-campus to students at convenient times and places. The primary mission of New College is to help Tennesseans complete a college degree without leaving their families, communities, and careers.

To accomplish its mission, New College offers online academic programs from the University of Tennessee campuses. By providing a single portal, it is easy for citizens of the state to access online programs offered by all UT campuses.

UT New College strives to emphasize a commitment to excellence, service to its students, an excitement for learning, and an entrepreneurial spirit that seeks new and more effective ways to engage students and faculty in the teaching-learning process.

In support of Tennessee’s Workforce Initiative, UT New College works with business and industry to develop degree and non-degree programs needed by their employees. UT New College also provides educational pathways for Tennesseans seeking career changes.

Fulfilling its commitment to all Tennesseans, UT New College also enables students in rural and underserved areas, as well as the homebound, to access the University’s programs online at convenient times and locations.

The following undergraduate majors are available through UT New College starting Fall 2001:

Bachelor of Undergraduate studies with an area of interest in Business, and Human Resource Development.

For further information, contact:
UT New College
1534 White Avenue
Knoxville, Tennessee 37996-1525
Phone: (865) 974-6622 or (1-866) UT New 4 U
or (1-866) 886-3948
FAX: (865) 974-9014
E-mail: NewCollege@utk.edu

UNIVERSITY EVENING SCHOOL

Assistant Dean for Credit Programs:
M.K. Warden, Ed.D. Tennessee

Associate Director:
Dolcie Peccolo, Ph.D. Tennessee

Assistant Directors:
L.U. Jurand, M.S. Tennessee

The University Evening School administers on- and off-campus, undergraduate and graduate courses in a variety of nontraditional formats. All courses are approved and offered in conjunction with academic colleges and departments. Support services are provided to assist working adult students in their educational pursuits.
Off-Campus Programs The Evening School conducts undergraduate and graduate courses in a number of locations away from the Knoxville campus. All course offerings and instructors are approved by the appropriate academic departments, and the credit awarded is resident credit. The Master of Science in Human Resource Development (College of Human Ecology) is available in Nashville. The Master of Science in Education is available in Anderson and Hamblen Counties. The Ed.D. in Education is available in Chattanooga. The Evening School administers off-campus courses in Oak Ridge leading to advanced degrees in Chemical, Environmental, Industrial, and Nuclear Engineering, as well as Safety Education.

Workshops Credit workshops are coordinated through various academic departments of the University and provide students the opportunity to participate in short periods of intensive study. Workshops offer flexibility of timing, location, and content. Summer workshops are particularly popular with teachers and school administrators. Although most workshops are held on the University’s Knoxville campus, geography is not a limiting factor.

Student Services A comprehensive program of services is provided by the University Evening School for both on- and off-campus students: Registration Priority registration by touchtone, regular phone, mail, web, or FAX is offered as a convenience to current Evening School students. Final registration at both on- and off-campus locations is available by phone, web, or in person.

Fee Payment The Evening School functions as a Bursar’s office. Fees may be paid in person, by mail or by phone (with a credit card).

Advising Advising is available for the benefit of all Evening School students who need assistance with academic or related matters. The program can accommodate students during regular daytime hours and in the evening by appointment, as well as at several centralized off-campus locations. The Colleges of Arts and Sciences, Business Administration, Community Education and Engineering cooperate with the Evening School to provide advising appointments after work hours.

Financial Aid Evening School undergraduates may be eligible for assistance through the need-based Evening School Scholarship Program. Interested students may also obtain applications for the Pell Grant in the Evening School office.

Fee Waiver Program for Senior and/or Disabled Citizens The Evening School administers this state-legislated program for UT. Senior or totally disabled Tennessee citizens who wish to take UT credit courses may audit these free of charge or, upon admission, may pay a reduced rate to receive regular credit. Specific information about the program may be obtained in the Evening School office.

Additional information may be obtained from:
University Evening School
451 Communications Building
Knoxville, TN 37996-0341
Phone: (865) 974-5361 or 1-800-676-8657
FAX: (865) 974-2027
E-mail: eveningschool@utk.edu
Website: www.outreach.utk.edu/evening

SUMMER SCHOOL AND SPECIAL PROGRAMS
Assistant Dean for Credit Programs: M.K. Warden, Ed.D. Tennessee

SUMMER SCHOOL
The Summer School offers a wide range of educational opportunities to regular students of the University of Tennessee and to visiting students from a variety of backgrounds. More than 1,000 different summer courses are offered by the departments in the School of Information Sciences, and the Colleges of Agricultural Sciences and Natural Resources, Architecture and Design, Arts and Sciences, Business Administration, Communications, Education, Engineering, Human Ecology, Law, Nursing, and Social Work.

One full term of ten weeks and two five-week sessions are offered during the summer. The principle mission of the Summer School is to offer students from all levels of education the opportunity for students to spend half of their time in a choice of seven programs with focused topics in contemporary science, engineering and mathematics.

East Tennessee Academic Decathlon This event brings high school teams of nine students and their coach(es) to campus for a day of competitive test taking. Approximately 260 teams register and pay an annual entry fee for the privilege of competing for medals and trophies.

Tennessee Science Olympiad This annual event brings teachers and school administrators to the Knoxville campus. Teachers participate in a 4-week residential program and administrators attend a 3-day workshop. Emphasis is placed on the exploration of the experiential nature of ideas in science and mathematics and the profound interdependence of these two fields of human endeavor. The goal is to teach new, exciting ways of presenting math and science. In addition, the alumni are networked through the internal and via annual meetings. Operating since 1991, the Academy presently has approximately 750 alumni located in 19 states and eastern Canada.

Directory of Special Programs Each year, the Special Programs office compiles a directory containing as many programs as can be identified on the University’s Knoxville campus. The directory is available in a 4-week residential program and administrators attend a 3-day workshop. Emphasis is placed on the exploration of the experiential nature of ideas in science and mathematics and the profound interdependence of these two fields of human endeavor. The goal is to teach new, exciting ways of presenting math and science. In addition, the alumni are networked through the internal and via annual meetings. Operating since 1991, the Academy presently has approximately 750 alumni located in 19 states and eastern Canada.

FOR MORE INFORMATION To obtain more information about UT Summer School, please contact:
UT Evening School
451 Communications Building
Knoxville, TN 37996-0349
Phone: (865) 974-5361 or 1-800-676-8657
FAX: (865) 974-2027
Website: www.outreach.utk.edu/evening

SPECIAL PROGRAMS
The University of Tennessee offers a number of special programs on its Knoxville campus. Many of the Special Programs may be of interest to K-12 and college teachers and students.

Tennessee Governor’s School for the Sciences
The annual Governor’s School brings between 130 and 150 high school students from Tennessee to the campus for a four-week residential program which emphasizes skill development in writing, computer use and analytical thinking skills. The school also provides the opportunity for students to spend half of their time in a choice of seven programs with focused topics in contemporary science, engineering and mathematics.

The Summer School offers a wide range of educational opportunities to regular students of the University of Tennessee and to visiting students from a variety of backgrounds. More than 1,000 different summer courses are offered by the departments in the School of Information Sciences, and the Colleges of Agricultural Sciences and Natural Resources, Architecture and Design, Arts and Sciences, Business Administration, Communications, Education, Engineering, Human Ecology, Law, Nursing, and Social Work.

One full term of ten weeks and two five-week sessions are offered during the summer. The principle mission of the Summer School is to offer students from all levels of education the opportunity for students to spend half of their time in a choice of seven programs with focused topics in contemporary science, engineering and mathematics.
ACCOUNTING (009)

201 Principles of Financial Accounting (3) Introduction to financial accounting theory and practice with emphasis on the role of financial information in business decisions. Prerequisite to all other courses in Accounting. E

202 Principles of Managerial Accounting (3) Introduction to managerial and cost accounting concepts with emphasis on uses of accounting data by managers in planning operations, controlling activities, and decision making. Prerequisite: 201. E

311 Accounting for Primary Business Activities (3) Study of financial accounting for the primary activities of a business corporation: primary financial statements; revenue-accounts receivable-cash cycle; cost of goods sold; debt and equity financing. Prerequisite: 202. Prerequisite or Corequisite: Finance 301 and Management 203.

321 Cost and Managerial Accounting (3) Analysis of costing for products, projects, and management control. Topics include cost behavior, cost prediction, budgeting, and responsibility accounting. Prerequisite: 202. Prerequisite or Corequisite: Management 203. E

341 Accounting Information Systems (3) Development and use of accounting information systems for collection, organization, and distribution of economic information about organizations for internal and external decision making. Prerequisite: 202, Management 203, junior standing. Major exam may be given during the last class meetings. F, Sp

411 Financial, Compliance, and Operational Auditing (3) Role of auditing in society from an internal and external perspective, the IIA Code of Ethics, the IIA Standards for the Professional Practice of Internal Auditing, auditing methodology, role of internal control and statistical sampling in auditing, fraud auditing, operational auditing, compliance auditing, and applications of auditing procedures to specific transaction cycles. Prerequisite: 202.

414 Non Business Entities: Acquisitions; Mergers; and Foreign Operations (3) Investments; revenue recognition; accounting changes; error correction; statement of cash flows; introduction to leases, pensions, and deferred taxes; mergers; acquisitions; consolidated financial statements; foreign exchange and translation. Prerequisite: 311 with a C or better.

415 Governmental and Nonprofit Accounting (3) Advanced study of governmental and nonprofit entities. Governmental accounting principles, revenues and expenditures, budgeting, and financial reporting. Accounting principles and reporting models of nonprofit organizations. Integration of economic and social issues with reporting, and governance and management of nonprofit organizations. Prerequisite: 414 or permission of the instructor.

431 Federal Income Taxation (3) Fundamentals of gross income, deductions, credits, and tax determinations. Introduction to taxation of corporations and partnerships. Prerequisite: 311 with a C or better, or consent of instructor. F, Sp

451 Operational Auditing and Consulting (3) Approaches auditors might use to evaluate an entity’s efficiency and effectiveness in a variety of settings and techniques auditors might use in consulting to provide the entity a competitive advantage.

ADVERTISING (012)

250 Advertising Principles (3) Survey of the role of advertising in American business and society. Relationship between advertising and marketing; functional components of the advertising process; research, media, creative, and management.

340 Advertising Research Methods (3) Secondary data and primary research techniques for advertising decisions. Prerequisite: 250 and Statistics 201.

350 Advertising Creative Strategy (3) Basic concepts of creative strategy with intensive practice in developing creative platforms, writing and designing advertisements, and judging creative work. Prerequisite: 250, Communications 100 or Speech Communication 100.

360 Advertising Media Strategy (3) Assessment of markets, vehicle audiences and mathematical techniques for advertising planning. Instruction in media planning, buying, and evaluation. Prerequisite: 340.

380 Advertising Professional Seminar (1) Exploration of career choices in mass communications. Resume and letter writing, interviewing, and portfolio preparation. Prerequisite: Progression as a major in the Department of Advertising.

450 Advertising Management (3) Case-study approach to advertising decisions. Data analysis and interpretation, generating alternative strategies, oral and written presentation of recommendations. Prerequisite: 350 and 360.

470 Advertising Campaigns (3) Group-based development of an advertising campaign for a regional or national client. Prerequisite: 450.

480 Advertising Issues (3) Examination of the role of advertising in society and controversies surrounding economic, social, cultural and ethical aspects of advertising. Emphasis on written and oral exposition of different viewpoints. Prerequisite: 414.

490 Special Topics (3) Detailed study of a specialized area of advertising. Topics vary by semester and include advanced media strategy, advanced creative strategy, direct marketing, and multicultural advertising.

492 Advertising Practicum (1) Experience in a functional area of advertising. Ten hours laboratory each week. May be repeated once. Prerequisite: Progression as a major in the Department of Advertising. Satisfactory/No Credit grading only.

493 Independent Study (1-3) Individual study in a specialized area under the supervision of a faculty member. Prerequisite: Consent of instructor.

AFRICAN AND AFRICAN-AMERICAN STUDIES (022)

201 Introduction to African-American Studies (3) Multidisciplinary approach to the African-American experience through the Civil War period which examines such issues as traditional African societies, the institution of slavery, the development of African-American culture, the beginnings of African-American protest tradition, and the Civil War and Reconstruction.

202 Introduction to African-American Studies (3) Multidisciplinary approach to the African-American experience from the Civil War through the Civil Rights era which focuses on such topics as African-American rural and urban societies, the African-American church and education and African-American intellectual and protest movements.

233 Major Black Writers (3) (Same as English 233.)

235 Introduction to African Studies (3) Multidisciplinary approach to the study of African traditions, cultures, religions, political economies, precolonial democracies, and states form the first through the sixteenth century.

236 Introduction to African Studies (3) The Multidisciplinary study of Africa and its incorporation into the world economy between the sixteenth and the twentieth century. Includes the rise of nationalism, postcolonial dependency, contemporary problems, and current liberation struggles in various areas of the continent.

310 Introduction to African-American Music (3) (Same as Music History 310.)

315 The African Diaspora (3) (Same as Anthropology 315.)

319 Caribbean Cultures and Societies (3) (Same as Anthropology 319 and Latin American Studies 319.)
AGRICULTURAL AND EXTENSION EDUCATION (042)

201 Field Experience in Agricultural and Extension Education (1) Field observation/experience in potential agricultural and extension education career fields. Grade requirements: daily journal, formal written report, complete required hours, seminar. Prereq: Consent of instructor may be repeated if changing concentrations. E

211 Foundations of Agricultural and Extension Education (3) History and philosophy of agricultural education and extension education. Major areas of emphasis include the historical developments of agricultural education in the public schools and the federal extension education system. Formal and non-formal methods of education used, audiences served, organizational structure, and programming emphases will be studied by students. Foundation course for departmental majors and service course for those interested in related careers. Sp

301 Non-Formal Youth Development Programs (1-2) Structured experience in administering, organizing, conducting, and evaluating youth education programs in agricultural and extension education. Prereq: Consent of instructor. Sp

345 Agricultural Education and Program Planning (3) Overview of the historical and philosophical aspects of agriculture education, the role of teacher and learner, emphasis on SAE, FFA, community service, and summer programs. Prereq: 201, 211 or consent of instructor. Sp

346 Instructional Strategies for Teaching Agricultural Education (3) Methods and techniques for teaching agriculture, preparing lesson plans and units of instruction, development of agriculture curricula, and utilization of resources, multimedia, and computer technology into instruction. Prereq: 201, 211, 345 or consent of instructor. Sp

420 Methods of Teaching Agricultural Mechanics (2) Methods for teaching high school agricultural education students. Special competencies for planning, conducting, and evaluating an agricultural mechanics program. Prereq: Biosystems Engineering Technology 202 or consent of instructor. F, Sp

435-36 Student Teaching in Agricultural and Extension Education (6,6) Full-time teaching practicum in an approved high school program. Applied practices needed by agricultural education classroom teachers. Prereq: Admission to Teacher Education and AEE 201, 211, 345, and 346 Coreq: 435 for 436; 436 for 435. F

492 Internship In Agricultural and Extension Education (1-6) Pre-approved off-campus supervised experience in county Extension offices, agricultural business, or agricultural related agencies. (Requires living off-campus for a specified time.). May be repeated up to a maximum of 6 hours. Prereq: 211, or Consent of Instructor. E

493 Independent Study (1-3) Individualized study of a special project or problem in Agricultural and Extension Education. Must be selected in consultation with the instructor and consent of instructor. May be repeated for credit. Maximum 6 hours. E
Courses of Instruction 147

470 Natural Resource Economics (3) Nature of natural resources; economic efficiency as a basis for natural resource use; externalities in natural resource use; factors influencing environmental quality; alternative public policy tools for influencing natural resource use or improving environmental quality. Prereq: Economics 201. Sp.

492 Off-Campus Internship (1-3) Pre-approved supervised experience with firm or organization in the field. May be repeated for a different experience up to a maximum of 6 hours. Prereq: Junior standing or consent of advisor. Sp.

493 Independent Study (1-3) Directed individual or team research and report writing. Special courses in specific topics. Student must arrange with instructor before registering. May be repeated up to a maximum of 6 hours. Maximum 6 hours. Prereq: Junior standing. E

AGRICULTURE AND NATURAL RESOURCES (088)

101 Perspectives in Agriculture and Associated Natural Resources (3) Historical development, current national and international issues, and trends for the future. 3 hours.

290 Computer Applications to Problem Solving (3) Use of computer to analyze and solve problems related to agricultural sciences and natural resources. The use and integration of computer applications such as spreadsheets, databases, presentation graphics, word processing, and other appropriate software as needed for problem analysis and reporting. Prereq: Satisfactory performance on a skills placement test. For details, see advisor. 2 hours and 1 lab. F-Sp.

317 Agriculture and Natural Resources Honors Seminar (1) Discussion of selected topics, issues and problems influencing national and international food, agricultural and natural resources systems. Primarily for College of Agriculture Science majors. May be repeated. Maximum of 3 hours. Satisfactory/No Credit. F.

333 Food, Forests and the Environment (3) Overview of the environmental tradeoffs that have been, are, and will be required to produce the food, fiber and other products needed to feed, cloth and house a growing world population. Topics to include basic natural resources, current practices in agriculture, forestry, and food handling, and practices related to quality of life issues, such as wildlife and landscape design. This course may not be used by College of Agricultural Sciences and Natural Resources students to satisfy directed elective requirements.

491 International Experience in Agriculture and Natural Resources (1-15) Credit for formalized international experiences related to agricultural sciences and natural resources. Evaluation of credit based on nature of the proposed experience. Student should discuss the opportunity with their faculty advisor prior to the trip to determine if it is appropriate for credit. Credit hours will be determined by the department and college depending on the extent of activity and types of projects and/or presentations to be completed by the student upon return. S/N.C.

497 Honors Independent Project (1-6) For students participating in the CASNR Honors Research and Creative Achievements Program. Consists of independent work with a faculty member. Prereq: Participation in the CASNR Honors Program.

498 Honors Presentation (1) For students participating in the CASNR Honors Program. Final written report and oral presentation of the honors project. Prereq: Participation in the CASNR Honors Program.

AIR FORCE AEROSPACE STUDIES (094)

101-102 The Air Force Today (1,1) AS100 is a survey course that focuses on the organizational structure and mission of the Air Force; officering and professionalism; and includes an introduction to communicative skills. A weekly Leadership Laboratory (LLAB) consisting of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies is mandatory.

103-104 Leadership Laboratory (1,1) Leadership Laboratory consists of a study of Air Force customs and courtesies, drill and ceremonies, and giving military commands; instructing, correcting, and evaluating the preceding skills; studying the environment of an Air Force officer; and learning about opportunities available to commissioned officers.

201-202 The Development of Air Power (1,1) AS200 focuses on factors contributing to the development of air power from its earliest beginnings through two world wars; the evolution of air power concepts and doctrine; and an assessment of communicative skills. A weekly Leadership Laboratory (LLAB) consisting of Air Force customs and courtesies, Air Force environment, drill and ceremonies, and field training orientation is mandatory.

203-204 Leadership Laboratory (1,1) Leadership Laboratory consists of a study of Air Force customs and courtesies, drill and ceremonies, and giving military commands; instructing, correcting, and evaluating the preceding skills; studying the environment of an Air Force officer; and learning about opportunities available to commissioned officers.

205 Field Training (Academic Program) (1,4) Role of United States military forces in contemporary world, with particular attention to the United States Air Force, its organization and mission, various component forces of U.S. military power, organization of America’s defense structure, policies of major powers, and elements and processes in making of defense policy. Conducted at Field Training bases throughout the country. Open only to two-year-program students. F-Sp.

301-302 Air Force Leadership and Management (3,3) AS300 is a study of leadership and quality management fundamentals, professional knowledge, leadership ethics, and communicative skills required of an Air Force officer. Conducted to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory weekly Leadership Laboratory (LLAB) provides advanced leadership experiences in office-type activities and gives students the opportunity to apply leadership and management principles to their work.

303-304 Leadership Laboratory (0,0) Leadership Laboratory consists of activities classified as advanced leadership experiences. They involve planning, organizing, staffing, coordinating, directing, and controlling the military activities of the cadet corps: preparation and presentation of briefings and other oral and written communications; and providing interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets.

401-402 National Security Forces in Contemporary American Society (3,3) AS400 examines the need for national security, analyzes the evolution and formulation of American strategy of joint doctrine; investigates the methods for managing conflict; and overviews regional security, arms control, and terrorism. Special emphasis of interest focus on the military as a profession, officering, the military justice system, and current issues affecting military professionalism. Within this structure, continued emphasis is given to the refinement of communicative skills. A weekly Leadership Laboratory (LLAB) consisting primarily of advanced leadership experiences in office-type activities is required.

403-404 Leadership Laboratory (0,0) Leadership Laboratory consists of activities classified as advanced leadership experiences. They involve planning, organizing, staffing, coordinating, directing, and controlling the military activities of the cadre corps: preparation and presentation of briefings and other oral and written communications; and providing interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets.

AMERICAN STUDIES (099)

310 Introduction to American Studies (3) Explores dynamics and nature of the culture(s) of the United States through interdisciplinary study and interpretation. Considers broad and "minority" cultures. Writing-emphasis course.

312 Popular Culture and American Politics (3) Same as Political Science 312.)

320 American Cultures (3) Same as Anthropology 320.)

334 Film and American Culture (3) Same as Cinema Studies 334 and English 334.)

343 Race and Ethnicity (3) Same as Sociology 343.)

345 Collective Behavior and Social Movements (3) Same as Sociology 345.)

355 Religion and Culture in the United States (3) Same as Religious Studies 355.)

381 Introduction to Folklore (3) Same as English 381.)

410 Topics in American Culture (3) Content varies. May be repeated once.

420 Political Attitudes and Behavior (3) Same as Political Science 420.)

423 Geography of American Popular Culture (3) Same as Geography 423.)

442 American Humor (3) Same as English 442.)

450 Seminar in American Studies (1) Intensive study of a major issue in American Studies scholarship.

456 History of Sports in the United States (3) Same as History 456.)

469 Freedom of Speech (3) Same as Speech Communication 469.)

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

ANIMAL SCIENCE (113)

101 Orientation to Animal Science (1) For Animal Science majors and Animal Science Prevet students in their first year. Discussion of student services, activities, and careers; student participation required during the first week of the college experience. Satisfactory/No Credit. F, Sp.

220 Anatomy and Physiology of Farm Animals (3) Skeletal and joints; muscles; blood and microcirculation; nervous, endocrine, cardiovascular, respiratory, and digestive systems; demonstrations of physi- cal-chemical phenomena. Prereq: Biology 120 or 130. 2 hours and 1 lab. F.


285 Horse Handling and Care (3) Proper procedures for horse-human interaction and the recommended management procedures for horse care. The basic behavioral characteristics of the horse, an understanding of its physical and mental parameters and their use in horse-human communication. Interactions include imprinting, halter, halter training, lunging, long-line driving, bridling, bitting, roundpen training, saddling and leading, and gaiting. Basic care includes feed selection and management, post-natal care, restraint, foot care, dental care, grooming, loading and trailering, stall maintenance, internal and external parasite control, exercise, identification techniques, routine vaccinations and first aid. Safety for both horse and handler will be emphasized. 3-2.5 hours labs. F.

320 The Physiology of Reproduction and Lactation (3) Biology of sex and reproduction, functional anatomy of male and female, reproduction and lactation, gametogenesis, neuroendocrinology and endocrinology of reproduction, nutrition, sex cycles, folliculogenesis, ovulation, spermatogenesis, fertilization, embryonic development, implantation, pregnancy, parturition, nutrition of the dam and offspring, care of the newborn during the dry period, artificial control of reproduction and lactation. Prereq: Biology 120 or 130. 2 hours and 1 lab. Sp. (Same as BCMB 322.)
330 Animal Nutrition, Feeds, and Ration Formulation (4) Properties, functions, utilization, and deficiency symptoms of essential nutrients, properties and functions of feeds and principles of ration formulation. Prereq: Chemistry 110 or Chemistry 130 and Math 121. 2 hours and 2 labs. F

340 Principles of Animal Breeding (3) Genetic and environmental bases of animal variation. Selection and maintenance systems as mechanisms of genetic change. Planning breeding programs for economically important domestic species. 2 hours and 1 lab. F


362 Dairy Cattle Evaluation (2) Comparative judging, oral reasons, breed classification programs, economic value of conformation traits. Prereq: 260. 2 labs. F

364 Horse Evaluation (2) Evaluation of horses for soundness and functional efficiency and the relationship of form to function in various breeds of horses. 2 labs. Sp

380 Animal Health Management (3) Characteristics, symptoms, prevention, and treatment of major diseases and parasites. Immunization, health regulations and herd health programs for all farm livestock species and poultry. Prereq: AS220. 2 hours and 1 lab. Sp

381 Animal Production Systems (3) Fundamentals of production and management systems in beef, dairy, pork, and poultry programs. Application of principles of nutrition, breeding, reproduction, and marketing into enterprise systems. Decision making management practices and information resources, enterprise evaluation, and comparison of enterprise systems. 2 hours and 1 lab. No credit for majors. F

420 Advanced Reproduction (3) Collection, evaluation, and preservation of ova, spermatozoa and embryos; application of methods of natural breeding and techniques of artificial insemination and embryo transfer; herd sire and dam evaluation; pregnancy determination; gestation and parturition; infertility; recent advances in theriogenology. Prereq: 320. 1 hour and 2 labs. F

430 Advanced Ration Formulation (2) Advanced ration formulation for beef and dairy cattle, sheep, horses, swine, poultry, laboratory, zoo, and companion animals. Mathematical and computer solutions and applications to formulating complex rations with constraints. Prereq: 330 and introductory computer science course. 2 labs. Sp

461 Advanced Beef Cattle, Dairy Cattle, Horse, Poultry, Sheep, and Swine Judging (1) Advanced evaluation in judging: evaluation, selection and presentation of oral reasons for classes of beef cattle, dairy cattle horses, poultry, sheep, and swine. Prereq: Consent of instructor. 2 labs. F

481 Beef Cattle Production and Management (3) Integration of principles of nutrition, breeding, physiology, and marketing into complete production and management programs. Structure of industry, enterprise establishment, systems of production, production practices, and improvement programs. Management evaluated in terms of production response and economic returns. Comparisons made to small ruminant, forage-based production systems. Prereq: Completion of Animal Science sophomore and junior core courses or consent of instructor. 2 hours and 1 lab. Sp

482 Dairy Cattle Production and Management (3) Integration of principles of nutrition, breeding, physiology, and marketing into complete production and management programs. Structure of industry, enterprise establishment, systems of production, production practices, and improvement programs. Management evaluated in terms of production response and economic returns. Prereq: Completion of Animal Science sophomore and junior core courses or consent of instructor. 2 hours and 1 lab. F

483 Pork Production and Management (3) Integration of principles of nutrition, breeding, physiology, and marketing into complete production and management programs. Structure of industry, enterprise establishment, systems of production, production practices, and improvement program. Management evaluated in terms of production response and economic returns. Prereq: Completion of Animal Science sophomore and junior core courses. 2 hours and 1 lab Sp

484 Poultry Production and Management (3) Integration of principles of nutrition, breeding, physiology, and marketing into complete production and management programs. Types of enterprises, management of feed and pasture resources, health maintenance and first aid, housing and finishing, farm structures and equipment. Prereq: Consent of instructor. 2 hours and 1 lab. F

485 Horse Production and Management (3) Integration of principles of nutrition, breeding, physiology and euthanasia into complete production management programs. Management evaluated in terms of production response and economic returns. Prereq: Completion of Animal Science sophomore and junior core courses. 2 hours and 1 lab. F

489 Companion, Zoo and Lab Animal Management (3) Principles of nutrition, physiology, breeding, handling, and history of breeds of common household pets, zoo animals and animals used in scientific research. Specific species requirements and peculiarities. Laws and agencies governing use of laboratory animals. Laboratory analysis of blood metabolites commonly used to monitor health and nutritional status. Prereq: Consent of instructor. 2 lectures and 1 lab. Sp

492 Animal Science Field Study (1-6) Off-campus work experience approved by the department. Objective of completion is to provide students and give the student an opportunity to gain experience in industry. Students must submit official approval form prior to registration. Students will be evaluated for knowledge and skills and must submit a written summary report after program completion. E

493 Independent Study in Animal Science (1-3) Approved supervised study in areas not formally presented in a course offered in the department. Written proposal of study is approved by the Department of Animal Science Undergraduate Committee. After completion of study, a written report is required and this report is maintained on file in the reference room of the department. May be repeated for a maximum of 6 credits. Prereq: Senior standing and consent of instructor and department head. Sp

494 Animal Science Teaching Assistant (1) Assist the primary instructor in laboratory instruction and demonstrations. Prereq: Senior standing and consent of the instructor and Department Head. S/NC. E

495 Seminar (1) Review of literature and oral and written presentation on special topics and current research in Animal Science field. Prereq: Senior standing. One 2 hour lab. F, Sp

496 Veterinary Medical Technology (1) For Animal Science and/or Animal Science Pre-Veterinary Medicine Majors only. Course content of instruction and completion of at least 60 credit hours. Students will observe and assist clinicians in the College of Veterinary Medicine as they carry out day to day activities in the large and/or small animal clinics. One lab. Sp

ANTHROPOLOGY (122)

110 Human Origins (3) Survey of humanity’s back- ground, fossil primates, fossil human remains, and living races of humankind.

120 Prehistoric Archaeology (3) Introduction to methods and techniques used to identify and date archaeological cultures, reconstruct social and economic aspects of cultural evolution. Overview of the prehistory of Africa, western Europe, southwest Asia, and the Americas from earliest dated human cultures to rise of complex civilizations.

130 Cultural Anthropology (3) Major concepts and methods in the study of culture; survey of cross-cultural similarities and differences in subsistence, social organization, political, and religious institutions, language, ideology and arts. Contributions of anthropology to resolving contemporary human problems.


302 Anthropology of Religion (3) (Same as Religious Studies 302.)

305 Evolution and Society (3) (Same as Ecology and Evolutionary Biology 305.)

306 Genetics and Society (3) (Same as Botany 306.)

310 North American Indians (3) Comparative overview of Indian cultures of North America. Topical cover- age ranges from prehistory and aboriginal lifeways to problems resulting from contact and acculturation. Writing emphasis course.

311 Southeastern Indians (3) Survey of Southeastern American Indian cultures at the time of European contact. Emphasis on Cherokee culture and on the social, economic, and religious organization of aboriginal groups. Prereq: 130 or consent of instructor.

312 Appalachian Culture (3) Traditional Southern Appalachian subsistence patterns and economy, social organization, beliefs, and values, folklore and customs, socio-cultural impacts of industrialization and modernization. Prereq: 130 or consent of instructor. Writing emphasis course.

313 Peoples and Cultures of Mesoamerica (3) Pre- Columbian and Hispanic cultures of Mexico, Guate- mala, and Costa Rica. The sociocultural continuity and cultural change throughout Mesoamerica’s history. Prereq: 130 or consent of instructor. (Same as Latin American Studies 313.) Writing emphasis course.

315 The African Diaspora (3) An overview of anthropo- logical perspectives on people of African descent and the impact of an African presence on societies in the Americas. Emphasis on African culture contact with Europeans and their counterparts elsewhere in the hemisphere are situated in the context of a broader diaspora. Prereq: 130 or consent of instructor. Writing emphasis course. (Same as African and African-American Studies 315.)

316 Peoples and Cultures of South America (3) An introduction to contemporary analysis and debate on South America that places the concept "culture" in historical perspective and discusses the anthropologi- cal notion of “people” within the complexity of indig- enous and black social formations. Writing emphasis course. (Same as Latin American Studies 314.)

319 Caribbean Cultures and Societies (2) Anthropo- logical approaches to key aspects of Caribbean history, sociocultural pluralism, racial and class stratification, patterns of economic development, and local and na- tional-level political processes. Prereq: 130 or consent of instructor. Writing emphasis course. (Same as African and African-American Studies 319 and Latin Ameri- can Studies 319.)

320 American Cultures (3) Anthropological perspec- tives on cultural diversity in America, including the immigrant experience and expressions of ethnicity, intercultural relations, occupational and interest group subcultures. Writing emphasis course. (Same as Ameri- can Studies 320.)

321 Indians of Northwest North America (3) Survey of American Indian cultures found in the Northwest, Columbia Plateau, and Northern Great Basin culture areas. Writing emphasis course.

357 Junior Honors in Anthropology (3) Analytical, integrative review of current directions of research and theory in Anthropology. Open to students with an overall GPA of 3.2 who have fulfilled progression requirements to declare a major in Anthropology.

360 North American Prehistory (3) Prehistoric cul- tures of North America from initial occupation of the continent to European contact. Writing emphasis course.

361 Historical Archaeology (3) Historical archaeology of Euro-American, African-American, and Asian Ameri- can cultures in the United States from 15th to 20th centuries.

362 Principles of Archaeology (3) Research strate- gies used in developing method and theory, constructing historical cultures, identifying site function and settle- ment, subsistence patterns, and site context. Writing explanations of cultural change. Prereq: 120 or consent of instructor.

363 Prehistory of Tennessee (3) Archaeological prin- ciples and theory illustrated in history of archaeological research in Tennessee and through survey of prehis- toric Indian cultures from initial occupation of the state to European contact. Recommended: 360. Writing em- phasis course.

457 Junior Honors in Anthropology (3) Analytical, integrative review of current directions of research and theory in Anthropology. Open to students with an overall GPA of 3.2 who have fulfilled progression requirements to declare a major in Anthropology.
464 Principles of Zoology (3) Basic osteological studies of major vertebrate groups, with emphasis on the amphibian's use of animals in subsistence and culture identification and interpretation of archaeologically derived molluscan and vertebrate remains, with introduction to laboratory use of comparative collections. Prereq: 120 or consent of instructor.

465 Urban Archaeology (3) Field archaeology and interpretation of urban sites in the United States. Course content will include lectures and field and laboratory research on urban sites in the United States. Prereq: 361 recommended.

480 Human Osteology (4) Intensive examination of the human skeleton. Prereq: 110 or consent of instructor; 3 hours and 1 hour lab.

481 Museology I: Museums, Purpose and Function (3) (Same as Art 481.)

482 Museology II: Exhibition Planning and Installation (3) (Same as Art 482.)

484 MUSCULAR SYSTEMS (3) Intensive study of the human skeleton and muscular system. Prereq: Anthropology 480 or consent of instructor.

490 Primate Evolution (3) Living and fossil primate taxonomy, ecology, and comparative anatomy. Survey of primate fossil evidence in terms of major primate lineages. Prereq: 110 or consent of instructor.

491 Foreign Study (1-15)

493 Independent Study (1-15)

494 Primate Behavior (3) Social organization and behavior of selected primates including group composition, size, and structure; patterns of mating; other social interactions; communication; and cultural behavior. Application of primate studies to human ethology. Prereq: 110 or consent of instructor.

495 Human Paleontology (4) Intensive survey of the human fossil record from the earliest hominid remains to the earliest origins of modern human form. Prereq: 110 or consent of instructor.

496 Biology of Human Variability (3) Introduction to human populations; human adaptation, biological features of major human races, relationships of major groups to one another. Prereq: 110 or consent of instructor. (Same as African and African-American Studies 496.)

ARCHABIC (127)

121-122 Elementary Modern Arabic I, II (5,5) Same as Asian Studies 121-122.)

221-222 Intermediate Modern Arabic I, II (5,5) (Same as Asian Studies 221-222.)

ARCHITECTURE (133)

101 Introduction to the Built Environment (3) Scope and definition of the built environment in relation to contemporary society, building industry, and allied design professions. Orientation to courses and programs of the school. Coreq: 171. F

102 Visual Design Theory (2) Principles of visual design, addressing scale and space. Exploration of visual ideas through analysis. Introduction of terminology and vocabulary. Coreq: 172. Sp

111 Architecture and the Built Environment (3) An introduction to architecture and the built environment for nonarchitectural students. Focus on the city as a product of human ingenuity, forces that create them, Creative aspects of design. Survey of examples from local to global. Strategies for individual and collective involvement.

121 Drawing and Perception (2) Exploration of drawing as a means of visual thinking and communication, addressing different methods of representation. Exploration of different media and techniques of representation. Drawings based on observation, abstraction, and transformation. Coreq: 172. Sp


180 Introduction to Architecture (2) Introduction to the fundamentals of construction, materials and statics in a lecture/seminar format.

181 Introduction to Graphic Skills (4) Introduction to freehand drawing and technical techniques emphasizing visualization and simulation. The work will be explored and developed in the studio (4 credit hour studio).

182 Introduction to Basic Design (6) Introduction to basic design principles in three dimensions. The work will be explored and developed in the studio (1 credit hour seminar and 5 credit hour studio).

211 History and Theory of Architecture I (3) Architectural thought and ideas of building and community form. Ancient through High Renaissance in Italy, France and Spain.

212 History and Theory of Architecture II (3) Architectural thought and ideas of building and community form. English Renaissance, late Renaissance in Italy, France and Spain through the mid-twentieth century. Prereq: 211. Sp


215 Architectural History/Theory I (3) Introduction to architectural form, ideas and traditions in a lecture/discussion format. Prereq: M. Arch Admission.

216 Architectural History/Theory II (3) Exploration of the ideas and forms of architecture in a lecture/discussion format. Prereq: M. Arch Admission.

231 Computer Applications in Design I (3) Introduction to computer systems software and hardware and their application in architecture. Emphasis on learning how to use computer systems. Students will assist in the design process by modeling, visualizing and analyzing building designs. Introduction to drafting, three-dimensional modeling, and desktop publishing.

232 Introduction to Architectural Technology (3) Place of building technology in architectural design. Introduces concepts and theory of structures; building materials and construction; and environmental control. F, Sp

271 Architectural Design I (6) Introduction to contextual design in architectural design. Role of the city, and the landscape in architectural design. Methods of analyzing place and form in determining design strategies. Representational skills developed including drawing, computer programming and modeling techniques. Prereq: 172. F

272 Architectural Design II (6) Studies in architectural space. The role of function, habitation, movement, structure and scale as determinants of spatial form explored through a series of design projects ranging in scale from furniture to dwellings. Development of design processes, including analytical skills, diagramming, and determining design organizational strategies. Use of computer-aided visualization techniques. Prereq: 271. Sp

281 Principles of Architectural Form (6) Principles of architectural form emphasizing building configuration and design. Design of simple buildings which explore possibilities of site, use, shape, materials and color. (1 credit hour seminar and 5 credit hour studio). Prereq: 182 or equivalent.


334 Advanced Architectural Structures (3) Philosophy of structural design in relation to materials and form. Advanced mathematical and experimental analysis of structures, including use of computer programs. Prereq: 323 or equivalent.


336 Structures in Architecture II (3) Continuation of analysis and design of simple structures in wood, steel and concrete. Introduction of building codes, loading tables and handbooks for selection of structural members. Prereq: 335 or special permission.

341 Environmental Control Systems I (4) Heating, ventilating, and air-conditioning systems, including passive and active solar energy systems. Plumbing and fire protection systems. Prereq: 231 and 232. F.


345 Principles of Environmental Control I (3) Introduction to heating, ventilating, air-conditioning, solar energy, plumbing and fire-protection systems. Prereq: 180 and M. Arch. Admission.


403 Introduction to Preservation (3) History, theory, and legal aspects of architectural preservation and restoration.


405 Descriptive Analysis of Historic Buildings (3) Identification and analysis of characteristic elements of buildings from various architectural periods, with emphasis on American architecture. Survey techniques.

406 Ideas in Architecture (3) Historical and critical review of the major ideas of architecture through the ages. Open to all students.

410 History and Theory of Urban Form (3) Patterns of community development. Selected historical and contemporary examples. Basic urban design issues and exemplary design approaches are examined through lectures, readings, essays, and sketch studies including historical change in urban form and design.

412 Non-Western and Indigenous Architecture (3) Building responsive to climate, material availability, and economic level, as designed by anonymous builders. Examples from the present include the fertile Crescent; the Indus Valley; Hindu, Buddhist, and Mughal architecture of India, China, and Japan.

413 Tennessee Architecture (3) History of settlement patterns and building in Tennessee. Selected examples examined through artistic representations, literature, discussion, and field trips. Historical research using primary material.

414 History of Architectural Technology (3) Building materials and construction techniques from antiquity to the present.

415 Medieval Architecture (3) History of architecture from the decline of Rome to the beginning of the Renaissance. (Same as Medieval Studies 415.)

417 The International Style (3) A survey of architecture of the early modern movement, primarily in Europe and America, covering the years 1900 to 1940.


420 American Architecture, 1840-1940 (3) Stylized periods from the Gothic Revival through the Twentieth Century.

421 History of Landscape Architecture (3) Intellec-
tual, social, and historical influences which provide the theoretical basis for design throughout history. Selected examples of landscape architecture analyzed in terms of design.

422 Modern East European Architecture (3) Twenti-
eth century architecture in Russia, Czechoslovakia, Poland, Hungary, East Germany, Rumania, Bulgaria, Yugoslavia.

425 Special Topics in Architecture (1-6) Faculty initi-
tated courses. Topics vary. May be repeated. Maximum credit 12 hours. Prereq: consent of instructor. F.

431 Structural and Mechanical Applications (3) Case study analysis of structural and mechanical systems, examining the conceptual integration of technical information into a unified design solution. Prereq: 332, 342, Coreq: 471. F.


433 Computer Applications in Design II (3) Advanced course that integrates three-dimensional modeling and technical analysis using computers to automate aspects of design and design studies, under faculty direction. Prereq: Consent of instructor. Sp.

433 Building Energy Analysis (3) Balancing heat flow through external skin of residential and small and large commercial buildings; local climate evaluation; site plan-
ing, building size and orientation, window area, wall treatment, infiltration control. Energy use quantification methods and economic analysis of energy efficient design features. Architectural program analysis of exter-

444 Advanced Environmental Control Systems (3) In-depth analysis and innovative concepts in design of heating, ventilating, and air conditioning. Prereq: 341.

445 Advanced Lighting (3) In-depth analysis and innovative concepts in design of lighting. Prereq: 341.

462 Professional Practice (4) Management and organi-
tational theories and practices for delivering profes-
sional design services. Included are assessment of the building industry and its influence on practice, analysis of the basic management functions within professional firms; and legal and ethical concerns facing practitio-
ners today. Special obligations and privileges of the design professional. Sp.

463 Architectural Development (3) Principles and practice of the architect as a developer. Impact of economics, finance and urban policy on the design and development of real estate. Open to all students.

471 Architecture Design V (6) Design project from conceptual through design development phase. Spec-
fication of component building systems including structure, mechanical, lighting and construction details. Prereq: 372. Coreq: 431. F

472 Architectural Design VI (6) Order and form in complex buildings developed to address programmatic, structural, energy and environmental issues. Prereq: 471.

473 Architectural Photography (3) Photography as a design, research, and presentation medium. Applica-
tion of photographic techniques, printing and processing. Color, black and white.

480 Comprehensive Design Project I (3) Project selected in cooperation with Architecture 464. Forma-
tion and documentation of hypotheses. Preparation of background and program information. Goals and con-
cepts set forth. To be taken semester immediately following 482.

481 Advanced Architectural Design Topics (6) Fac-
ulty initiated design projects. Advanced architectural topics not covered under 483, 484, 485, 486, or 489. Prereq: 471. F.

482 Comprehensive Design Project II (6) Student selected project under faculty direction. Exploration of design hypothesis which informs the character of a substantial building design. (See Architecture 480.) Completed project will address all issues of environ-
ment, structure, enclosure, use, and ethical consideration of design appropriateness. Design is expected to stand up to rigorous scrutiny regarding strength of idea, economic realism, durability for stipulated use, quality of cultural expression, and character of setting. Prereq: 480 and satisfactory completion of all design courses. Sp.

483 Urban Design (6) Urban design projects respond-
ing to specific community conditions. Exploration of urban issues in making and understanding the architec-
ture of the city. Prereq: 471. F.


485 Development and Design (6) Exploration of image making, consumerism and the allocation of scarce re-
sources. Issues of finance, economics, urban economi-
ics, and marketing are analyzed in relation to urban and architectural design. Application of financial feasibility models. Prereq: 471 and 463 or consent of instructor. F.

486 Design of Sustainable Architecture (6) Architect-
tural design studio emphasizing concern for the environ-
ment, conservation of energy conservation techniques, and use of renewable resources. Prereq: 471. F.

489 Structural Innovations (6) Building design with innovative structural configuration and technology. Ex-
ploration of new materials, detailing, and methods in building construction. Prereq: 471. F.

491 Foreign Study (1-15) Research and design projects conducted in various locations abroad. F, Su.

492 Off-Campus Study (1-15) Studies conducted under direction of architect or expert in an allied profes-
sion, in service to public service organizations or agen-
cies of government, and public groups. Not a Design Course elective.

493 Independent Study in Architecture (1-6) Indi-
vidual studies and projects under faculty direction. Credit adjusted to complexity and level of effort required. May be repeated once. Prereq: consent of dean. F.

494 Foreign Studies Sketchbook (1-3) Investigations of historic urban fabric and architecture in various loca-
tions abroad. Analysis and sketch records in sketch-
book format required. F.

496 Design Studies in Krakow (6) Studio meets in Krakow, Poland. Design studio focusing on specific community conditions in an Eastern city.

497 Sketchbook Study of Architecture in Central and Eastern Europe (1-3) Prereq: 491. F.

498 Design Studies in Krakow (6) Fine arts investigations related to architectural design studio emphasizing concern for the environ-
ment, consideration of energy conservation techniques, and use of renewable resources. Prereq: 471. F.

499 Stud-
ART (140)

101 Studio Fundamentals: Drawing and Design (2) Introduction to basic drawing media, concepts and techniques to the elements and principles of pictorial organization.

103 Studio Fundamentals: Three Dimensional Design (2) Projects designed with real space and three dimensional movement. Primarily for art, architecture, art education, and interior design and housing majors.

191 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For Non-majors only. Courses may be repeated, medium may not be repeated. Maximum 12 hours.

205 Intermediate Design and Color (3) Further exploration of basic techniques of two-dimensional design, with emphasis on color theory and technique. Prereq: 101, 103. Non-majors only. Courses may be repeated, medium may not be repeated. Maximum 12 hours.

Special Topics (3) Student or instructor-initiated course offered at convenience of department. May be repeated. Maximum 12 hours.

300 Inter-area Portfolio Review (0) Review of prior studio work. Successful completion required prior to registration for junior and senior courses. Prereq: Art History 172 and 173 with a grade of C or better.

481 Museology I: Museums, Purpose and Function (3) Purposes, functions and development of museums of art, history, natural and applied science. (Same as Anthropology 481.)

482 Museology II: Exhibition Planning and Installation (3) Exhibition concept development and implementation. Exhibition design and installation techniques. Publicity, production, matting and framing, shipping and storage. Prereq: 481 or consent of instructor. (Same as Anthropology 482.)

484 Museology III: Field Projects (1-12) Special field projects including restoration, preservation, registration, and other related research on or off campus. Prereq: 481 and consent of instructor. May be repeated. Maximum 12 hours. (Same as Anthropology 484.)

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15) Prereq: Consent of instructor.

494 Individual Problems (3) Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

495 Visiting Artist Seminar (2) Study and discussion of contemporary art issues conducted by different visiting artists each semester. (Does not apply toward art history requirement.) May be repeated. Maximum 12 hours.

499 Special Topics (3) Student or instructor-initiated course offered at convenience of department. May be repeated. Maximum 12 hours.

ART CERAMICS (135)

191 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For Non-majors only. Courses may be repeated, medium may not be repeated. Maximum 12 hours.

221 Ceramics: Handbuilding I (3) Introduction to handbuilding glazing, clay preparation and firing. Prereq: 101 and 103.

222 Ceramics: Throwing I (3) Introduction to throwing, glazing, clay preparation and firing. Prereq: 101 and 103.

225 Portfolio Practicum - Handbuilding (3) Intense post-introductory studio experience to develop work for application to Ceramics Portfolio Review 320. Art majors only. Not repeatable for credit. Prereq: 221, 222, and consent of Department.

226 Portfolio Practicum - Throwing (3) Intense post-introductory studio experience to develop work for application to Ceramics Portfolio Review 320. Art majors only. Not repeatable for credit. Prereq: 221, 222, and consent of Department.

229 Ceramics: Special Topics (3) Student or instructor initiated courses to be offered at convenience of department. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

320 Ceramics: Portfolio Review (0) Review of prior work in ceramics. Successful completion required prior to registration for junior and senior courses. Prereq: Art 101 and 103, Art History 172 and 173, Art Ceramics 221, all with a grade of C or better. Coreq: Art 295 with a grade of C or better. Coreq: Art Ceramics 222. Satisfactory/No credit only.

321 Ceramics: Handbuilding II (3) Continued investigation of handbuilding with emphasis on the development of individual ideas and expression. Prereq: 320.

322 Ceramics: Throwing II (3) Continued investigation of throwing with an emphasis on the development of individual ideas and expression. Prereq: 320.


424 Ceramics: Clays and Glazes (3) Clay chemistry, clay bodies, glaze theory, and calculation. Formulating, mixing and testing of clay bodies and glaze formulas. Prereq: 320.

429 Ceramics: Special Topics (3) Student or instructor initiated courses to be offered at convenience of department. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

493 Independent Study (1-15) Prereq: Consent of instructor.

494 Individual Problems (3) Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

495 Visiting Artist Seminar (2) Study and discussion of contemporary art issues conducted by different visiting artists each semester. (Does not apply toward art history requirement.) May be repeated. Maximum 8 hours.

ART DESIGN/GRAPHIC (136)

151 Graphic Design History (3) Major movements and pivotal artists/designers and directors, 1850 to the present, and their impact on current graphic design trends. (Cannot be used to fulfill art history requirement.)

191 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For Non-majors only. Courses may be repeated, medium may not be repeated. Maximum 12 hours.

251 Beginning Graphic Design I (3) Introduction to the elements and principles of graphic design including typography and layout. Survey of graphic design, tools, materials, and processes. May be repeated. Maximum 6 hours. Prereq: Art 101 and 103, Art Design/Graphic 151, all with a grade of C or better.

252 Beginning Graphic Design II (3) Survey of graphic design from concept through production. Emphasis on visual problem-solving. May be repeated. Maximum 6 hours. Prereq: 251 with a grade of C or better.


256 Individual Projects in Graphic Design (3) Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

259 Special Topics: Graphic Design (3) Student or instructor initiated course offered at discretion of department. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

340 Portfolio Review (0) Review of prior work in graphic design. Successful completion required prior to registration for junior and senior courses. Prereq: Art History 172 and 173 with a grade of C or better. Coreq: Art Design/Graphic 252. May be repeated. Satisfactory/No credit only.


352 Intermediate Graphic Design II (3) Investigation of sign, symbols, marks and identity systems. Prereq: Art Design/Graphic 351 with a grade of C or better.

354 Color Illustration (3) Flat and process color media and production techniques as applied to product and editorial illustration. Prereq: 254 and successful completion of any portfolio review.

356 Graphic Design Production (3) Traditional and computer-generated techniques for the production of print media in graphic design. Introduction to computer systems, software and techniques.

396 Airbrush Painting (3) Techniques of airbrush painting; skills and creative applications emphasized. Prereq: 211.

405 Computer Enhanced Graphic Design (3) Exploration of new technologies and their significance to graphic design. Prereq: 254 with a grade of C or better and consent of instructor. May be repeated. Maximum 6 hours.

444 Graphic Design Center Practicum (3) Practical work experience in a student-managed, on-site studio. Prereq: 350 and consent of instructor. May be repeated. Maximum 6 hours.

451 Advanced Graphic Design (3) Theory and techniques of visual problem-solving as applied to advanced applications of graphic design. Prereq: 352 with a grade of C or better.

452 Graphic Design Seminar (3) Discussion of design and professional issues including politics, economics, and ethics for the graphic designer. Culminates in a student-initiated project. Prereq: 451 with a grade of C or better.

453 Advertising Illustration (3) Media and techniques as applied to advertising illustration. Prereq: 254 and successful completion of any portfolio review.

454 Editorial Illustration (3) Media and techniques as applied to editorial illustration for books, magazines, and newspapers. Prereq: 254 and successful completion of any portfolio review.

455 Graphic Design Professional Seminar (3) Professional practices including client relationships, design management and business practices. Assembly, organization and editing of the professional portfolio. Prereq: or Coreq: 452.

456 Graphic Design Practicum (3-12) Practical work experience in the graphic design field. Only by prearrangement with the department. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

459 Special Topics in Graphic Design (3) Student or instructor initiated course offered at discretion of department. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

493 Independent Study (1-15) Prereq: Consent of instructor.

494 Individual Problems (3) Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

495 Visiting Artist Seminar (2) Study and discussion of contemporary art issues conducted by different visiting artists each semester. (Does not apply toward art history requirement.) May be repeated. Maximum 8 hours.

ART DRAWING (137)

191 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For Non-majors only. Courses may be repeated, medium may not be repeated. Maximum 12 hours.


212 Drawing II: Life Drawing (3) Development of drawing and observational skills with special emphasis on structure and dynamics of the human figure and of the figure in environment. Prereq: 211. May be repeated. Maximum 6 hours.

219 Special Topics in Drawing/Painting (3) Student or instructor-initiated course offered at convenience of department to enhance and expand the painting, drawing, and watercolor curriculum. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.
311 Drawing III (3) Development of personal drawing techniques and concepts through class projects. Prereq: 212 and 312 or consent of instructor. May be repeated. Maximum 8 hours. Total of 8 hours required for students in the Drawing concentration.

312 Drawing Portfolio Review (0) Review of prior work in drawing. Successful completion required prior to registration for junior and senior courses. Prereq: Art History 172 and 173 or a grade of C or better. Satisfactory/No credit only.

411 Drawing IV (6) Individualized pursuit of personal drawing techniques and concepts, supplemented by individual and group critiques and weekly drawing sessions. Prereq: 8 hours of Art Drawing 311 with a grade of C or better or consent of instructor. May be repeated. Maximum 12 hours.

419 Special Topics in Drawing and Painting (3) Student or instructor-initiated course offered at convenience of department to enhance and expand the painting, drawing, and watercolor curriculum. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

495 Visiting Artist Seminar (2) Student or instructor-initiated course offered at convenience of department to enhance and expand the painting, drawing, and watercolor curriculum. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

403 History of Photography (3) Survey of the history of photography from the introduction of the daguerreotype and calotype to more recent trends. Emphasis will be placed on aesthetics and the use of photography as a medium for artistic expression.

411 Art of South and Southeast Asia (3) A survey of the art and architecture of the Indian subcontinent and Southeast Asia from 2000 B.C. to the 20th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing emphasis course.

415 Art of China (3) A survey of the art and architecture of China from the neolithic Period to the 20th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing emphasis course.

ART EDUCATION (141)

301 Foundation of Art Education (3) Basic philosophy and structural concepts underlying learning activities in two and three dimensional design, art appreciation, and teaching methodology. F, Sp, Su

302 Multiculturalism in Visual Art (3) Selected cognitive and productive experiences involving multicultural visual art. Prereq: 101 and 102 with permission of instructor.

303 Concepts of Sculpture and Crafts (3) Processes in teaching of sculpture and crafts including pertinent literature and research. Prereq: 301. F

350 Field Experience (1) Tasks related to teaching and to teacher roles. May be repeated. Maximum 2 hours. Prereq: Admission to Teacher Education Program. Satisfactory/No credit only. F, Sp

400 Curriculum Planning and Teaching Strategies (3) Program development, instructional methods, professional literature, contemporary issues, simulation and micro teacher training. Prereq: 301 and admission to Teacher Education Program. Sp

ART HISTORY (139)

162 Art of Africa, Oceania, and Pre-Columbian America (3) Survey of the traditional arts of the cultures of Black Africa, the Pacific and the Americas (focusing primarily on the period before the European conquest). Sculpture, painting, pottery, textiles, architecture, and human adornment will all be examined.

172 Western Art (3) Major monuments in Western Art with emphasis on Europe from prehistory through the Middle Ages. Two-hour lecture and one-hour discussion each week.

173 Western Art (3) Major monuments in the history of European and American Art from the Renaissance to the present. Two-hour lecture and one-hour discussion section each week.

177 Honors: Western Art I (3) Consent of Department required. Major monuments in Western Art with emphasis on Europe from prehistory through the Middle Ages. Study grounded in reading, writing, and discussion. Writing-emphasis course.

178 Honors: Western Art II (3) Consent of Department required. Major monuments in the history of European and American Art from the Renaissance to the present. Study grounded in reading, writing, and discussion. Writing-emphasis course.

183 Asian Art (3) Selected works of painting, sculpture, architecture, and other forms in India, China, Japan, and to a lesser extent, Korea and Southeast Asia from antiquity through the 19th Century.

279 Special Topics in Art History (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

376 Seminar in Art History (3) Variable theme, emphasis on methodology and skills in writing. Required for Art History majors. Prereq: junior or senior standing and completion of at least 12 hours in art history, or consent of instructor. May be repeated for a maximum of 6 hours. Writing-emphasis course.

402 History of Photography (3) Survey of the history of photography from the introduction of the daguerreotype and calotype to more recent trends. Emphasis will be placed on aesthetics and the use of photography as a medium for artistic expression.

411 Art of South and Southeast Asia (3) A survey of the art and architecture of the Indian subcontinent and Southeast Asia from 2000 B.C. to the 20th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing emphasis course.

415 Art of China (3) A survey of the art and architecture of China from the neolithic Period to the 20th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing emphasis course.

419 Art of Japan (3) A survey of the art and architecture of Japan from the neolithic Period to the 20th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing emphasis course.

425 Early Christian and Byzantine Art to 1350 (3) Art in Italy and the Eastern Empire from the beginnings of Christian art to c. 1350. Mosaic and painting, sculpture and architecture. Writing emphasis. (Same as Medieval Studies 371 and Judasic Studies 425.)

431 Medieval Art of the West, 800-1400 (3) European art of the Carolingian and Romanesque, and Gothic periods. Writing emphasis course. (Same as Medieval Studies 381 and Judasic Studies 431.)

441 Northern European Painting, 1350-1600 (3) From court art of late Middle Ages to Northern Renaissance. Jan van Eyck, Rogier van der Weyden, Durer. Early printmakers. Writing-emphasis course. (Same as Medieval Studies 372.)

442 Art of Northern Europe, 1600-1675 (3) Concentrated study of Bruegel, Rubens, Rembrandt, Georges de La Tour, Vermeer, Poussin, and Hals. Writing-emphasis course.

451 The Art of Italy, 1250-1450 (3) Development of exploration of naturalism. Revival of antiquity and development of theories of perspective in the Early Renaissance, including Duccio, Giotto, Masaccio, Donatello, Botticelli. Writing-emphasis course. (Same as Medieval Studies 382.)

452 Art of Italy, 1475-1575 (3) Concentrated study of Leonardo da Vinci, Michelangelo, Titian, Raphael, Pontormo, and Giorgione. Writing-emphasis course.

453 Art of Southern Europe: 1575-1700 (3) Concentrated study of Caravaggio, Bernini, and Italian Baroque developments in all media. Spanish Baroque painting and sculpture with special attention to Velazquez. Writing-emphasis course.

454 Renaissance and Baroque Theory (3) Addresses the theory of Western art in the early modern period with emphasis on the development and evolution in European art during the Renaissance and Baroque periods. Prerequisites: Art History 172 and 173 (or their Honors equivalents), or consent of instructor. Writing emphasis course.

461 Art of Southern and Eastern Africa (3) Art traditions of the southern and eastern regions of Africa. Sculpture, painting, pottery, textiles, and architecture of human adornment will be examined. Some ancient Stone and Iron Age traditions will be examined, but the main emphasis will be on the diverse ethnic and regional art traditions practiced in the area from the 19th century to the present. Writing emphasis course.

462 Art and Archaeology of Ancient Africa (3) Historical art traditions of sub-Saharan Africa. Topics to be covered include prehistoric rock paintings; art from archaeological sites and ancient kingdoms. The time period covered ranges from the first and second millennia B.C. for some of the early terracotta sculpture and rock paintings, the 11th through 19th centuries A.D. for the later ancient kingdoms. Writing emphasis course.

463 Arts of the African Diaspora (3) Examines the aesthetic, philosophical and religious patterns of the African descendants of Brazil, Surinam, the Caribbean and the United States. Emphasis will be placed on the full range of art forms, including the sculptural and performance traditions as well as architecture, textile, baskery and pottery art forms. Writing emphasis course.

471 History of North American Art (3) Survey of landscapes, painting, architecture, and design from prehistory to 1900. Writing-emphasis course.

472 History of 20th Century American Art (3) Development in architecture, painting, and design from 1900. Writing-emphasis course.

473 19th Century American Painting (3) From West and Coley to emergence of ‘The Eight.’ Writing-emphasis course.

474 Theory of 20th-Century Art in Europe and America (3) Addresses the theoretical basis for the modern movement. Emphasis on analyzing and discussing the individual works of art in light of contemporary writings by artists and theorists. Prereq: 172 and 173 (or their Honors equivalents), or consent of instructor. Writing-emphasis course.

475 History of 19th Century Painting and Sculpture in Europe and America (3) Development of the Modern and Post-Modern movements in Europe. Investigation of the progression of abstraction through major recent conceptual trends. Analysis of the major individual artists such as Picasso, Matisse, and many others. Writing emphasis course.

479 Special Topics in Art History (3) Student or instructor-initiated course offered at convenience of department. May be repeated. Maximum 12 hours.

483 History of American Sculpture (3) American sculpture from prehistory to the 1960’s. Writing-emphasis course.


489 Studies in Art History (3) Concentration in individually selected area. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

493 Independent Study (1-15) Prereq: Consent of instructor.

494 Individual Problems (3) Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

ART MEDIA ARTS (134)

191 Introduction to Studio Art: Various Media (3) Individual selections for Non-majors only. Courses may be repeated; medium may not be repeated. Maximum 12 hours.

231 Photography I (3) Art of black and white photography. Field and studio shooting, history of photography, development, and enlarging techniques.

235 Introduction to Cinematography as Art (3) Development of basic concepts and techniques for the creation of film as an art form. Prereq: or Coreq: 231 or consent of instructor. (Same as Cinema Studies 235.)

236 Introduction to Video Art (3) Development of basic concepts and techniques for the creation of video works as an art form. (Same as Cinema Studies 236.)

239 Special Topics in Media Arts (3) Student or instructor-initiated course offered at convenience of department. May be repeated. Maximum 12 hours.
330 Media Arts Portfolio Review (0) Review of prior work in media arts. Successful completion required prior to registration for senior courses. Prereq: Art History 173 with a grade of C or better. Satisfactory/No Credit only.

331 Photography II (4) Individual expression in photographic medium. Prereq: 231. May be repeated. Maximum 8 hours.

341 Digital Photography I (4) Studio course introducing theory and practice of photography using large format view camera. Prereq: 231, 311, and 331; and consent of instructor.

431 Photography III (3-6) Individual development of photographic problems and techniques. Prereq: 233 and 331. May be repeated. Maximum 12 hours.

432 History of Modern Art and Film (3) Study of the development and interaction between the cinematic arts and the visual arts within the context of modern art history. Available for Art History credit. (Same as Cinema Studies 433.)

435 Cinematography as Art (3) Continued development of concepts and techniques for the creation of film as an art form with an emphasis on individual projects. Prereq: Permission of instructor. May be repeated. Maximum 9 hours. (Same as Cinema Studies 435.)

436 Video Art (3) Continued development of concepts and techniques for the creation of video works as an art form. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

ART PAINTING (138)

191 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For Non-majors only. Courses may be repeated, median may not be repeated. Maximum 12 hours.

213 Painting I: Introduction (3) Capacities of oil and acrylic painting on canvas. Prereq: 101, 103 for art majors; instructor permission for others. May be repeated. Maximum 6 hours.

214 Painting II (3) Techniques of expression in oil and acrylic. Prereq: Painting 213. May be repeated. Maximum 6 hours.


216 Watercolor II (3) Capacities of transparent watercolor, working with the practical exploration of surface, space, and concept. Prereq: Painting 215. May be repeated. Maximum 6 hours.

219 Special Topics in Drawing/Painting (3) Student or instructor-initiated course offered at convenience of department to enhance and expand the painting, drawing, and watercolor curriculum. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

313 Painting III (4) Individual expression with varied media on canvas. Prereq: 214 and 314 or consent of instructor. May be repeated. Maximum 8 hours. Total of 8 hours required for students in the Painting concentration.

314 Painting Portfolio Review (0) Review of prior work in painting. Successful completion required prior to registration for junior and senior courses. Prereq: Art History 172 and 173 with a grade of C or better. Satisfactory/No credit only.

315 Watercolor III (4) Individual expression with varied water-based media on paper. Prereq: 216 and 316 or consent of instructor. May be repeated. Maximum 8 hours. Total of 8 hours required for students in the Watercolor concentration.

316 Watercolor Portfolio Review (0) Review of prior work in watercolor. Successful completion required prior to registration for junior and senior courses. Prereq: Art History 172 and 173 with a grade of C or better. Satisfactory/No credit only.

413 Painting IV (6) Advanced painting stressing individual concepts and personal expression with varied media. Prereq: 313. May be repeated. Maximum 12 hours. Total of 12 hours required for undergraduate students in the Painting concentration.

415 Watercolor IV (6) Advanced painting with water-based media on paper stressing individual concepts and personal approaches. Prereq: 315. May be repeated. Maximum 12 hours. Total of 12 hours required for undergraduate students in the Watercolor concentration.

419 Special Topics in Drawing and Painting (3) Student or instructor-initiated course offered at convenience of department to enhance and expand the painting and watercolor curriculum. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

493 Independent Study (1-15) Prereq: Consent of instructor.

494 Individual Problems (3) Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

495 Visiting Artist Seminar (2) Study and discussion of contemporary art issues conducted by different visiting artists each semester. (Does not apply toward art history requirement.) May be repeated. Maximum 8 hours.

ART PRINTMAKING (173)

191 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For Non-majors only. Courses may be repeated, median may not be repeated. Maximum 12 hours.

262 Intaglio I (3) Metal plate intaglio printing in traditional and contemporary techniques of etching, softground, drypoint, aquatint, and color methods. Prereq: 101.

263 Lithography I (3) Stone and aluminum plate lithography applying traditional and contemporary techniques of crayon, tusche, transfer methods, state proofs and photolithography. Prereq: 101.

264 Screen Printing I (3) Screen printing as a fine art medium including development and application of various basic screens in compositional printing. May be repeated. Maximum 6 hours. Prereq: 101.

265 Silk Screen Printing (3) Screen printing as a fine art medium including development and application of various basic screens in compositional printing. May be repeated. Maximum 6 hours. Prereq: 101.

269 Special Topics in Printmaking (3) Student or instructor-initiated course offered at convenience of department. Prereq: 101 and determined by department and individual students. May be repeated. Maximum 12 hours.

291 Papermaking Workshop (3) Papermaking as a medium for two- and three-dimensional art. Includes sheet forming, embossing, laminating, embossing, pulp dying, inlaying, casting, and other related techniques. Emphasis on development of a personal form.

360 Printmaking Portfolio Review (0) Review of prior work in printmaking. Successful completion required prior to registration for junior and senior courses. Prereq: Art History 172 and 173 with a grade of C or better. Satisfactory/No credit only.

362 Intaglio II (4) Exploration of concepts and techniques in intaglio printing including work from zinc, photo-intaglio and steel plate. Prereq: 262 and 360 or consent of instructor. May be repeated. Maximum 8 hours.

363 Lithography II (4) Exploration of concepts and techniques in lithography from stones, aluminum plates and photo-plates. Prereq: 264 and 360, or consent of instructor. May be repeated. Maximum 12 hours.

364 Screen Printing II (4) Advanced work with basic screen printing techniques including photo screening. Emphasis upon image development and personal concept. Prereq: 264 and 360, or consent of instructor. May be repeated. Maximum 12 hours.

462 Intaglio III (3-6) Exploration of individual projects through advanced color printing methods and combinations with other print media. Prereq: 363, or consent of instructor. May be repeated. Maximum 12 hours.

463 Lithography III (3-6) Exploration of individual projects through advanced lithographic methods in combination with other print media. Prereq: 363, or consent of instructor. May be repeated. Maximum 12 hours.

464 Screen Printing III (3-6) Individual development of screen printing problems and techniques. Emphasis upon further development of image and personal concept. Prereq: 364, or consent of instructor. May be repeated. Maximum 12 hours.

469 Special Topics in Printmaking (3) Student or instructor-initiated course offered at convenience of department. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

493 Independent Study (1-15) Prereq: Consent of instructor.

494 Individual Problems (3) Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

495 Visiting Artist Seminar (2) Study and discussion of contemporary art issues conducted by different visiting artists each semester. (Does not apply toward art history requirement.) May be repeated. Maximum 8 hours.

ART SCULPTURE (143)

191 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For Non-majors only. Courses may be repeated, median may not be repeated. Maximum 12 hours.

241 Sculpture I (3) Problems which explore basic materials and techniques including clay modeling, plaster construction, molding, limited work in plastics, wood, or metal.

242 Life Sculpture I (3) Modeling techniques in clay and wax, working from figure. Possibilities of expression with human form as both observational and material handling technique. Prereq: 101, 103, or consent of instructor. May be repeated. Maximum 6 hours.

243 Metal Cast Sculpture I (3) Metal casting methods in bronze or aluminum. May include lost wax, styrofoam sand, ceramic shell casting methods. May be repeated. Maximum 6 hours.

245 Steel Sculpture I (3) Problems to introduce steel as a material for the creation of sculpture. Development of welding techniques.

246 Mixed Media Sculpture I (3) Use of two or more materials, and a variety of sculptural techniques, joined to create dimensional form. May include carving, modeling, molding, construction, and found objects.

249 Special Topics in Sculpture (3) Student or instructor-initiated course offered at convenience of department. Prereq: Art 101 and 103 with a grade of C or better. May be repeated. Maximum 12 hours.

340 Sculpture Portfolio Review (0) Review of prior work in sculpture. Successful completion required prior to registration for junior and senior courses. Prereq: Art History 172 and 173 with a grade of C or better. Satisfactory/No credit only.

341 Sculpture II (3) Further exploration and development of sculptural concepts and materials. Prereq: 241 and 340 or consent of instructor. May be repeated. Maximum 6 hours.

343 Metal Castling II (3) Further exploration of casting methods for bronze and aluminum. Prereq: 243 and 340 or consent of instructor.

345 Steel Sculpture II (3) Further exploration of construction in steel and other metals. Prereq: 245 and 340 or consent of instructor.
151-152 Elementary Japanese I, II (5,5) Must be taken in sequence. F, Sp
199 Chinese and Japanese Language and World Business (2) Examines the importance of foreign trade at the local, state, and national levels. Interdisciplinary faculty from the Colleges of Business Administration and Arts and Sciences provide an overview of the value of language study and international cultural awareness in today's global business world. See Director for further information. F
231-232 Intermediate Chinese I, II (5,5) Prereq: 131-132 or equivalent or consent of instructor. Must be taken in sequence.
251-252 Intermediate Japanese I, II (5,5) Prereq: 151-152 or consent of instructor. Must be taken in sequence. F, Sp
311-312 Chinese Literature in English Translation (3,3) 311-Classical literature. 312-Vernacular and modern literature. Writing-emphasis course.
313-314 Japanese Literature in English Translation (3,3) 313-Classical/Traditional masterpieces of poetry, fiction, and drama to 1888. 314-Modern: masterpieces of fiction since 1888. Writing-emphasis course.
331-332 Advanced Chinese I, II (4,4) Prereq: 231-232 or equivalent or consent of instructor. Must be taken in sequence.
351-352 Advanced Japanese I, II (4,4) Includes conversational drill, and composition practice with native speaker as well as reading and translation. Prereq: 251-252. Must be taken in sequence.
431 Readings in Chinese Literature (3) Prereq: Mastery of intermediate-level Chinese of consent of instructor. May be repeated. Maximum 9 hours.
432 Readings in Japanese Literature (3) Prereq: Mastery of intermediate-level Japanese of consent of instructor. May be repeated. Maximum 9 hours.
490 Chinese and Japanese Internship (1-15) Prereq: Successful completion of any Portfolio or-initiated course offered at convenience of department. May be repeated. Maximum 151-152, 161-162 or 217-218 may be taken for credit.
217-218 Honors: Introductory Astronomy (4,4) Introduces the universe, solar system, and stars, with emphasis on the laws of physics as they apply to the changing conceptions of the universe; structure of the solar system and celestial motions; evolution and properties of stars; stellar ecology and particle physics. Principles and methods of observation and scientific reasoning are reinforced in practice laboratory. Must be taken in sequence. 3 hours lecture, 2 hours lab. Coreq: Math 141 or 151 or equivalent. Credit given for only one of the three sequences 151-152, 161-162 or 217-218 may be taken for credit.

151-152 Introductory Astronomy (4,4) Survey of the universe, which includes the basic concepts of astronomy and the scientific method. Components of the solar system including the Sun and the planets, their formation; evolution and death as a chain of events; characteristics of galaxies and the origin and evolution of the universe examined in light of modern astrophysics and particle physics. A minimum of mathematical analysis must be taken in sequence. 4 hours lecture, demonstration and star chart field work. Only one of the three sequences 151-152, 161-162, or 217-218 may be taken for credit.

300 Introduction to Communication Disorders (3) Nature, etiology, and incidence of speech, hearing and language disorders.
302 Audicots and Perception (3) Basic audicots, introduction to psychoacoustics and speech perception.
303 Audiology (3) Introduction to disorders of hearing, development of normal and pathological growth of the auditory system, and muscles.
305 Speech Science I: Phonetics and Acoustics of Speech (3) Basic phonetics including recognition and production of spoken English sounds with analysis of formant acoustic characteristics of speech and perception.
306 Speech Science II: Anatomy and Physiolog (3) Anatomy, physiology and embryological development of the speech production mechanism. Prereq: 305.
320 Speech and Language Development (3) Speech and language development in the normal child.
331 Articulation Disorders (3) Etiology, diagnosis, and treatment of articulatory defects. Prereq: 304, 305, or consent of instructor.
431 Stuttering (3) Nature, appraisal and treatment. Prereq: 304 or consent of instructor.
433 Observation of Clinical Practice (1) Prereq: 320, 331 or consent of instructor.

434 Clinical Practice in Speech-Language Pathology II (1-4) Prereq: 433 and consent of instructor. Enrollment may vary. May not exceed 4 credit hours. Six maximum credit hours.

440 Voice Disorders (3) Etiology, diagnosis, and treatment of organic and functional voice disorders. Prereq: 304, 305, or consent of instructor.

445 Clinical Practice in Audiology (1-4) Prereq: 473 and 494. May be repeated. Maximum hours.

455 Problems in Speech Pathology (1-3) Prereq: Consent of instructor.


491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

494 Aural Habilitation/Rehabilitation of the Hearing Impaired (3) Impaired hearing people: socio-personal aspects; amplification components/characteristics, assistive devices, speech acoustics, speech perception, speechreading, parent-infant, preschool school years of children, disabilities/impairments/handicaps; remediation of adults, effects of aging/remediation on the elderly, and case studies. Prereq: 305 and 473, or equivalent or consent of instructor.

499 Senior Seminar in Communication Sciences and Disorders (3) Capstone Experience; A writing emphasis course exploring the forces shaping the profession of communication disorders in the past, present and future. Prereq: Consent of instructor and senior standing.

BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY (188)

230 Human Physiology (5) Fundamentals of human physiology, primarily from the perspective of cellular and organ-system interactions. Credit may not be applied toward BCMB major. Prereq: One year of college chemistry is recommended.

280 Modern Medicine and You (3) New biomedical advances in internal medicine, surgery, obstetrics and gynecology, infectious diseases, cancer treatment, genetic disorders, psychiatry, health promotion, and disease prevention. Taught by academic clinicians in their area of specialty. Class meets 2 hours a week. Each session will include: basic biological principles/processes; scientific advances and current status about new diagnostic and treatment procedures of the particular disease state. Prereq: Biology series for majors or non-majors. Satisfactory/No Credit grading. F, Sp

310 Physiological Chemistry (4) Biochemical principles underlying physiological events in animals. Metabolism of carbohydrates, lipids, proteins, and nucleic acids. Role of vitamins and minerals as coenzyme and prosthetic group. Action of drugs and hormones. Prereq: Chemistry 100-110 or 120-130. Biology 130-40 or BCMB 230. Not available for credit if credit has been previously received for BCMB 401 or 410 or 420. Credit cannot be counted toward BCMB concentration. (Same as Nutrition 310.)

320 Physiology of Reproduction and Lactation (3) (Same as Animal Science 320.)

330 Mechanisms of Development (3) A survey course on cellular and molecular basis of embryonic development: differentiation via transcription, RNA processing, and translation; sex determination in humans. Intended for Biology majors in BCMB concentration, but also open to other Biology majors. Prereq: Biology 140 and 240 or consent of instructor.

331 Mechanisms of Development Laboratory (2) Coreq: 330. 2 labs.

401-402 Biochemistry-Molecular Biology I, II (3,3) A two-course sequence providing in-depth coverage of biochemistry and molecular biology, intended for Biology majors concentrating in BCMB, but may also be taken by Biology majors in other concentrations. First semester covers amino acid structure and chemistry, protein structure and chemistry, protein folding, enzyme behavior and function, reaction mechanisms, catabolism and energy transfer, synthetic metabolism including photosynthesis, and protein transport. Second semester covers structure of DNA and RNA, experimental methods and techniques in nucleic acid structure and chemistry, protein and nucleic acid synthesis, mechanisms of DNA replication, repair and recombination, chromosome structure and function, regulation of gene expression, genome structure and genomics, and mechanisms of biological regulation. Prerequisites: Biology 240, Chemistry 350-360, 369.

403 Advanced Genetics Laboratory (2) Experiments illustrating methods in modern genetics, including techniques in classical, cyto-, molecular and developmental genetics. Emphasis on current research interests, e.g., allosteric theory and hybridization, sequencing, and immunochemical methods. Prereq or coreq: 401 or 410. F, Sp

405-06 Minicourse in BCMB (2, 2) Select advanced topics in biochemistry, cell biology, genetics, neurosciences, or biology concentrations, including time and subject matter. Consult departmental listing for topics offered. Prereq: As announced. May be repeated. Maximum 4 hours may apply toward BCMB major.

409 Perspectives in Biochemistry and Cellular and Molecular Biology (3) Current issues in biochemistry, cell biology and molecular biology. Emphasis on current developments and their applications, societal and economic impacts and implications. Writing emphasis course. An oral presentation and a referenced library-research essay are required. A capstone course.

410 Cellular and Comparative Biochemistry (4) Electrolyte behavior, chemistry and structure of proteins; enzyme behavior and biological function; catabolism and energy capture; synthetic metabolism; nucleic acid function; protein synthesis, and biochemistry and genetics; regulation of biological processes. Prereq: Chemistry 350-360 and Biology 140-240, 3 hours and 1 discussion. Not available for credit if credit has previously been received for BCMB 401. Credit, especially Drosophila and mice. Prereq: Biology 240 and Chemistry 350-360-369.

411 Advanced Cellular Biology (3) Cellular structure and function at the molecular and supramolecular level. Topics include protein structure and function, membrane structure and permeability and transport, control of cell cycle, mitosis and the cell cycle, cytoskeleton and cell motility and cell-cell interactions and tissues. Prereq: 410-110.

415 Foundations in Neurobiology (3) Basic nerve cell physiology, nervous system organization, sensory and motor systems, neural basis of behavior, and nervous system development and plasticity. Prereq or coreq: Psychology 221-222; Chemistry 120, 130; Biology 140; F, Sp

416 Neurobiology Laboratory (2) Experiments designed to illustrate concepts of modern neuroscience using electrophysiological, historical, and behavioral neurobiological techniques. Prereq or coreq: 415. S

419 Cellular and Comparative Biochemistry Laboratory (2) Experiments with enzymes, nucleic acids, and membranes illustrating new techniques, classifications, hybridization, sequencing, and immunochromatographic methods. Prereq or coreq: 401 or 410. F, Sp

420 Advanced Topics in BCMB (3) Selected Topics of current interest in biochemistry, cell biology, and control of protein function, immunochemistry, regulation of gene expression, bioenergetics, etc. Emphasis on original literature and the experimental basis of current knowledge. Historical background and sociopolitical, ethical and moral implications, and future development of technologies. Written reports required. Prereq: 410. F, Sp

421 Cell and Tissue Structure and Function (4) Study of strutures and tissues at light and electron microscope levels. Prereq: Biology 140. 2 hrs and 2 labs.

429 Cell Biology Laboratory (3) A series of open-ended, discovery-based exercises will be developed to design and test new drugs using modern cell biology and computer technologies. Experimental modules include techniques used in cell isolation, purification, culturing, fluorescent microscopy, receptor binding and signal transduction, immunocytochemistry, protein and steroid secretion, computer modeling, and state-of-the-art electron microscopy. Students will actively participate in experiment design, execution, data analysis, and scientific writing. Prereq: Consent of instructor. F, Sp


452 Independent Research in Biochemistry (1-6) Special experimental problems under direction of a staff member. Limited to undergraduates and by consent of instructor. May be repeated. Maximum 12 hours. Prereq or Coreq: 410, 419.

462 Junior/Senior Seminar (1) Lecture/discussion on the application of biochemical principles and techniques in the research, clinical, diagnostic or therapeutic environment. May not be used toward requirements for major. May be repeated. Prereq. 410.

465 Human Genetics (3) Genetic and molecular principles and problems of human inheritance. Prereq: Biology 240.

471-481 Biophysical Chemistry (3,3) Physiochemical principles with applications to biological systems. 471 Thermodynamics; chemical equilibrium; solution chemistry and transport; interactions of light with biological molecules; optical and magnetic spectroscopy; scattering. 481-Elementary quantum chemistry; interactions of light with biological molecules; optical and magnetic spectroscopy; scattering. Case studies of selected macromolecules. Prereq: Calculus, Organic Chemistry, General Biology or consent of instructor. (Same as Chemistry 471-81.) F, Sp

480 Physiology of Exercise (3) (Same as Exercise Science 480.)

492 Off-Campus Study (1-6) No more than two credits of 492 will count toward the Biological Sciences: BCMB major. Satisfactory/No Credit grading.

BIOLOGY (190)

101-102 Humankind in the Biotic World (4,4) Introduction to the principles of biology from the perspective of the impacts of plants, animals, and microbes on human health and the impact of the human microbiome on plants and animals. Intended for students not majoring in the biological or pre-health sciences. 101 surveys life from the cell to topics in human health. Topics include: ecosystems, environments, the role of molecules and cells, energy flow in biological systems, genetics and information flow from generation to generation, regulation, development, and expression of genes, cell regenerative, sex and sexuality, human physiology, cancer, drugs—use and misuse. 102 focuses on the diversity of the Earth’s biota and the interdependence among communities. Topics include: surveys of biodiversity from bacteria to higher plants and animals, genetics and evolutionary processes, population biology, ecology, ecosystems, environmental issues including world population, and global climate change. Each course is 3 hours lecture, 1 hour discussion/laboratory. Laboratories involve a mix of skills-oriented exercises and assignments focused on topics. Although not required, it is strongly recommended that 101-102 be taken in sequence.

130 Biodiversity (4) Unifying concepts and principles of biology, illustrated with diversity of life, intended for science majors. Properties of life, molecular basis, origin of life, cells, genetics, introduction to kingdoms, origins of multicellularity, multicellular plants and animals, life’s about nutrition, metabolism, and reproduction. Emphasis on common themes in living systems (e.g., metabolism, protein and nucleotide sequence similarities, molecular evolution), physiological chemistry, fossils, and the major plant and animal groups. Writing and analysis of lab activities required. 3 hours lecture, 1 hour lab each week, not available for students with credit for both 101 and 102.

140 Organization and Function of the Cell (4) Topics...
include: basic organic chemistry and biomolecules, cell structure—membranes, cell walls, and internal organelles; energetics—respiration and photosynthesis; cell division—involves mitosis and meiosis; safety and sanitation; stress basic laboratory skills and procedures such as measuring pipetting and mixing solutions, as well as introduce molecular biology, lab techniques such as electrophoresis and centrifugation. Prereq: 130, Chemistry 120; coreq: Chemistry 130.

202 - 203 Inside the Biological Sciences (1,1) Presentations by faculty and other biology professionals to in-depth problem solving and research. It familiarizes students with diverse nature and current applications of biology. Open to freshmen and sophomores. Satisfactory/No Credit only. May be repeated.

240 General Genetics (4) Classical and modern principles of heredity. Topics include meiosis and transmission genetics; molecular genetics and gene expression; population and evolutionary genetics. Laboratories will alternate with problem-solving sessions and will include computer-based simulations and hands-on experience with model genetic systems. Emphasis on development of analytical skills. Prereq: 130-140 or Bot 110-120; Chemistry 120-130.

250 General Ecology (4) Relations between organisms and their environment, including human environmental problems. Topics include populations, communities, and ecosystems. 3 hours lecture, 1 hour discussion. Prereq: 303 or Biology 120. 3 hours lab or 1 lab. (Same as Plant and Soil Sciences 315.)

303 Transport Processes in Biological Systems (3) Analysis, design, and problem solving in fluid and material balances. 3 hours lecture, 2 labs. F

300 Transport Processes in Biological Systems (3) Analysis, design, and problem solving in fluid and material balances. 3 hours lecture, 2 labs. F

307 - 308 Honors Colloquy in Biological Research (1,1) Presentations by professional biologists emphasizing rewarding careers in different areas of biology. Nationally recognized speakers invited each term. Open to sophomores, juniors and seniors; required of Threshold Biology Scholars. Prereq: 8 hours of 200 or above; admission to an honors program or permission of the instructor. Satisfactory/No Credit only. May be repeated. F, Sp.

397 Honors Seminar on Research Skills (3) Technical and cognitive skills necessary for participation in biological research. Lecture/presentations and small team demonstrations and discussion. Required of (but not limited to) Threshold Biology Scholars. Prereq: 8 hours of 200 or above. Permission of instructor required. F

398 Honors Practicum in Biological Research (3-5) Rotation through 3-5 modules of required an in-depth experience in participating laboratories. Required of (but not limited to) Threshold Biology Scholars. Prereq: 8 hours of 200 or above and 397. Permission of instructor required. S

401 Senior Thesis (3-12) Required research experience of Threshold Biology Scholars. Students design research project and conduct data collection, organize thesis documents, and prepare presentations. May be repeated. Maximum of 12 hours. Prereq: 394-395.

BIOSYSTEMS ENGINEERING (196)

103 Introductory Design and Fabrication (1) Experience with fundamental tools, machine and systems of biosystems engineering, through lab experiences, design competition, and field trips to production facilities. 2 hours lab. F

104 Design Apprenticeship (1) Exposure to design in biosystems engineering through apprenticeship with senior design teams in Biosystems Engineering 402. Apprentices will maintain a journal describing their activities in assisting the senior design engineers, and will make an oral presentation summarizing the design project with which they assisted. Grading will be based on journal submissions, the final presentation, and attendance. Prereq: 103. 2 hour lab. Sp.

201 Career Opportunities (1) Activities and opportunities in the fields of specialization; required training for each area; projected career activities. 1 hour. F

243 Material and Energy Flows in Biological Systems (3) Introduction to Mass and energy balances, and enzyme and membrane function, through the study of plants, animals and microorganisms. Topics include: mass balance; material balances; plant energy budgets; animal energy budgets and waste production; mathematical descriptions of microbial growth processes; similarities between plant and animal systems. Emphasis on problem formulation, solving and reporting. Design content. Prereq: Engineering Fundamentals 101-102, and Chemistry 120 and 130. Sp.

303 Transport Processes in Biological Systems (3) Analysis, design, and problem solving in fluid and material balances. 3 hours lecture, 2 labs. F

307 - 308 Honors Colloquy in Biological Research (1,1) Presentations by professional biologists emphasizing rewarding careers in different areas of biology. Nationally recognized speakers invited each term. Open to sophomores, juniors and seniors; required of Threshold Biology Scholars. Prereq: 8 hours of 200 or above; admission to an honors program or permission of the instructor. Satisfactory/No Credit only. May be repeated. F, Sp.

401 Biosystems Engineering Design I (3) First course of a capstone design sequence. Review of fundamental engineering principles, time and project management, ethics, contemporary issues in biosystems engineering, portfolio review, and design proposal generation. Design proposals will include extensive documentation and preliminary analyses. Prerequisite: 451 and senior standing or consent of instructor. Corequisite: 403 or 423 or 430 or 433. F

402 Biosystems Engineering Design II (6) Culmination of capstone design sequence. Intensive design experience on project approved in Biosystems Engineering 401. Analysis, construction, testing, evaluation and reporting required. Technical lectures on statistics, engineering software, and technical issues relevant to project. Weekly project reports, oral and written reports. Submission of design to external engineering design competition or display required. Prerequisite: 401. 2 hour lecture, 2 hour recitation (weekly project reports) and 4 hour lab. Sp.

403 Machine and Component Design (3) Nature of design; functional analysis; creativity; geometric and kinematic requirements; plane mechanisms, force, stress, deflection, event-time analyses applied to design project components and assemblies. Prereq: 331 or consent of instructor. 1 hour and 2 labs. F

423 Irrigation and Waste Management System Design (3) Design of irrigation and agricultural waste management systems. Topics include crop water and nutrient requirements; crop irrigation requirements; soil water characteristics; and impact on crop yield and water quality. Design content: 3 hours. Prereq: 315, Environmental Science 303, and Environmental Engineering 390. 1 hour and 2 labs. F

430 Mobile Hydraulic Power System Design (3) Functional and operational characteristics of mobile hydraulic system components including pumps, valves and actuators and control systems, including system operation and control circuits. Prereq: Engineering Science 341 or Civil and Environmental Engineering 390. 2 hours and 1 lab. F

433 Bioprocess System Design and Analysis (3) Design of processing, storage and handling systems for biological materials. Mass and energy balances, product and waste characterization, equipment specifications, economic analysis. Emphasis on problem formulation, solving and reporting. Design content: 3 hours. Prereq or Coreq: 311. 1 hour and 2 labs. F

451 Electronic Systems (4) Basic electronics with biological applications. Analog and digital electronics; sensing and controlling physical and environmental parameters; sensor selection and interfacing; signal conditioning; process control. Includes laboratory experiments and senior design projects. Design content. 1 hour. Prereq: Electrical Engineering 301. 3 hours and 1 lab. Sp.

470 Special Problems in Biosystems Engineering (1-3) Selection, analysis solution and report of problem. May be repeated.

480 Selected Topics in Biosystems Engineering (1-3) Current trends and problems in agricultural engineering. May be repeated. E

BIOSYSTEMS ENGINEERING TECHNOLOGY (194)

202 Materials and Fabrication (3) Properties of materials including wood, metals, concrete, plastics and lubricants; drafting and plan reading; fabrication techniques and processes; introduction to basic engineering principles, power equipment, and arc and gas welding. 1 hour and 2 labs. F

212 Surveying (3) Measurement of distances, angles, and areas; differential and profile leveling; topographic surveying and mapping; area computation. Prereq: Math 119 or consent of instructor. 1 hour and 2 labs. Sp.

422 Food and Process Engineering Technology (3) Application of basic engineering principles to agricultural and food processes. Fluid handling, drying, evaporation, thermal processing, heating and cooling, refrigeration systems, and materials handling. Prereq: Physics 101 or 221. 2 hours and 1 lab. F

432 Agricultural Machinery and Tractors (3) Functions, selection, matching, and management of agricultural machinery systems. Tractor power ratings, engine and transmission systems, hydraulic systems, hitching and ballasting. Field and material capacity, field efficiency, cost analysis, and machinery replacement strategies. Functional analyses of tillage operations, planters and drills, no-tillage systems, hay harvest systems, forage and small grain harvesting, and cotton harvesting. Crop drying processes, off-road machinery safety considerations, and operational safety. Prereq: Mathematics 123 or 125 or consent of instructor. 2 hours and 1 lab. Sp.

442 Agricultural Waste Management and Pollution Control (3) Appropriate waste utilization and management of animal manure, techniques for collecting, transporting, storing, and utilizing livestock waste. Prereq: Mathematics 125 or 123 or equivalent. 2 hours and 1 lab. F

452 Small Internal Combustion Engines (3) Theory concepts and mechanics of small internal combustion engines; theoretical cycles, selection, operation, adjustment, troubleshooting and repair of single-cylinder engines. Prereq: Mathematics 123 or 125 or consent of instructor. 2 hours and 1 lab. Sp.

462 Agricultural Chemical Application Technology (3) Equipment for application of liquid, solid, and gaseous agricultural chemicals; system components; operational characteristics; cost benefits; safety considerations; materials handling and disposal methods. Prereq: Mathematics 123 or 125 or consent of instructor. 2 hours and 1 lab. Sp.

BOTANY (198)

110-120 General Botany (4,4) 110 - Introduction to taxonomy through free-living organisms; basic organization and function of cells; respiration; photosynthesis; genetics (including meiosis, mitosis, Mendelian inheritance); survey of plant kingdom (bacteria, fungi, mosses, ferns, conifers, and flowering plants). 120-Plant growth, anatomy, growth regulation; uptake and transport; origin of life and mechanism of evolution; ecology, importance to humans and environmental concerns. Students receiving credit for 110-120 may not receive credit for either 130-140 or Biology 101-102, 110-F; 120-Sp.

305 Socio-Economic Impact of Plants (3) Significance
of plants in origin and development of human cultures, evolution of cultivated plants, and role of plants in present civilization. Occasional field trips. Sp

306 Genetics and Society (3) Introduction to genetics, anthropology and evolution with emphasis on their implications for human society. (Same as Anthropology 306.)

309 Biology of Human Affairs (3) Basic biological principles involved in deterioration and preservation of an environment in which humans and their cultures may survive.

310 Plant Morphology (4) Morphology, development, natural history, and evolution of non-vascular plants (monera, algae, fungi, and bryophytes) and vascular plants (ferns, fern allies, gymnosperms, and flowering plants). Prereq: 110-120 or Biology 130-140 or equivalent. F

312 Introductory Plant Pathology (3) (Same as Entomology and Plant Pathology 313.)

321 Introductory Plant Physiology (4) Organismal physiology of plants; water relations, mineral nutrition, morphogenesis, elements of metabolic processes, effects of age, light, natural rhythms, temperature, and other environmental factors. Lecture and lab. Prereq: One year general chemistry and one year biological science. F, Su

330 Field Botany (3) Principles of taxonomy, basic ecological concepts and the identification, recognition, collection and preservation of local, native and naturalized plants. Prereq: 8 hours in biological sciences. F, Sp, Su

371 Undergraduate Seminar (1) At least one hour is required for a Botany major or minor. Junior or senior standing recommended. May be repeated. Maximum 2 hours.

400 Tutorial in Botany (1-2) Individual, independent study under supervision of selected staff. By application only. May be repeated with consent of department. Maximum 4 hours.

401 Field Studies in Botany: (Specific Topic to be announced) (1-3) Field experience and taxonomy of special plant groups. Selected field topics will vary and may include: Bryology, Lichenology, Pteridology, Agrostology, Mycology, Phycolology, Aquatic Vascular plants, Sylanthrology, Woody Plants, and Botanical Photography. May be repeated, but no specific topic may be repeated for credit. Maximum 9 hours.

404 Plant Molecular Biology (4) Instructions to current research in plant molecular biology and to commonly used techniques and procedures. Lectures include gene structure, gene expression and regulation, transformation, transposable elements, plant development, etc. Labs involve DNA and RNA, molecular hybridization, isolation and preparation of plasmids, PCR amplification of specific sequences, DNA sequencing and transformation. Prereq: Biology 140 and 240 with grade of A or B and consent of instructor.

412 Plant Anatomy (3) Cells, tissues and organs; their development in vegetative and reproductive structures of vascular plants—emphasis on seed plants. Prereq: 110-120 or Biology 130-140 or equivalent.

431 Plant Ecology (3) Interactions between individuals, species, communities and their environment. Circulation of energy and matter in ecosystems. Weekly field trips or laboratory periods, and at least two weekend field trips. Prereq: 130-140 or equivalent. Su (Same as Ecology and Evolutionary Biology 431).

441-442 Undergraduate Research Participation (1-2,1-2) Experience in active research projects under supervision of staff members. Prereq: Junior or senior standing. Minimum 3.0 hour of credit required. May be repeated. Maximum 8 hours. E

451 Plant Tissue Culture (3) Methods for the culture of cells, tissues, and organs including media preparation and maintenance of cultures. Lecture and lab. Prereq: 110-120 or Biology 130-140 or equivalent and Chemistry 120-130 or equivalent. Recommended: 310, 321, 412; Microbiology 310 or 319; Ornamental Horticulture and Landscape Design 330; and Plant and Soil Science 301.

471 Senior Seminar (3) A capstone course conducted in seminars with topics of current interest in plant biology. Written reports and oral presentations are required. Prereq: Senior standing. Sp

499 Evolutionary Ecology (3) Basic concepts in evolutionary and ecological genetics. Biogeography, climate, population genetics, evolution and natural selection, population growth and regulation, competition, niche, experimental ecology, predation, phylogenetics in ecology, biodiversity and conservation. Prereq: General Biology and General Ecology. Students may not receive credit for both 499 and 498. (Same as Ecology and Evolutionary Biology 499.) Sp, A-O

BROADCASTING (202)

275 Introduction to Radio and Television (3) Lecture and lab course providing students with an overview of radio, television, cable, and related technolgies. Includes history, technology, regulations, and effects of radio and television on society. Students gain practical experience in radio at WUTK-FM. Prereq: Communications 100 or Speech Communication 100.

310 Radio-TV News (3) Writing and reporting for electronic media. Lecture and lab course with writing emphasis. Includes work experience at WUTK-FM. Prereq: 275.


330 Audio/Video Production (3) Emphasis on the function and operation of the primary video and audio tools to develop effective communication. Lecture and laboratory provide experience in studio production process and procedures. Includes concept development, script writing, message design, applied aesthetics, crew management, and producing. Prereq: 275.

360 Radio-TV Performance (3) Development of vocal, visual and performance skills for announcers, interviewers, narrators, reporters, and newscasters. Laboratory hours required. Prereq: 275.

410 Electronic News Gathering (3) Writing, reporting, performing and producing news for television. Lecture and lab course providing students with experience as reporters/producers for a television news program. Includes an overview of electronic news gathering equipment and techniques as well as video editing. Prereq: 310.


430 Electronic Field Production (3) Basic principles of video production on location. Emphasis on the concepts related to message design, development, and production in the field. Includes concept development, script writing, shooting, graphics, sound design, lighting, and editing. Prereq: 330 or consent of instructor.

440 Corporate Video (3) Examination of special requirements for corporate and educational and medical uses of video. Management, budgeting, planning, producing, and evaluating projects. Prereq: 430 or consent of instructor.

450 Radio, Television and Society (3) Effects of electronic media on society. Research and theory applied to current issues. Prereq: Communications 100 or Speech Communication 100.

460 Broadcast News Operations (3) Production of news program for broadcast on television stations. Electronic newsroom, cameras, editing, news room, audio, graphics, packages, and studio production. Prereq: 410 or consent of instructor.

470 Cable Television and Emerging Technologies (3) History and structure of broadcast television industry. Cable regulations and programming. Examination of the role of telephone companies in the distribution of video. Analysis of all relevant technologies including direct broadcast satellite, cable, video on demand, satellite news gathering, video packages, and studio production. Prereq: 275 or consent of instructor.


490 Radio and Television Management (3) Business policies and practices of broadcast operations, department functions, cost and income analysis, leadership styles and techniques, with emphasis on mid-level management. Capstone course to be taken in student’s last semester. Prereq: Senior standing.

492 Practicum (1) Work and learning experience at radio, television, cable or non-broadcast facilities. Final written report required. May be repeated once. Prereq: Senior standing and consent of department head. S/NC grading only.

494 Special Topics (3) Salient issues in electronic media. Topics vary. Prereq: Consent of instructor. May be repeated. Maximum of 6 hours.

BUSINESS ADMINISTRATION (205)

220 Business Career Planning (1) Introduction to business, concentration options, career opportunities. Making the concentration/career decision, preparing for and conducting a job camp. Satisfaction/No Credit only. Required for satisfactory progression to upper-division level in Business. Prereq: Business Pre-major.

320 Business Career Placement (1) Exploration of career opportunities in business. Process of making the career decision, preparing for and conducting a job camp. Using the Career Services office. Satisfaction/No Credit only. Prereq: Satisfactory progression to upper-division level in Business or Liberal Arts Business minor.

400 Special Topics (1-9) Topics of current interest in business. Topics announced prior to offering. May be repeated for additional credit provided topic is different. Maximum 9 hours. Prereq: consent of instructor.

311 International Business (3) Survey of strategic implications of conducting business operations in an international context. Analysis of relevant cross-national environments, including cultural, political, economic and legal characteristics. Prereq: Economics 201.

467 Honors: Corporate Executive in Residence Seminar (3) Interaction with top corporate executives from a wide spectrum of business disciplines. Domestic and international strategic planning as it is applied in major U.S. Corporations. Executive presentations and small group discussion on goods and services in consumer and industrial settings. Prereq: Senior standing, Finance 301, Management 301, Marketing 301 and consent of instructor.

491 Foreign Study (1-15) Prereq: Consent of instructor.

492 Off-Campus Study (1-15) Satisfactory/No Credit grading only. Prereq: Consent of instructor.

493 Independent Study (1-15) Prereq: Consent of instructor.

495 Seminar in International Business Policy (3) Capstone course for students in the Language and World Business Program designed to integrate concepts covered in other business courses. For students with major concentrations in International Business only.

BUSINESS LAW (216)

301 The Legal Environment of Business (3) Introduces students to understanding the legal environment of business. Course introduces students to the legal environment of business as it impacts individual and corporate activities. Business law topic will vary. Prereq: Consent of instructor.

302 The Legal Environment of Business (3) Business law topic will vary. Prereq: Consent of instructor.

401 Law of Business Organizations and Commer- cial Transactions (3) An introduction to legal implications of business organizations and commercial transactions. Topics include business organization, contracts, property, negotiable instruments, secured transactions, bankruptcy, suretyship, insurance, and labor law. Fundamentals of business law required for professional examination preparation (e.g., CPA exam). Major writing requirement. Prereq: 301, E
CHEMISTRY (235)

100 Principles of Chemistry (4) Bonding and molecular structure. gases, liquid and solid state, solutions, colloids, acids and bases, oxidation and reduction, kinetics and equilibria. 3 hours and 1 lab. E

110 Introduction to Organic and Biochemistry (4) Organic chemistry: alkanes, unsaturated and aromatic hydrocarbons; functional groups; properties and reactions of various organic functional groups. Biochemistry: amino acids and proteins, carbohydrates, lipids, nucleic acids. 3 hours and 1 lab. Prerequisites: 100. E

120-130 General Chemistry (4,4) A general course in theoretical and descriptive chemistry. 120 - Modern atomic theory, chemical bonding, stoichiometry, quantitative treatment of gas laws, quantitative aspects of solution chemistry. 121 - Chemical equilibrium, descriptive chemistry of nonmetallic and metallic elements, electrochemistry, introduction to organic and biochemistry. Prereq for 120: 120 or 129; 3 hours and 1 lab. E

128-138 Honors: General Chemistry (4,4) 3 hours and 1 lab. 128-F, 138-Sp

150 Chemistry and Society (3) Food and agricultural chemistry; chemistry of life; chemistry in medicine; air and water pollution; energy and fuels. 3 hours lecture. Not a prerequisite for any other chemistry course. Sp

200 Introduction to Chemical Research (1) Participation in an area of research in analytical, inorganic, organic, physical, or polymer chemistry. Students work with researchers to acquire expertise in planning experiments, interpreting results, and formulating hypotheses. Credits may not be applied toward a major or minor in chemistry. Not a substitute or prerequisite for 400. Prereq or Coreq: 130 or higher numbered course in chemistry and consent of instructor. May be repeated. Maximum 4 hours. E

230 Inorganic Chemistry (3) Periodicity, valence, bonding, and the descriptive chemistry of the elements: coordination compounds; nuclear chemistry; transition elements, inner transition elements. 2 hours and 1 lab. Prerequisites: 130 or 138. F,

240 Chemical Programming (2) Use of the computer in solving problems encountered in chemistry. Required of and limited to chemistry majors. Prereq: 130 or 138. 1 hour and 1 lab. Sp

301 Industry/Laboratory Internship (3) Supervised by industry/laboratory technical staff at an approved facility. Consists of a full-time hands-on individual assignment for the entire semester. Credits may not be applied toward a major or minor in chemistry. May not be repeated. Prereq: 130 or 138 and consent of Department Head. Senior standing required. Sp

310 Analytical Chemistry (3) Principles and practices of quantitative measurements in chemical systems. Acid-base, complexometric, and redox equilibria; applications of titrmetric analysis; potentiometry; elementary spectrophotometry; chromatographic separations including chromatography, ion exchange, and solvent extraction. Prerequisites: 130 or 138. E

319 Analytical Chemistry Laboratory (1) Experiments on topics covered in 310. Coreq: 310. E

320 Advanced Analytical Chemistry (3) Modern electroanalytical methods; mass spectrometry; optical, spectrophotometric and related spectroscopic techniques; magnetic resonance methods; advanced chromatographic theory. Prerequisite: 310. Sp

329 Advanced Analytical Chemistry Laboratory (2) Experiments on topics covered in 320. Prerequisites: 320. Sp

350-360 Organic Chemistry (3,3) Compounds of carbon and their reactions. Reaction mechanisms, synthesis, spectroscopy, and determination of physical properties. Must be taken in sequence. Prerequisites: 130 or 138; Coreq for 360: 369. E

369 Organic Chemistry Laboratory (2) Experiments on topics discussed in 350-60. Coreq. 360. 1 hour lecture and 4-hour lab. E

400 Research in Chemistry (3) Open to senior majors with consent of department head. Written reports are required. Advanced students work with faculty on projects relating knowledge and skills acquired in chemistry course and previous courses and readings. Prerequisites: 310. No credit for both 400 and 403. 360-400 hours. Prereq: minimum of 6 hours of Research in Chemistry. E

401 Advanced Industry/Laboratory Internship (3) Supervised by industry/laboratory technical staff at an approved facility. Consists of a full-time hands-on assignment for the entire semester. Credits may not be applied toward a major or minor in chemistry. Final comprehensive written report required. May not be repeated. Prerequisite: 230 or higher course in chemistry and consent of Department Head. E

405 Topics in the Development of Chemistry (3) Historical development of topics such as the atomic theory; chemical industry; interrelationship of population, energy, and food. Subject matter may vary from one offering to another. Assignments include readings from older original literature (Dalton, Faraday, Kekule) and from current journals and monographs. Includes the use and misuse of evidence, the impact of chemistry on society, how scientists reach conclusions, and the nature of scientific controversy. Written reports will be required. Coreq. Senior standing in chemistry. Writing emphasis course. F

406 Senior Seminar (1) Discussions by faculty and students of current research and topics from recent literature. Oral and written reports required. All chemistry majors are encouraged to enroll. Coreq. Senior standing in chemistry. May be repeated. Maximum 2 hours. Sp

408 Honors Research in Chemistry (3) Advanced students work with faculty on research projects required for honors thesis. Students are encouraged to enroll in chemistry 498. An Honors Thesis is written and is defended orally before a faculty committee. Prereq: 400. E

430 Advanced Inorganic Chemistry (3) Atomic and molecular structure, bonding theories, descriptive chemistry of the elements and their compounds. Modern organic reactions, applications of modern techniques for characterization, coordination and organometallic chemistry. Prereq: 230. Sp

439 Advanced Inorganic Chemistry Laboratory (1) Modern experimental techniques in inorganic chemistry, including synthesis, analysis, and handling of air-sensitive materials. Coreq. 430. Open to B.S. in Chemistry students or with consent of instructor. Sp

450 Advanced Organic Chemistry (3) Modern organic reactions of mechanistic, synthetic, and theoretical interest. Contents reflect current trends in the area. Prerequisites: 360. F

471-481 Biophysical Chemistry (3,3) (Same as BCMB 471-481.)

472-482 Physical Chemistry (3,3) Students may not receive credit for both 471-481 and 472-482. Properties of gases; first, second and third laws of thermodynamics; chemical equilibria; simple phase equilibria; properties of solutions. 483—Introduction to statistical thermodynamics; kinetics of chemical reactions; introduction to quantum mechanics and applications to electronic structure of atoms and molecules. Prerequisites: 130 or 138; Physics 136 or 138 or 222 or 231, and Mathematics 241 or 247.

479-489 Physical Chemistry Laboratory (2,2) Experiments on topics discussed in 471-481. Coreq: Corresponding courses 471 or 473 for both 479 and 483. 479—Properties of gases; first, second and third laws of thermodynamics; chemical equilibria; simple phase equilibria; properties of solutions. 479-483 or 481 for 483. 1 lab. 479-E, 489-Sp

490 Introductory Polymer Chemistry (3) Fundamentals principles stressing the role of chemistry in the interdisciplinary field of polymer science. Relation of molecular structure of polymers. Prerequisites: 360. Prerequisite or Coreq: 471 or 473. F

CHILD AND FAMILY STUDIES (245)

110 Introduction to Early Childhood Education (3) History, philosophy, current trends, issues, programs and program models. Includes observation.

205Introduction to Family Life Programs (2) Community and school-based programs that focus on enhancing individual and family life. Includes observational experiences. 50 credits.

210 Human Development (3) Conception through adult hood in various social/ecological contexts; interrelationships among various aspects of development: physical, cognitive, emotional, social; normative, nonnormative development. Includes observation.

211 Development in Infancy and Early Childhood (3) Development from conception through early childhood; interrelationships among cognitive, emotional, social, physical aspects of ontogeny, normative, nonnormative development. Includes observation.

213 Development in Middle Childhood and Adolescence (3) Development during middle childhood and adolescence; interrelationships among cognitive, emotional, social, physical aspects of ontogeny; normative, nonnormative development. Includes observation.

220 Marriage and Family: Roles and Relationships (3) Emerging, declining roles, changing relationships among family members across life cycle from various theoretical approaches; impact of gender roles on marital relationships, marital quality, power, decision-making, communications, conflict management, combining work-family roles. (Same as Women’s Studies 230.)

240 Human Sexuality (3) Sexuality through cultural, social, familial, and psychological factors.

312 Families in Middle & Later Adulthood (3) Adult life in society from youth through elderly, adjustment to internal, environmental changes through adulthood, interrelationships among various aspects of develop ment, familial, cognitive, emotional, social. Includes observation.

320 Parenting (3) Factors in contemporary American families impacting on parent-child relations across the life cycle. Review of strategies for strengthening parenting skills. Prereq: 220 or consent of instructor.

345 Family Resource Management (3) Theory and application of financial management and family resource management; analysis of goals, resource use, information systems, constraints within families. Observation and analysis of diverse family practices. Prereq: 220 or consent of instructor.

350 Early Childhood Education I: Environments for Children (4) Classroom management, behavior guidance, organization of day care environments, communication, interpersonal skills, interaction with children, child stress reduction and management in classroom. Laboratory participation included. Prereq. 110 and 211, HDR 210, admission to the major or consent of instructor.

351 Early Childhood Education II: Curricula and Program Development for Young Children (4) Planning effective early learning programs for young children. Development of knowledge of learning and development to appropriate experiences in art, music, number, logic,媒体, physical knowledge, planning, implementing, evaluating curriculum activities. Laboratory participation included. Prereq: 350 and admission to the Child Development major or admission to the Early Childhood Education licensure program.

352 Diversity in Family-School-Community Relations (3) Techniques for developing community relationships including advocacy for families and families from diverse cultures and populations. Includes observation. Prereq or Coreq: 351 or consent of instructor. Sp

353 Reading, Language, and Literacy (3) Theory and methods for creating learning environments for the development of language, emergent literacy, and reading and writing skills from infancy through eight years. Prereq: 350 and admission to Early Childhood Education licensure program or consent of instructor. Sp

360 Family Stress (3) Family’s response to stressful circumstances; skills for intervention into family systems; violence, abuse, divorce, illness, death. Prereq: 220 or consent of instructor.

405 Development and Teaching of Interpersonal Studies (3) Development of basic interpersonal skills needed to work with families and other professionals. Skills include active listening, self-disclosure, relationship-building, and negotiation. Process of teaching interpersonal skills and group facilitation in observation setting. Prereq: Family Studies majors only.
420 Family Diversity (3) Cultural, socioeconomic, ethnic variations; emerging needs and programs. Prereq: 220, Junior standing or consent of instructor. (Same as African-American Studies 420.)


430 Family Communication (3) Dynamics of interactions within family systems, marriage, and parent-child relationships. Study of verbal and nonverbal communication processes, patterns and problems. Prereq: 220 or Speech 320 or consent of instructor. (Same as Speech 430.)

440 Family Life and Parent Education (3) Emphasis on skills required to develop family life education programs in various community settings. Overview and current approaches to the process of parenting and parent education programs. Prereq: Family Studies majors only.

450 Assessment in Early Childhood Programs (3) Methods and principles of assessment of children, birth through 8 years of age. Includes participation. Prereq: 350 and admission to the major or ECE licensure program. Prereq or Coreq: 351.

451 Early Childhood Education III: Including Exceptional Children (3) Individualized curriculum planning based on knowledge of normative, nonnormative development, assessment, effective teaching strategies for facilitating development. Includes participation. Prereq: 350 and admission to the Child Development major or admission to the Early Childhood Education licensure program.

455 Children and Stress (3) Theory and methods for understanding young children’s life stressors, examining children’s coping strategies, and designing appropriate intervention techniques and learning environments. Prereq: Admission to the Child Development major or the Early Childhood Education licensure program or by consent of instructor. Sp, A

460 Directed Study in Child and Family Studies (1-3) Individual learning experience arranged for students under supervision of faculty. May be repeated with different topics. Maximum 6 hours. Prereq: 9 hours in Child and Family Studies and consent of instructor.

470 Student Teaching (6-12) Responsibility for planning and guiding groups of infants, toddler, or preschoolers under supervision of classroom teacher and coordinator. Includes weekly seminar. Prereq: 350 and 351 and admission to the Child Development major or admission to the Early Childhood Education licensure program and completion of all progression requirements. Satisfactory/No Credit only. F and Sp student teaching begins on first day of registration and ends on last day of final examination period. Includes participation. Prereq: follows the CDL calendar and does not include Fall or Spring break. Summer student teaching begins the day following 5th week of the semester and ends the day before Summer commencement. Priority for summer student teaching is given to students who have completed all program requirements, except student teaching, prior to the Summer session.

471 Practicum in Child Development (3-12) Supervised experiences working with children and families in early childhood settings. Prereq: Admission to the Child Development major or admission to the Early Childhood Education licensure program and consent of the instructor. May be repeated. Maximum 12 hours. Satisfactory/No Credit only.

475 Day Care Administration (3) Theories, methods, and materials for administrators of early childhood education programs; funding writing proposals; staff selection, financial management, recruiting and enrolling children, parent relations, public relations, conflict resolution. Includes participation experience. Prereq: 351 and admission to the Child Development major or admission to the Early Childhood Education licensure program or consent of instructor. May be repeated. 21st Century B.C. Readings include Hesiod and Aesop's Fables, and Homer's Odyssey. Writing-emphasis course.

480 Internship in Family Studies (9) Supervised experiences in community-based family life programs. Coreq: or Prereq: Completion of Family Studies core, completion of the Instructional Pod and Family and Community Service Pod, including CPS 405 and HS 380. Satisfactory/No Credit only.

481 Research in Child and Family Studies (3-6) Supervised research experiences. Prereq: 9 hours in Child and Family Studies, cumulative GPA of 3.0 or above, Junior standing, or consent of the instructor. May be repeated. Maximum 12 hours.

485 Special Topics in Child and Family Studies (1-9) Personal or professional interest in human development or family studies. Prereq: 9 hours in Child and Family Studies, with consent of instructor. May be repeated. Maximum 9 hours.

497 Honors: Child and Family Studies (3-6) Issues or topics affecting children and/or families, designed to meet particular interests of the student. Prereq: 15 hours in Child and Family Studies, overall GPA of 3.25 or greater, Junior standing, or consent of instructor. May be repeated. Maximum of 6 hours.

CHINESE (249)

131-132 Elementary Chinese I,II (5,5) (Same as Asian Languages 131-132.)

231-232 Intermediate Chinese I,II (5,5) (Same as Asian Languages 231-232.)

311-312 Chinese Literature in English Translation (3,3) (Same as Asian Languages 311-312.)

331-332 Advanced Chinese I,II (4,4) (Same as Asian Languages 331-332.)

431 Readings in Chinese Literature (3) (Same as Asian Languages 431.)

CINEMA STUDIES (251)

235 Introduction to Cinematography as Art (3) (Same as Art 235.)

236 Introduction to Video Art (3) (Same as Art 236.)

281 Introduction to Film Studies (3) (Same as English 281.)

312 Popular Culture and American Politics (3) (Same as Political Science 312.)

323 German Film (3) (Same as German 323.)

325 Russian Film (3) (Same as Russian 325.)

334 Film and American Culture (3) (Same as English 334 and American Studies 334.)

400 Special Topics (3) May be repeated. Maximum 6 hours.

420 French Cinema (3) (Same as French 420.)

421 Topics in Italian Literature and Cinema (3) (Same as Italian 421.)

433 Modern Art and Film (3) (Same as Art 433.)

434 Hispanic Culture Through Film (3) (Same as Spanish 434.)

435 Cinematography as Art (3) (Same as Art 435.)

436 Video as Art (3) (Same as Art 436.)

465 Latin American Film and Culture (3) (Same as Latin-American Studies 465 and Spanish 465.)

469 Sexuality and Cinema (3) (Same as Women’s Studies 469.)

489 Special Topics in Film (3) (Same as English 489.)

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

CLASSICS (257)

201 Introduction to Classical Civilization (3) Introduction to civilization of ancient Greece, Rome. Includes aspects of history, literature, art and archaeology. Prereq: 9 hours in Classical Language. Writing-emphasis course.

221 Early Greek Mythology (3) Archetypal Greek religion through comprehensive study of Greek myths with emphasis on how they reflect the early Greek vision of the universe and humanity’s place in it. Origins and development of Greek myths and the rise of organized religion, from Bronze Age to about 450 B.C. Readings include Hesiod and Aesopus. Writing-emphasis course.

222 Classical Greek and Roman Mythology (3) Use of myth in literature, history, religion and philosophy of Greece and Rome from about 450 B.C. to about 350 A.D. Two foci are the latter half of the fifth century B.C and the last quarter of the first century B.C. Includes Oriental intrusions into Greece and Rome, including early Christianity. Includes Sophocles, Aeschylus, and Euripides, Roman poetry, and modern scholarship. Writing-emphasis course.

232 Archaeology and Art of Ancient Greece (3) Survey of Greek archaeology from prehistoric times to the fall of the Roman Empire (1000 B.C.-500 A.D.). Of prehistoric times emphasis on architecture and artifacts used to recreate the culture of the Minoan and Mycenaean civilizations. That of the following Dark Age. For Archaic, Classical, and Hellenistic periods emphasis on development of architecture, sculpture, and vase painting. Includes minor arts and the relationship between archaic and art. Writing-emphasis course.

233 Archaeology and Art of Etruria and Rome (3) Survey of the archaeology of the Italian peninsula and the Roman World from prehistoric times to the fall of the Roman Empire (1000 B.C.-500 A.D.). Reconstruction of the Etruscan culture from tombs, paintings, and artifacts, development of Roman architecture, and urban planning in Rome and the provinces. Writing-emphasis course.

253 Greek and Roman Literature in English Translation (3) Major literature of ancient Greece from Homer to Tactus. Writing-emphasis course.

273 Medical and Scientific Terminology (3) Greek and Latin roots from which medical and scientific terminology is derived. Effective practice in analysis of terms. Practice in use of Latin emphasis course.

331 Archaeology of the Aegean Bronze Age and Early Greece (3) Includes Troy, the Cycladic Islands, the Greek mainland, Crete, and Cyprus ca. 3000-700 B.C. Rise and fall of the Mycenaean civilization and the effects on the Aegean World and Cyprus. Evidence for daily life, religion, trade, and foreign contacts. Architecture, wall paintings, and artifacts. Prereq: One of the following: 233, 381, ancient history (Ancient Near East or Ancient Greece), or consent of instructor. Writing-emphasis course.

334 Cities and Sanctuaries of the Greek and Roman World (3) Major cities and sanctuaries in Greece, the Greek Colonies, and the Roman Empire. Approach is archaeological, focusing on physical evidence—landscape, architecture and artifacts as well as descriptions of ancient authors. Cities include various types—planned and unplanned, seaports, caravan centers, government and commercial centers. The sanctuaries also vary in function: surviving prophetic centers, athletic centers, theater centers, and healing centers. Writing-emphasis course.

362 Roman Law (3) This course covers the historical development of Roman law in the Classical period (50 B.C.-A.D. 62) with an emphasis on the analysis of case-law in the areas of property, or debt. (Same as Legal Studies 362.)

381 Greek Civilization (3) Major aspects of ancient Greek civilization: religion, fine arts, political life, pan-Mediterranean relations, the prominence of Athens; the role of modern archaeology in interpretation; emphasis on the sixth and fifth centuries B.C. Writing-emphasis course.

382 Roman Civilization (3) Major aspects of ancient Roman civilization: religion, fine arts, architecture, history, culture and daily life, emphasizing the late Republic and early Empire. Writing-emphasis course.

383 Women in the Greek and Roman World (3) The condition of women in the apparently male-dominated world of Classical Greek and Classical Rome. Evidence from literature, vase paintings, and other arts is examined from the age of Homer to the second century A.D. Typical topics covered include the role of women in the Roman household, the family in Rome, and Roman Italy in the first and second centuries A.D. (Same as Women’s Studies 383.)

401 Greek Poetry (3) Epic, lyric, drama. Authors vary. May be repeated for credit. Maximum 9 hours. Prereq: 281.

402 Greek Prose (3) History, philosophy, and oratory. Authors vary and may be repeated for credit. Maximum 9 hours. Prereq: 281.
404 Special Topics (1-3) Instructor initiated course offered at convenience of the department on various topics of current interest. Contact department for listing of topics to be covered. May be repeated. Maximum 15 hours. E


410 Sex Role Development: Implications for Education and Counseling (3) Theories and research concerning the development of sexual role and its relevance in educational and counseling settings. (Same as Women’s Studies 410). F, Su

431 Personality and Mental Health (3) Perspectives of mental health with applications to education and other social institutions. E

493 Independent Study (1-15) Independent investigation of problems in educational and counseling psychology. May be repeated. Maximum credit 15 hours. E

CULTURAL STUDIES IN EDUCATION (271)

290 Human Motor Behavior (3) Theories and principles explaining motor behavior; psychological factors related to and/or affecting motor skill acquisition and performance. Prereq: At least sophomore standing.

291 Sport in American Society (3) For all university undergraduates on the study of sport in American society from a sociological perspective. (Same as Sociology 291.)

302 School and American Society (3) Historical, philosophical and social perspectives on contemporary educational issues. F

321 History of Sport and Physical Activity in Western Culture (3) Study of sport and physical activity from ancient Greek period to modern times, illustrating historical role in western culture. Provides background for growth of sport in education, and explores how most modern collegiate divisions, bearing a myriad of titles, developed. Prereq: Progression to the major or consent of instructor.

356 Motor Development (3) Evolution of human motor behavior within the context of structural/functional changes, and with the respect to psychological, sociological, and social-psychological factors related to and/or affecting motor performance/learning; analysis of changes in motor performance and underlying attributes across the lifespan with emphasis upon critical developmental periods. Prereq: Progression to major or consent of instructor.

364 Contemporary Issues in African-American Education (3) (Same as African-American Studies 364.)

372 Philosophy of Sport (3) Theories of reality and value as they apply to sport with emphasis on ethical issues. Prereq: Progression to major or consent of instructor.

380 Special Topics (1-3) Study in selected disciplinary or professional areas of Physical Education. May be repeated. Prereq: Progression to the major.

391 Psychology of Coaching (2) Major topics and theories dealing with social-psychological factors affecting and relating to sport performance, with practical implications and applications to teaching and coaching. Prereq: Progression to major or consent of instructor.

405 Sociology of Sport (3) (Same as Sociology 405.)

451 Education in Cultural Perspective (3) Contribution of anthropological concepts to understanding of educational processes; major conceptual frameworks; selected ethnographic research on process of schooling. F

466 Motor Development Laboratory (3) Application of selected perceptual-motor development, movement education, and pedagogical concepts to performance assessment, lesson design and presentation. Prerequisite: to normally developing preschool or primary grade children. Participation in intra- or interdisciplinary research projects. Prereq: Progression to major or consent of instructor.

493 Directed Independent Studies (1-3) Independent study in a specialized area with physical education. May be repeated. Maximum 9 hours. Prereq: Consent of adviser and approval of the major. Satisfactory/No Credit or letter grade.

DANCE (274)

101 Practicum: Dance Production (1) Supervised technical and promotional production aspects of university dance company. May be repeated. Maximum 2 hours.

201 Practicum: Dance Performance (1-2) Preparation and presentation of university dance company performances. Participation through audition only. May be repeated. Maximum 16 hours.

210 Ballet: Level I (2) Instruction and practice in elementary classical ballet techniques. May be repeated. Maximum 4 hours.

220 Jazz: Level II (2) Instruction and practice in elementary jazz dance styles and techniques. May be repeated. Maximum 4 hours.

230 Modern: Level I (2) Instruction and practice in elementary modern dance techniques. May be repeated. Maximum 4 hours.

240 Tap: Level I (2) Instruction and practice in elementary tap dance techniques.

310 Ballet: Level II (2) Instruction and practice in intermediate classical ballet techniques. Available to minors or with consent of instructor. May be repeated. Maximum 12 hours.

320 Jazz: Level II (2) Instruction and practice in intermediate jazz dance styles and techniques. Available to minors or with consent of instructor. May be repeated. Maximum 12 hours.

330 Modern: Level II (2) Instruction and practice in intermediate modern dance styles and techniques. Available to minors or with consent of instructor. May be repeated. Maximum 5 hours.

340 Tap: Level II (2) Instruction and practice in intermediate tap dance techniques. Prereq: 240 or consent of instructor.

380 Special Topics (1-3) Selected disciplinary or professional areas of dance. May be repeated.

410 Ballet: Level III (2) Instruction and practice in advanced classical ballet techniques. Available to minors or with consent of instructor. May be repeated. Maximum 16 hours.

415 Teaching Creative Dance for Children (3) Theory, methods, materials and practical experience in the presentation and integration or creative dance in grades K-6. A seminar portion is involved in this class. Prereq: Progression to major or consent of instructor. Writing emphasis course. (Same as Psychology 415.)

420 Jazz: Level III (2) Instruction and practice in advanced jazz and musical theater dance styles and techniques. Available to minors or with consent of instructor. May be repeated. Maximum 16 hours.

430 Modern: Level III (2) Instruction and practice in advanced modern dance techniques. Available to minors or with consent of instructor. May be repeated. Maximum 16 hours.

440 Composition I (2) Choreographic skills emphasizing the basic techniques and concepts of dance composition. This course focuses on the choreography of solos and duets. Prereq: 400; credit in upper level modern dance technique (330 or 430) or approval of instructor.

445 Composition II (2) Choreographic skills emphasizing the advanced techniques and concepts of dance composition. This course will focus on the choreography of group works and the technical aspects of produc- tion. Prereq: 440 or approval of instructor.

480 Dance History through the 19th Century (3) Survey of the evolution of various societies and cultures from prehistory through the nineteenth century. Senior standing or graduate status required for graduate credit. Different levels of performance are expected of those registered for graduate credit.

490 Dance in the 20th Century (3) Survey of history and philosophy of dance in the 20th century. Senior standing or graduate status required for graduate credit. Different levels of performance are expected of those registered for graduate credit.

493 Directed Independent Studies (1-3) Independent study in a specialized area with dance. May be repeated. Maximum 9 hours. Prereq: Consent of instructor.

495 Dance Pedagogy (3) Principles and methods of the teaching of dance with practical application in a mini-instructor training experience. Prereq: Upperclass or graduate standing and approval of instructor. Senior standing or graduate status required for graduate credit. Different levels of performance are expected of those registered for graduate credit.

EARLY CHILDHOOD EDUCATION (279)

410 Early Childhood Special Education Foundations (3) Introduction to the field of early childhood special education including the nature of disabling conditions; theoretical perspectives in the field; legislation, policies and procedures used in the field. Prereq: Admission to Teacher Education Program.

422 Early Childhood Teaching Methods (6) Methods and materials for teaching in early childhood classrooms focusing on K-4th grade. Emphasis on holistic integrative approaches to curricular development and presentation. Prereq: Pre-K-4th licensure program and admitted to Teacher Education.

445 Early Childhood Education: Program Development and Teaching with special undergraduate (3) Curriculum planning, classroom organization and management practices for teaching young children; relationship of kindergarten to the elementary school. Prereq: Admission to Teacher Education Program. E

471 Early Childhood Special Education (6) Assessment, curriculum planning and development and teaching approaches used in early childhood special education. Prereq: Admission to Teacher Education Program. E

472 Field Experience in Early Childhood Special Education (3-9) Placement in educational settings serving young children with special needs. Provides experience in assessment, curriculum planning and teaching. Prereq: Admission to Teacher Education Program. May be repeated. Maximum 5 hours. E

ECOLOGY AND EVOLUTIONARY BIOLOGY (278)

202-203 Ecology and Evolutionary Biology Colloquium (1,1) Weekly discussions of current topics in ecology, behavior, and evolutionary biology including undergraduate research and career opportunities, for declared and potential majors. Course familiarizes students with the contemporary research and with its applications and introduces them to departmental faculty and research. S/NC only. Prereq: Biology 110-120 or equivalent.

240 Human Anatomy (4) Gross and Microanatomy of the human. Credit may not be applied toward Ecology and Evolutionary Biology major. Prereq: Biology 101 or 102 or 120 or 140 or equivalent introductory biology course. 3 hours lecture, 3 hours lab.

305 Evolution and Society (3) Issues and controversies surrounding the teaching and learning of evolution in America today. May not be applied to Ecology and Evolutionary Biology major. Prereq: General Biology or Anthropology 110 or consent of instructor. Writing emphasis course. (Same as Anthropology 305.)

350 Comparative Vertebrate Biology (4) Origins, phylogeny, diversity and functional anatomy of vertebrates. Laboratory involves dissection of shark, cat, and selected other vertebrates. 2 hours and 2 labs.

360 Comparative Invertebrate Biology (4) Origins, phylogeny and functional anatomy of invertebrates with emphasis on diversity of life forms and adaptations to specialized local environments. 2 hours and 2 labs.

370 Ethology and Sociobiology (3) Basic concepts in the evolution of social behavior, including evolutionary applications to psychology, the social sciences, and the humanities. (Same as Psychology 370.)

380 General Entomology (3) Introduction to insects: basic structure, physiology, behavior, evolution and classification of insect orders. 2 hours and 1 lab.
ECONOMICS (283)

201 Introductory Economics: A Survey course (4)
Theory of consumer behavior, theory of firms, supply and demand, costs of production, market models, national income and employment theory, money and banking, monetary and fiscal policy, debt, and international economics.

207 Honors: Introductory Economics (4)
Honors course for students of superior ability and interest. Students accepted on the basis of their records.

311 Intermediate Microeconomics (3)
Theories of consumer behavior, production and costs, of price and behavior of firms in perfectly competitive, monopolistic and imperfectly competitive markets, input prices, income distribution, welfare and general equilibrium. Prereq: 201.

313 Intermediate Macroeconomics (3)
Measurement of income and prices, aggregate demand, output, employment, price determination, inflation, business fluctuations, fiscal and monetary policies and growth. Prereq: 201.

321 International Economics (3)
Balance of payments, exchange rate determination, money and fiscal policies, monetary arrangements, comparative advantage, tariff and nontariff trade distortions, protection arguments, regional integration. Prereq: 201.

323 Economic Development (Third World) (3)
Overview of international development and developing countries and other emerging markets. Theories of growth and policies used to promote economic improvement. Prereq: 201 or permission of instructor. Writing-emphasis course.

331 Government and Business (3)
Antitrust and regulatory economics, problems in regulation and social control of business organization, oligopoly models. Prereq: 201.

341 Survey of Labor Economics (3)
Extension of economic principles to labor market, public policy questions, demand and supply, theory of wage differentials, unemployment, unions in the private sector, investment in individuals, education and training, mobility. Prereq: 201.

351 Monetary Economics (3)
The role of money in the economy, Federal Reserve System, evaluation of monetary policy, U.S. depository institutions and money supply process. Prereq: 201.

361 Regional and Urban Economics (3)
Overview of regional differences. Theory of industrial and agricultural location and human migration, economic basis for land use patterns, central places, and urban form, regional economic, rural and regional economic analysis, examination of urban problems. Prereq: 201.

381 Econometrics (3)
Methods of specification, estimation, testing and forecasting of economic relationships. Includes specification of models, estimation methods, testing of statistical inferences, forecasting procedures and common econometric problems, such as multi-collinearity, heteroscedasticity, and autocorrelation. Prereq: 201, Statistics 201, Mathem- atics 123-125 or 141-142.

400 Special Topics (3)
Topics vary. Prerequisites determined by department each time course is offered. Numerical grade is given to law students. May be repeated when topic varies. Maximum 9 hours. Prereq: 201.

413 Macroeconomic Fluctuations (3)
Analysis of historical data, methods of analyzing macroeconomic fluctuations, theoretical explanations of cycles, and the role of monetary and fiscal policies in the aggregate economy. Prereq: 313 or consent of instructor. Writing-emphasis course.

415 Western Economic Thought Since the 18th Century (3)
Methods of studying doctrinal history. Origins and evolution of economic thought; classical, neoclassical, and Keynesian economics, economics of Keynes and his followers, principal developments of second half of 20th century. Major writing requirement. Prereq: 201 or equivalent and consent of instructor. Not available for graduate credit in History. (Same as History 415)

435 Industrial Organization Analysis (3)

436 Economics of Health and Health Care (3)
Medical care and health status; demand for medical care and insurance; physician and hospital supplies; government provision of services and insurance; regulation of health care markets. Writing emphasis course.

462 Economics of Resources and Environmental Policy (3)
Economic analysis of environmental policy and allocation of resources. Benefits and costs of development of natural resources and their regulation. Writing emphasis course. Prereq: 201. Writing-emphasis course.

471 Public Finance: Optimal Government Functions and Expenditure Analysis (3)
Problems of collective consumption, external effects, public investment, social decision making. Prereq: 201. Writing-emphasis course.

472 Public Finance: Taxation and Intergovernmental Relations (3)
Individual taxes and tax system, non-tax sources of revenue, fiscal federalism. Prereq: 201. Writing-emphasis course.

482 Introduction to Mathematical Economics (3)
Application of basic mathematical tools (e.g., calculus, matrix algebra, etc.) to major topics of economic theory. Prereq: Economics 311 with a grade of B or better, Mathematics 141-142 or 147-148.

492 Economics Off-Campus Study (1-6)
Satisfactory, N.C. Credit only. Prereq: Consent of instructor.

493 Independent Study (1-3)
Opportunity for qualified students to pursue topics of individual interest. Prereq: Senior standing, 3.0 GPA in economics courses, and consent of instructor. Maximum total credit 3 hours.

499 Analysis of Economic Problems (3)
Study of the effects of economics on modern society and the practice of economics from a value-oriented perspective. Students will integrate learning from all fields of economics and other disciplines where appropriate, and work as teams to prepare economic analyses of selected economic problems facing modern society. Prereq: Senior standing and completion of Economics 311, 313 and six other hours of upper division economics. Writing-emphasis course.

EDUCATION (289)

100 Special Topics (1-3)
Study in selected disciplinary or professional areas represented in the College of Education. Topics to be determined as needs/issues are identified and as resources are available to support the course.

400 Professional Studies: Teachers, School, and Community (2)
Focus on roles and responsibilities of teachers, on how schools are organized and the relationship between schools and the larger society. Prereq: 201 or permission of instructor. Coreq: Educational and Counseling Psychology 210. Prereq: Admission to Teacher Education.

401 Professional Studies: The Learner (3)
Understanding of students from diverse cultures; study of learning principles; special needs of learners; behavior management techniques and assessments. Prereq: or Coreq: Educational and Counseling Psychology 210 and 400; Prereq: Admission to Teacher Education.

EDUCATIONAL PSYCHOLOGY (310)

210 Psychoeducational Issues in Human Development (3)
Understanding and application of the psychological and sociological factors in human development to teaching/learning processes in educational settings. Primarily for students entering teaching or Human Services.

215 Learning Skills and Study Systems (3)
Approaches to enhancing academic performance through study skills, efficient reading and understanding of personal factors.

404 Special Topics (1-3)
Initiator initiated course offering essentially the same content on various topics of current interest. Contact department for listing of topics to be covered. May be repeated. Maximum 15 hours.

431 Personality and Mental Health (3)
(Same as Counselor Education and Counseling Psychology 431.)

432 The Disadvantaged Student: Psychoeducational Perspectives (3)
Theory and research regarding ecolo- gy, psychosocial behavior and appropriate interventions.

435 Industrial Organization Analysis (3)
460 Self-Management in the Helping Professions (3) Applications of self-management strategies to career, social, emotional and health domains for both helping professionals and their clientele. Prereq: Introductory course in psychology or permission of instructor. Su

493 Independent Study (1-15) Independent investigation of problems in educational and counseling psychology. May be repeated. Maximum credit 15 hours. E

**ELEMENTARY EDUCATION (322)**

325 Teaching Science and Social Studies in Elementary and Middle Schools (3) Methods and materials for teaching science and social studies in elementary and middle schools. Teaching approaches common to both fields including inquiry, multisensory activities and group approaches. For BS Education students. Prereq: Admission to Teacher Education Program. F, Sp

326 Teaching Language Arts/Reading in Elementary and Middle Schools (3) Language and language development as applied to teaching of oracy (listening-speaking) and certain aspects of literacy (reading process/readiness and writing). Includes methods and materials for both fields. For BS Education students only. Prereq: Admission to Teacher Education Program. F, Sp

351 Laboratory and Field Studies in Elementary Education (1) Simulated and actual experiences in which students apply concepts and skills from professional methods courses in a variety of school settings and levels. May be repeated. Maximum 3 hour. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit grading only. E

356 Elementary and Middle School Teaching Laboratory Experiences (1) Simulated and micro-teaching experiences to develop planning skills and give feedback to students relative to their ability to apply learning to school settings, Prereq: Admission to Teacher Education Program. F, Sp

421 Elementary and Middle School Science and Social Studies Instruction (3) Methods and materials for teaching science and social studies. Development of functional relationships and individual entities of the two fields. Not open to students with recent course or background in The Teaching of Elementary School Science and/or Social Studies. Prereq: Admission to Teacher Education Program. F, Sp

422 Elementary and Middle School Teaching Methods (2, 3) Methods and materials for teaching elementary and middle school reading, language arts, science, social studies and mathematics. Emphasis on planning, implementing, and evaluating experiences. Prereq: Admission to Teacher Education Program; must be taken prior to Professional Year Internship. S

424 Studies in Elementary Education (1-5) Study of topics in Early Elementary (K-3), Middle Elementary (4-8); and Skills (K-8). Prereq: Admission to Teacher Education Program and permission of instructor. May be repeated. Maximum 8 hours. E

429 Language Arts/Reading Instruction in Elementary and Middle Schools (3) Language and language development as applied to teaching of oracy (listening-speaking) and aspects of literacy (reading process/reading/writing). Not open to students who have had recent course in language arts methods. Prereq: Admission to Teacher Education Program. F, Sp

**ENGINEERING AEROSPACE (018)**

345 Aerospace Engineering Instrumentation and Measurement (3) Fundamentals of measurement systems; standards; dynamic characteristics of instruments; statistical data treatment; transducers; signal conditioning; strain, pressure, and temperature and flow measurement. Coreq: EE 363. Prereq: ES 431, EE 301. F, Sp

351 Compressible Flow (3) One-dimensional internal flow with shocks, friction and non-dimensional similarity factors. Two-dimensional external flows. Prereq: ES 341, ME 332. Sp

362 Dynamics/Vibrations (3) Central force motion, transfer orbits, free and forced vibrations of single and multiple degree vibrating systems. Prereq: ES 231, F

363 Structural Analysis of Aerospace Vehicles (3) Fundamentals of structural analysis applied to configurations common to aerospace vehicles. Prereq: ES 321, F


401 Thesis (3) Problem investigation and report. Prereq: Senior standing. F, Sp

422 Aerodynamics (3) Theory and design of aerodynamic bodies for desired characteristics. Potential flow theory, viscous effects, compressibility effects. Subsonic, transonic, and supersonic airflow. Prereq: 351, 370. F

424 Astronautics (3) Perturbation mechanics, propulsion, atmospheric reentry of space vehicles including reentry thermal protection materials, human factors in space flight, the space environment, and current topics. Prereq: 351, Coreq: ME 344.

425 Propulsion (3) Principles of propulsion devices: turbojet, ram jet and rocket engines. Prereq: 351. F

426 Introduction to Aerospace Design (2) Design process, synthesis, safety, reliability, patents, product liability, economic analysis, optimization, design standards, design studies. Individual design reports required. Prereq: 351, 370, 380. Coreq: Math 343, F

429 Aerospace System Design (4) Synthesis and design of a complete aerospace system comprising economic and technical aspects. Participation in team design effort including formal presentations and design report. Prereq: 422, 425, 426, 130-140.

431 Mechanical Engineering/Aerospace Engineering Seminar (1) Topics related to engineering including ethics. Formal oral presentations by students on engineering topics. Prereq: Senior standing. F

449 Aerospace Laboratory (3) Designing, building, and testing of small rocket and jet engines. Prereq: 351. F


469 Biomedical Engineering Design II (4) Design of complete biomedical device: documentation includes complete specification, design calculations, preparation of working drawings, and cost analysis. Written and oral reports. Prereq: BME 310, MEE 474.


**ENGINEERING CHEMICAL (226)**


230 Introduction to Chemical Engineering Thermodynamics (3) Introduction to the laws of thermodynamics, state functions, thermodynamic processes, the basis, ideal systems, the gas law, Raoult’s law, and deviations from ideal behavior (fugacity and activity). Introduction to the principles of property description. Prereq: BME 310, CHE 230. F


250 Application of Chemical Engineering Thermodynamics (3) Basic concepts related to chemical engineering applications of thermodynamics; emphasis on flow processes, real gases and liquids, estimation of physical properties, phase equilibria of industrial mixtures, compressors, power cycles, and chemical reaction equilibria. Prereq: CHE 200, 230.

301 Chemical Engineering Data Analysis (3) Analysis of experimental data; identification of system extremes; statistical treatment by analytical and/ or computer methods; empirical model design and application of processes; statistical process control; optimization techniques. Prereq: Math 200.

310 Chemical Engineering Laboratory (3) Thermodynamics, fluid flow and heat transfer in chemical engineering. Prereq: 240. Coreq: CHE 241. F

340 Mass Transfer and Separation Processes (3) Stages operation; application of analytical, graphical and computer methods to design of stagewise separatory operations. Differential operations-application of analytical and computer methods to the design of diffusive processes. Applications include gas absorption, distillation, extraction, humidification, ion exchange and membrane separations. Prereq: 200.


380 Seminar (1) Presentation and discussion of topics in the practice of chemical engineering. Satisfactory/No credit.

394 Chemical Engineering Co-op (1) Co-op experiences in Chemical Engineering. Technical report writing and presentations. Prereq: Permission of instructor. May be repeated.

403 Introduction to Optimization (3) Principles and applications of optimization techniques to chemical process design; unconstrained and equality constrained optimization, least squares, dynamic programming, and geometric programming. Prereq: Math 241.

407 Honors Seminar (1) Presentations and discussions on topics of importance to chemical engineers. Prereq: Consent of instructor. Satisfactory/No Credit grading. May be repeated once.

408 Honors Seminar (1) Presentations and discussions on topics of importance to chemical engineers. Prereq: Consent of instructor. Satisfactory/No Credit grading. May be repeated once.

410 Chemical Engineering Laboratory II (3) Laboratory investigations of mass transfer and chemical reaction phenomena in chemical engineering. Prereq: 310, 340.

415 Computer Applications in Chemical Engineering (3) Introduction to computer solution of chemical engineering problems. Primary focus is on the application of personal computer programs. Includes flow sheet simulators, statistics, spreadsheets, graphics and process modeling.


445 Separation Process Technology (3) Multicomponent distillation, theory and computer simulations; humidification; specialized technologies, including membrane separation, crystallization, dialysis, adsorption, ion exchange, etc. Prereq: 340.

447 Honors: Transport Phenomena (3) Overview of momentum, heat and mass transfer processes, the analogies, differential and macroscopic balances, applications involving molecular diffusion, including simultaneous mass transfer and chemical reaction. Prereq: 340 and consent of instructor.

450 Chemical Reactor Fundamentals (3) Homogeneous and heterogeneous reaction kinetics; idealized homogeneous reactor models, both for closed and flow systems; corrections for non-ideal residence time distributions; identification of scaling parameters; catalyst effectiveness factors and conversion in fixed bed catalytic reactors. Prereq: 240, 340, 360, 301.

467 Honors: Engineering Internship in Process Control (4) Selected students work in small groups on industrial processes typically involved in process control. Directed by faculty and engineers from host company. Prereq: 360 and consent of instructor.

477 Honors: Applied Process Automation Laboratory (3) Interfacing flexible batch continuous processes to automation systems. Top down analysis with bottom up implementation, hierarchical structures and object oriented concepts are used to design automation solutions including human-machine-interfaces. Workstations with modern industrial equipment provide an interactive graphics and visualization environment. Prereq: 360 and consent of instructor.

488 Honors: Design Internship in Industrial Pollution Prevention (3) Selected students work in small groups to address the prevention of industrial pollution through industrial process design. May be substituted for 490 with departmental approval. Prereq: 480 and consent of instructor.


494 Special Problems in Chemical Engineering (3) Chemical engineering problems related to recent developments in industrial practice or engineering research. Prereq: Consent of instructor. May be repeated. Maximum credit 6 hours.

498 Honors Thesis (3) Research in problems related to recent developments in chemical engineering. Prereq: Consent of instructor.

ENGINEERING CIVIL AND ENVIRONMENTAL (254)

205 Professional Development I (2) Introduction to civil engineering specialties, history, and achievements. Professional responsibility, communication, and organizations. Prereq: Sophomore Standing.

210 Engineering Measurements (4) Mensuration through application of surveying techniques: theory of errors and their analysis; concepts of horizontal, vertical and angular measurements and control; construction specifications, route surveying, and construction layout; route and contour maps; curves; and introduction to GIS and GPS, 3 hours, 1 lab. Prereq: Sophomore Standing.

261 Structural Analysis I (3) Reactions; shear and moment diagrams; forces in trusses; uniaxial stress and strain; area moments of inertia; torsion. Prereq: Engineering Fundamentals 102.

305 Professional Development II (1) Legal and ethical responsibilities, continuous improvement, career planning, and leadership. Prereq: 205.


330 Introduction to Soil Behavior (4) Physical and mechanical properties of soils, theory of compaction, seepage, and effective stress. Consolidation theory, time rate and settlement, shear strength of sands and clays, and analysis of various slopes. 3 hours, 1 lab. Prereq: 205, Coreq: 361.

351 Transportation Engineering I (3) Transportation problems and perspectives, rural and urban; use of systematic planning processes; development of alternative transportation systems; mixed ownership and nonmotorized transportation; traffic and nondestructive testing. Two lectures and 1 lab. Prereq: 205, Coreq: 361.

352 Transportation Engineering II (3) Introduction to design, construction, maintenance, and operation of various transportation modes, their guideways and terminals, primarily highways and railroads. Prereq: 351.

361 Structural Analysis II (3) Stress and strain in beams and columns; Mohr’s circle; influence lines, deflections and beams and trusses; analysis of indeterminate structures; moment distribution. Prereq: 261.

380 Water and Waste Treatment (3) Principles of unit operations employed in physical, chemical, and biological treatment of water and wastewater, and solid wastes. Prereq: Junior standing and 390.

390 Hydraulics (4) Basic laws and properties of incompressible fluids. Units and dimensional analysis; drag forces; continuity, energy, and momentum equations; pipe flow; flow measurement; open channel flow and culverts; pump characteristics, 3 hours, 1 lab. Prereq: 205 or Biosystems Engineering 243; Engineering Fundamentals 102; Nuclear Engineering 203.

395 Hydrology (3) Concept of hydrologic cycle; weather patterns; precipitation measurement and distribution, abstractions, and runoff; storm hydrograph and peak flow analyses, including design floods; reservoir and channel routing; rainfall and streamflow frequency analyses; groundwater flow. Prereq: 390.

400 Senior Design Project (3) Open-ended, comprehensive project emphasizing team approach to design process. Includes problem formulation, site planning, project design, cost estimating, and various project components typical of those faced by practicing civil engineers. Prereq: Must be taken during the term of graduation. Summer graduates must take during their last preceding term.

401 Review of Engineering Fundamentals (1) Review of selected topics covered on the Fundamentals of Engineering exam. Emphasis is on those topics relating to Civil and Environmental Engineering. Letter grade only. Prereq: Must be taken during the last 15 hours of the curriculum.

409 Special Topics (1-3) Recent developments and current practice in civil and environmental engineering through field internship and/or self-study. Prereq: Consent of instructor and department head. May be repeated.

421 Portland Cement Concrete Mix Design and Analysis (3) Aggregate properties and tests, tests of portland cement, concrete, mix design, placement, setting, characteristics, and nondestructive testing. Two lectures and 1 lab. Prereq: 321.

431 Geological Engineering (3) Influence of geologic origin and history on the engineering characteristics of rocks and soils; applications of geology in the planning, design and construction of civil engineering projects. 2 hours lecture, 1 hour lab. Prereq: 330 or consent of instructor.

435 Foundation Engineering (3) Fundamentals of geotechnics applied to design and analysis of soil-structure systems; subsurface investigation; design of shallow and deep foundations on rock, Lateral earth pressure and retaining structures. Prereq: 330.

440 Civil Engineering Systems Design and Management (3) Methods of data analysis and modeling of civil engineering systems to enhance resource allocation for specific application to problems of transportation, environmental, water resources, structural analysis material. Emphasis on microcomputer applications. Prereq: Senior standing and Statistics 251.

442 Construction Methods and Equipment (3) Fundamentals in construction and equipment selection in productivity, operations, and control of construction projects. Prereq: Civil Engineering Systems Design and Management 440; Consent of instructor.

451 Highway Engineering (3) Design, construction, operation, and maintenance of highway facilities; inclusion of evaluation of various design principles and techniques to process of planning, locating and design of highway facilities; covers both geometric and pavement design. Prereq: 210, 251, 392.

452 Traffic Engineering (3) Characteristics of driver, vehicle, and roadway and their interrelationship; traffic studies; basic considerations of traffic circulation and control, lighting, capacity analysis, roadway safety analysis and design. Prereq: 210, 251, 392.

453 Airport Master Planning and Design (3) Airport master planning and railroad engineering. Runway configuration, airfield capacity, geometrics and terminal layout and design. Railroad capacity, geometrics and terminal layout and design. Prereq: 392.

462 Analysis of Framed Structures (3) Vertical and lateral force resisting systems; gravity loads due to dead, live, and snow loads; lateral loads due to earthquake and wind; use of computer in structural analysis, building modeling and analysis. Prereq: 340.

471 Introduction to Structural Design (3) Selection of rolled structural steel beams, design of structural steel members for axial tension and compression loads, reinforced concrete beams; use of standard specifications. Prereq: 381.

472 Steel Design (3) Design of plate girders and composite beams; consideration of members subjected to combined stresses; design of a typical framed building including connections. Prereq: 471.

474 Reinforced Concrete Design (3) Design of continu-
ENGINEERING ELECTRICAL AND COMPUTER (319)

201 Circuits I (3) Fundamental laws of circuit analysis. Ohm’s Law, Kirchoff’s current and voltage laws; the law of conservation of energy; circuits containing independent and dependent voltage, and current sources, resistance, conductance, capacitance, and inductance analyzed through circuit analysis. Includes laboratory experiments and source of transformations; and Norton’s and Thevenin’s Theorems. Steady state analysis of DC and AC circuits. Complete solution for transient analysis for circuits containing energy storage elements. Prereq: A grade of C or higher in Math 141 and Math 142. Coreq: Phys 231 and Math 231.


205 Electrical Engineering Computations (3) Linear algebra; complex analysis and phasor calculus; algorithms for computing Fourier transforms. Programming of the application language MATLAB. Includes Level 1 design projects which require laboratory work. Coreq: 201.

251 Small Computer Systems (3) Structured assembly language programming, data collection under the control of an external data acquisition board. Usage of D/A converter output to CRT displays; on-line, real-time analysis using elementary filters; communications between the computer and display system. Includes Level 1 design projects which require laboratory work. Prereq: 205 or both CS 102 and Math 251.

301 Circuits and Electro Mechanical Components (3) DC and AC Circuits, Transients, Transformers, Motors, Generators. For non-majors only. Prereq: Math 201, Electromechanics 231, Physics 231.


310 Frequency-Domain Analysis of Signals and Noise (3) Probability and random variables; Fourier series and transforms, power spectral density and autocorrelation, discrete Fourier transform. Prereq: 202; Math 241; 205 or both CS 102 and Math 251.

311 Transient Analysis (3) Transient response analysis of linear time-invariant continuous-time and discrete-time dynamic systems by various methods including Laplace transform, z-transform, and state space techniques; properties of systems, including stability, causality, causality, and frequency response analysis. Prereq: 202; 205 or both CS 102 and Math 251.

312 Linear System Analysis (3) Introduction to feedback theory of continuous systems using the tools of block diagrams, s-domain analysis, root locus, frequency response (Bode, Nyquist, Nichols), state variables, steady state error, system performance characteristics and complex variable and state space methods using MATHLAB and Simulink. Includes Level 1 design projects which require laboratory work. Prereq: 310, 311.


331 Electronic Devices (3) Basic semiconductor physics, theory of p-n junctions, diodes, field transistors, and bipolar junction transistors. Circuit design and properties of the devices; analysis and design of diode switching and rectifier circuits; basic transistor switching circuits and single-transistor switching circuits; SPICE. Includes Level 1 design projects which require laboratory work. Prereq: 202, Coreq 351.

332 Electronic Circuits (3) Multistage transistor amplifier biasing; gain stages, and output stages; frequency and transient design of simple networks and feedback amplifiers; operational amplifiers in feedback configurations. Includes Level 1 design projects which require laboratory work. Prereq: 331.


342 Analog Communication Amplitude and Frequency Modulation (3) Filter design, noise, signal-to-noise ratio, amplitude modulation, frequency modulation. Includes Level 1 design projects which require laboratory work. Prereq: 310, 331.

351 Introduction to Logic Design of Digital Systems (3) Boolean algebra and logic design of combinational and sequential circuits. Gate and flip-flop characteristics and TTL technology. Design of circuits using MSI, and FPGA components with VHDL. Includes Level 1 design projects which require laboratory work. Prereq: Math 241, Coreq 351.

359 Junior Seminar (1) Presentations and discussions related to professional development, including registration, ethics and current topics in electrical engineering. Prereq: 202. Satisfactory/No Credit.

400 Senior Design (5) A major design project that focuses on the practical application of professional practice. Includes Level 1 design projects which require laboratory work. Prereq: 312, 321, 332, 342, 351.

411 Digital Signal Processing and Filter Design (3) Discrete-time and continuous-time signal sampling, discrete Fourier transforms, analog filter characteristics, nonrecursive and recursive filter design, and CAD tools for filter design. Includes Level 1 design projects which require laboratory work. Prereq: 310, 312.

412 Linear Control System Design (4) Classical and modern techniques for design and compensation of linear feedback control systems. Includes Bode design, root locus design, root locus design, compensator design, and compensator design. Includes Level 2 design projects which require laboratory work. Prereq: 411.

421 Electric Energy Systems (3) Structure and operation of the electrical energy grid; load flow; economic loading; planning; control; reliability. Balanced and unbalanced faults; system protection; system stability. Includes Level 1 design projects. Prereq: 311, 321.


433 Operational Amplifier Circuits (3) Linear and non-linear operational amplifiers, power supplies, and slewing amplifiers. Includes operational, instrumentation, isolation, bridge, rms and logarithmic converters, multipliers and signal processing, performance evaluation, testing of a complete analog circuit. Includes laboratory experiments and projects. Includes Level 2 design projects which require laboratory work. Prereq: 312, 332, 342.

434 Electronic Amplifiers (4) Feedback amplifier principles, stability, linearity, feedback compensation, low-noise op-amp design; audio power amplifier design; linear regulated power supply design and switching regulator principles. Introduction to radio frequency amplifier design; oscillator principles. Includes laboratory experiments and projects. Includes Level 2 design projects which require laboratory work. Prereq: 312, 332, 342.

441 Digital Communication (3) Discrete Fourier Transforms. Binary and M-ary Signaling, digital communication in presence of noise, parameter estimation, modulation, and equalization. Introduction to information theory. Includes Level 1 design projects. Prereq: 342.

442 Communication System Design (4) Application of communication theory to system design. Development of system simulation utilizing a graphical programming language. Hardware and software design and simulation. Construction and performance evaluation of a complete analog or digital transmitter and receiver or significant subsystems. Includes Level 2 design projects. Prereq: 441.

443 Antennas and Propagation (4) Introduction to antenna theory including fundamental antenna concepts, antennas and practical antennas, including transmission lines and signal propagation. Theory of linear and loop antennas, arrays, and other simple antennas. Includes Level 2 design projects which require laboratory work. Prereq: 341.

446 Electromagnetic Compatibility (3) Principles and practices to avoid interference among and within electrical devices. Parameters and coupling for dipole, biconical, and log-periodic antennas. Frequency effects in circuit elements. Radiated and conducted emissions and susceptibility. Crosstalk, shielding, electromagnetic discharge, and EMI regulations. Includes Level 1 design projects which require laboratory work. Prereq: 312, 341, and 342.

451 Microprocessors and Microcontrollers in Electrical Engineering (3) Project oriented course using a microcomputer kit having a monitor program and development system with cross-assemblers, file management, and emulation capability. Interfacing and hardware/software tradeoffs in interrupt driver applications. Grade is dependent upon number of projects completed, homework solutions, and engineering design notebook. Includes Level 1 design projects which require laboratory work. Prereq: 441.

471 Introduction to Pattern Recognition (3) Design of
learning and adaptive machines. Elementary decision theory, perceptron algorithm, Bayes classification rule, learning and adaptive machines. Prereq: Senior standing or consent of instructor. F, Sp

495 Special Topics (3) Topics relating to basic design and current research. May not be repeated to satisfy senior requirements for graduation. Maximum three hours. Prereq: Completion of all junior EE courses or senior requirements for graduation. Maximum three hours. (Same as Nuclear Engineering 484.) Sp

494-495 Special Topics in Industrial Engineering (1-3) Engineering statistical methods and new methodologies. May be repeated once. Prereq: Senior standing and consent of instructor. F, Sp

492 Power Electronics Circuits (4) Voltage-fed inverters, PWM principles, control of inverters, dc-dc converters, dc machines, magnetic design, converters, step motor drives, brushless dc machine principles. Includes Level 2 design projects which require laboratory work. Prereq: 301, 311, 321, 332.

491 Sp (Same as Nuclear Engineering 484.) Sp


484 Introduction to Maintenance Engineering (3) (Same as Nuclear Engineering 484.) Sp

483, 3-1-3) Recent developments in Industrial Engineering including new areas of application, new research tech- niques and new methodologies. May be repeated once. Prereq: Senior standing and consent of instructor. F, Sp, Su

482 Power Electronics Circuits (4) Voltage-fed inverters, PWM principles, control of inverters, dc-dc converters, dc machines, magnetic design, converters, step motor drives, brushless dc machine principles. Includes Level 2 design projects which require laboratory work. Prereq: 481.

481 Special Topics (3) Topics relating to basic design and current research. May not be repeated to satisfy senior requirements for graduation. Maximum three hours. Prereq: Completion of all junior EE courses or senior requirements for graduation. Maximum three hours. (Same as Nuclear Engineering 484.) Sp

472 Digital Image Processing (4) Basic methods for digitizing, storing, processing, and displaying images. Use of computer software for image enhancement, restoration, coding, and segmentation. Includes Level 1 design projects. Prereq: Senior standing. Non-majors require consent of instructor.


314 Introduction to Human Factors Engineering (3) Human characteristics and limitations affecting work, work place, and work environment design. Emphasis on human factors methodology, human input requirements, human outputs, the design of human-machine interfaces, the analysis of stress on performance, environment factors such as noise, lighting, and atmospheric conditions. Focus on designing the task to fit the person, rather than the person to fit the task. Prereq: 201. F, Sp, Su

310 Operation Research in Industrial Engineering II (3) Network models including PERT-CPM, introduction to nonlinear programming, stochastic processes, and queuing theory. Basic decision analysis techniques and their applications in engineering practice. Prereq: 301. Sp

309-310 Manufacturing Materials Seminar (0,1) A re- view of statical and dynamic properties of engineering materials. Emphasis on correlation between atomic structure, crystal structure and mechanical behavior. Prereq: Consent of instructor. F

308 Introduction to Manufacturing (3) Manufacturing concepts and techniques. Levels of automation and integration of manufacturing systems. Prereq: Consent of instructor. F


306 Simulation (3) Simulation of complex production processes using computer simulation software. Introduction to modeling concepts, flowcharting, random num- ber generation, design of experiments, simulation logic, and computer animation. Utilization of statistical tools to analyze inputs and outputs to simulation models. Lab component provides hands-on experience in develop- ing simulation models for relevant industrial engineering case studies. 2 hours lecture, 1 lab. Prereq: 202, 301. F, Sp, Su

305 Operations Research in Industrial Engineering (3) Advanced system modeling concepts, linear math- ematical programming models including the original simplex procedure, transportation and assignment prob- lems, integer programming, parametric linear programming (sensitivity analy- sis), and integer linear programming. Prereq: Math 200 and 231. Coreq: 300. F, Sp

304 Introduction to Human Factors Engineering (3) Human characteristics and limitations affecting work, work place, and work environment design. Emphasis on human factors methodology, human input requirements, human outputs, the design of human-machine interfaces, the analysis of stress on performance, environment factors such as noise, lighting, and atmospheric conditions. Focus on designing the task to fit the person, rather than the person to fit the task. Prereq: 201. F, Sp, Su

303 Simulation (3) Simulation of complex production processes using computer simulation software. Introduction to modeling concepts, flowcharting, random num- ber generation, design of experiments, simulation logic, and computer animation. Utilization of statistical tools to analyze inputs and outputs to simulation models. Lab component provides hands-on experience in develop- ing simulation models for relevant industrial engineering case studies. 2 hours lecture, 1 lab. Prereq: 202, 301. F, Sp, Su

302 Mechanical Behavior of Materials I (3) Thermom-


340 Principles of Polymeric Materials (3) Synthesis and molecular structure of polymers; polymerization kinetics; molecular characterization; crystalline and glass transitions; crystallization kinetics; mechanical properties; rheology and processing. Prereq: 201. F

360 Principles of Ceramic Materials (3) Characterization of ceramic materials as to their crystal structure, their mechanical, electrical, and optical properties. Ceramic fabrication processes from the initial green body fabrication through the firing stage. Prereq: 201.

380 Materials Selection in Design (3) Systematic materials selection in design. Review of material properties: use of property selection charts and indices. Materials selection, with and without shape constraints; materials processing in design; case studies. Sources of material property data, utilization of material data bases. Industrial design, aesthetics, economics, regulations, features, finishes. Prereq: 201 and consent of instructor. F

402 Principles of Metallic Materials (3) Property control through composition, mechanical and thermal processing; ferrous and nonferrous alloys; alloy selection. Prereq: 201.

405 Structural Characterization of Materials (4) X-ray diffraction and electron microscopy: scanning and transmission electron microscope; microanalytical techniques.


421 Mechanical Behavior of Materials II (3) Description of stress and strain; linear elastic constitutive equations, isotropic and anisotropic moduli in various materials; yield criteria; brittle fracture; crazing; plastic strain; fracture; metals, semiconductors, ceramics. Prereq: 302, ES 321, sophomore mathematics.

422 Chemical Process Metallurgy (3) Application of chemical thermodynamics to metallurgical processing. Ferrous and nonferrous pyrometallurgical refining, slag-metal equilibria, solidification, gas-metal processing. Prereq: 303. F

429 Introduction to Ceramic Matrix Composites (3) Characteristics of composites, including ceramic matrix composites: macromechanics and materials design; overview of fabrication techniques; microstructural characterization; physical and mechanical property evaluation; current and potential applications. Prereq: 201 and ES 321, or equivalent (same as Engineering Science 429).

443 Polymer Processing (3) Rheological measurements; flow through tubes and slits, including end effects and extrudate swell; selected applications, including screw extrusion, injection molding, synthetic fibers, including structure development, properties.

444 Plastics Fabrication and Design (3) Lectures, laboratories and field trips; unit operations of plastics fabrication; plastics classification; design and selection criteria; processing techniques. Prereq: 301; Chemistry 130, Coreq: Laboratory. Sp

470 Environmental Degradation of Materials (3) Mechanisms, measurement techniques and control of environmental degradation processes in metals, polymers, ceramics and composites; materials selection and design considerations. Prereq: 201. Recommended for chemical engineering, mechanical engineering, civil engineering and engineering science and mechanics majors. F

472 Fundamental Principles of Composite Materials (3) Physical principles basic to the design, manufacture and application of fiber reinforced polymers, metals and ceramics. Prereq: 302 or equivalent. (Same as Engineering Science 426) F

474 Biomaterials (3) Metals, polymers and ceramics utilized in orthopedic, cardiovascular, and dental surgical implant devices; corrosion and degradation problems; biocompatibility; response of body; importance of biological response to synthetic materials. Prereq: 201. Recommended for engineering science and mechanics majors.

475 Fracture-Safe Design (3) (Same as Engineering Science 423.)

484 Introduction to Maintenance Engineering (3) (Same as Nuclear Engineering 484).


494 Special Project Laboratory (1-3) Group or individual investigation of problems related to materials science and engineering. May be repeated to a maximum of 6 credits. Prereq: 201 and consent of instructor.

495 Thesis (3) Research problems in materials science and engineering with prior approval of a professor. May be repeated once. Prereq: Senior standing or consent of professor.

496 Special Topics in Materials Science and Engineering (1-3) Recent developments in materials research, developments, and/or applications. Prereq: Senior standing or consent of instructor.

ENGINEERING MECHANICAL (650)

331 Thermodynamics I (3) Energy and laws governing energy transformations; thermodynamic properties; thermodynamic cycles; applications to engineering problems. Prereq: Chemistry 130, Coreq: Mathematics 241, F, Sp, Su

332 Thermodynamics II (3) Properties of gases and mixtures; chemical reactions; equilibrium; compressible flow; applications to engineering problems. Prereq: 331. F, Sp, Su


345 Mechanical Engineering Instrumentation and Measurement (3) Fundamentals of measurement systems; standard instruments; dynamic characteristics of instruments; statistical data treatment; transducers; signal conditioning; strain, pressure, temperature and flow measurements. Coreq: 362; Prereq: ES 341, EE 341, F, Sp, Su

362 Mechanical Vibration (3) Free and forced vibrations of damped and undamped lumped parameter systems; energy methods; free vibration of continuous bodies. Prereq: ES 231, Mathematics 231. F, Sp, Su


366 Manufacturing Processes (3) Processes related to design of machine parts. Casting, hot and cold forming, forging, sheet metal forming. Machining, tolerances and surface finishes. Prereq: Materials Science 201, F, Sp


402 Fundamentals of Engineering (1) The course reviews topics covered on the Fundamentals of Engineering exam. Letter grade only. Prereq: Senior standing in Engineering

405 Microcomputer-Based Control of Electromechanical Systems (3) Application of microcomputers to control electromechanical devices. Application and theory: dynamics of machine control, assembly language programming, microcontroller architecture, stepping and DC motors, photodiode devices, A/D, D/A, interfaced circuits. Prereq: EE 201 or EE 301 and consent of instructor.

431 Seminar (1) Topics related to engineering including ethics. Formal oral presentation by students on engineering topics. Prereq: Senior standing. F

449 Mechanical Engineering Laboratory (3) Designing, conducting and reporting results of experimental exercises. Test standards and specifications. Analysis of data and formation of conclusions. 3 hours per week. Prereq: 332, 344, 345. Coreq: 475. F, Sp, Su

451 Systems and Controls (3) Analytical models of physical systems; comprised of combinations of mechanical, fluidic, electrical, and thermal components; feedback control systems, transient and frequency response, stability analysis; nonlinear control of linear systems; state space systems, digital filters. Prereq: ME 345, EE 301, F, Sp

455 Introduction to Machine Design (2) Engineering economy, optimization, design for automation, reliability, patents and product liability; design of mechanical engineering systems. May be taken in team design effort; requires design report. Prereq: ME 363. F

456 Introduction to Thermal Design (2) Engineering economy, optimization, design for automation, reliability, patents and production design of mechanical engineering thermal-fluid systems. Participation in team design effort; requires design report. Prereq: 332, 344. F

466 Elements of Machine Design II (3) Application of strength and properties of materials, design factors, theories of failure to design of machine elements. Mini design experiences. Prereq: Materials Science 201, EE 321, F, Sp. F

469 Machine Design (4) Design of complete machine; documentation including complete specifications, design calculations, work instructions, test and analysis. Written and oral report. Prereq: 366, 455, 466. Sp

471 Refrigeration and Air Conditioning (3) Vapor compression and absorption cycles; heat pump systems; psychrometric processes; air washers; cooling towers; solar radiation; building heat transmission. Prereq: 332, 344.

475 Thermal Engineering (3) Thermal systems with emphasis on turbomachinery, heat exchangers, corrosion and control systems and analysis. Emphasis on numerical methods including use of symbolic math and spreadsheet software packages and numerical solutions of systems of ordinary and partial differential equations. Participation in team design effort including presentations and design report. Prereq: 456, 475. Sp

484 Introduction to Maintenance Engineering (3) (Same as Nuclear Engineering 484.)

494-495 Selected Topics in Mechanical Engineering (1-4) Courses of Instruction 167

ENGINEERING NUCLEAR (716)

200 Introduction to Nuclear and Radiological Engineering (1) Topics related to nuclear and radiological engineering. Satisfactory/No Credit.


304 Nuclear and Radiological Engineering Laboratory (3) Application of techniques in instrumentation, counting statistics, half-life and decay schemes, gamma spectrometry, heat transfer experiments. Prereq: 342, Coreq: 470.
305 Energy Transport (3) Development of differential and integral energy conservation; conduction and convection heat transfer including numerical methods; application of nuclear reactor fuel elements, reactor cores, and heat exchangers. Prereq: 203.

342 Thermal Science (3) Fluid statics; conservation equations of mass, momentum, and energy; applications to fluid machinery; heat transfer processes, heat conduction, thermal radiation, free and forced convection. Prereq: NE 203 or ME 331.


360 Reactor Systems Safety and Safety and operating limits of nuclear steam supply system components; NRC regulations; accident analysis and mitigation. Prereq: 342.

400 Senior Seminar (1) Current topics related to nuclear and radiological engineering including ethics, contemporary issues, and commitment to life-long learning. Prereq: Senior standing. Satisfactory/No Credit.

403 Nuclear and Radiological Engineering Laboratory (II) (4) Comprehensive laboratory experiments, preparation of reports, properties of neutrons, shielding, dynamics and controls, alpha and beta spectroscopy, radiation fields and dosimetry. Prereq: 304.

404 Nuclear Fuel Cycle (3) Topics relative to nuclear fuel cycle integrating mining, fabrication, in-core management, reprocessing, waste disposal, regulatory and radiation health issues and requirements. Prereq: 470 or equivalent.

406 Radiation Shielding (3) Types of radiation sources, fundamentals of neutron attenuation, biological effects, approximate methods of shield design, discrete ordinates, and Monte Carlo. Prereq: Physics 252.

421 Introduction to Nuclear Criticality Safety (3) Fundamentals of nuclear criticality safety; criticality accidents; safety standards: overview of experiments, computational methods, and applications. Prereq: 301.

431 Radiation Protection (3) External and internal dosimetry, biological effects of radiation, radiation detection, radiation risk assessment. Prereq: 301.

432 Radiation Risk Analysis (3) Radiation risk estimates for external and internal radiation, dose-response models, dose rate prediction of radiation risks, radiation safety standards.

470 Nuclear Reactor Theory I (3) Fundamentals of reactor physics relative to cross sections, kinematics of elastic scattering, neutron kinetics, reactor systems and nuclear data. Analytical and numerical methods applicable to general criticality problems, eigenvalue searches, perturbation theory, and the multip组 diffusion equations. Prereq: 301.

471 Nuclear Reactor Theory II (3) Nuclear spectrum computer methods: heterogeneous effects in fast and thermal spectra; considerations in reactor core design; equations that relate thermal and neutronic variables; power distribution calculations and reactivity control methods. Prereq: 470.

472 Nuclear System Design (4) First order design and analysis of a nuclear system, interface with non-nuclear systems, computer assisted constructive testing, life testing, accelerated life tests, failure prediction, system reliability, preventive maintenance and warranties. Prereq: Senior standing or consent of instructor.

484 Introduction to Reliability Engineering (3) Probabilistic failure models, parameter estimation (maximum likelihood), Bayesian techniques, Model identification, failure prediction, parameter estimation, life testing, failure prediction, models, and software analysis, survivability, and reliability. Prereq: Senior standing in engineering and consent of instructor. (Same as Materials Science and Engineering 484, Industrial Engineering 484 and Mechanical Engineering 484).

494 Special Topics in Nuclear Engineering (3) Problems related to recent developments and practice. Prereq: Senior standing, consent of instructor. May be repeated.

495 Special Topics in Radiological Engineering (3) Problems related to recent developments and practice. May be repeated. Prereq: Senior standing or consent of instructor.

498 Research (1-3) Research related to recent developments in nuclear and radiological engineering. Prereq: Consent of department head. Satisfactory/No Credit.

ENGINEERING SCIENCE

335 Dynamics (3) Kinematics of rigid bodies; center of mass; kinematics of systems of particles; mass moments of inertia; kinetics of rigid bodies; Newton's laws, work-energy, impulse-momentum. Prereq: Engineering Fundamentals 101, 102, Mathematics 241, F, K, F, Su.


322 Mechanics of Materials II (3) Analysis and design of beams, singularity functions, energy methods, thick-walled pressure vessels, inelastic bending and torsion, theories of failure and fatigue. Prereq: 321. F.

323 Mechanical Behavior of Materials (3) (Same as Materials Science 302) Sp

341 Fluid Mechanics I (3) Introduction to fluid flow concepts; hydrostatics; development of mass, momentum, and energy conservation laws in integral and differential form; dimensional analysis and similarity; viscous laminar and turbulent flows in pipes; introduction to boundary layers. Prerequisites: ES 231, Mathematics 241. F, K, F, Su.

423 Fracture-Safe Design (3) Critical variables of containing fractures and failure. Understanding of geometry; temperature, loading rate, section size, material; characterization of fracture toughness by stress intensity factors; strain energy release rates. J integral, COD data, transition temperature tests; use of fracture toughness data in design, 3 hours or 2 hours and laboratory. Prereq: 321 and Materials Science 201. (Same as Materials Science 429.)

426 Fundamental Principles of Composite Materials (3) (Same as Materials Science 472.)

429 Introduction to Ceramic Matrix Composites (3) Characteristics of composites, including ceramic-matrix composites; macromechanics and materials design; characterization; fabrication; mechanical properties; chemical and physical property evaluation; current and potential applications. Prereq: MSE 201 and MSE 321, or equivalent. (Same as Materials Science 429.)

427 Fluid Mechanics II (3) Integral forms of linear and angular momentum, energy; pumps and turbomachinery; performance/similarity; differential conservation equations; internal one-dimensional incompressible and compressible flows; potential flow methods of flow measurement; laboratory. Prereq: 341, Mathematics 231, 241. Sp

452 Computational Mechanics (3) Integration of fundamental physical laws, mathematical methods and computer programming to prepare engineering analysis and design capabilities. Finite element method. Prereq: ES 321. F

453 Projects in Design (3) Conceptualization, analysis, design, and presentation of engineering projects. Prereq: Senior standing in ES; 301, 303, 311, and 341. Coreq: ME 344. F

454 Computational Mechanics in Design (3) Computation techniques applied to engineering design problems. Prereq: 452, 453, ME 363. Sp

455 Dynamic Data Acquisition (3) Use and calibration of instrumentation for measuring and recording dynamic experimental data. Fourier function analysis, digital signal processing, transduction, experimental parameter estimation with applications to modal vibration analysis. 2 hours and laboratory. Prereq: EE 301, ME 363. Sp

475 Design of Artificial Internal Organs (3) Design, development and evaluation of artificial internal organs; analysis of transport processes in therapeutic devices for design optimization; review of currently available devices; federal regulation and ethical considerations. Prereq: 341, Mathematics 231.

494-495 Special Engineering Science Topics (1-3) Problems related to recent developments and practice. May be repeated once for credit. Prereq: Senior or junior standing, consent of instructor.

ENGLISH (339)

Completion of the English composition requirement is required to all other English courses.

101 English Composition I (3) Strategies for written argumentation, critical reading, and discussion; emphasis on audience analysis, the invention and arrangement of ideas, and revision for style and mechanics; typical assignments include formal essays, in-class essay exams, journals, quizzes and collaborative projects; two individual conferences required. Students receiving a grade below C in 101 will complete their freshman English requirements by choosing 102, a sophomore literature course in the English Department, or 355. A, B, C, NC grading.

102 English Composition II (3) Critical strategies for reading and writing about literature; emphasis on the documented essay, library skills, and continued development of style and voice; assignment may include analytical essays, annotated bibliographies, journals, quizzes, and collaborative projects; two individual conferences required. Students receiving a grade below C in 102 will complete their freshman English requirements by choosing 103, a sophomore literature course in the English Department.

103 Writing Workshop I (1) Self-paced Writing Center tutorial for students wanting additional instruction while enrolled in English 101 or having ACT English and composite scores at or below 18 (or SAT verbal/composite scores at or below 450/850). Individual instruction in mechanics, paragraph writing, and essay structure. To receive credit, a student must participate at least two hours per week and must also pass the 101 class in which he or she is currently enrolled. S/N grading.

104 Writing Workshop II (1) Self-paced Writing Center tutorial for students wanting additional instruction while enrolled in English 102 or students advised to enroll by their 102 instructors. Individual instruction in critical reading and in developing and documenting the research paper. To receive credit, students must participate at least two hours per week and must also pass the 102 class in which they are currently enrolled. Prereq: English 101. S/N grading.

118 Honors English Composition (3) For students whose ACT English and Composite scores are at or above 28 (or SAT verbal/composite scores at or above 650/1250). Grading scale as high as an A. This course may be repeated up to a maximum of 3 credits. Prereq: junior or senior standing, consent of instructor. May be repeated. Prereq: NE 203 or ME 331. Senior standing, consent of instructor. Problems related to recent developments and practice. May be repeated once for credit. Prereq: Senior or junior standing, consent of instructor.

121 Academic English for Non-Native Speakers (4) Development of English academic literacy, including reading, writing, vocabulary, and grammar as well as some attention to listening, oral presentation, and pronunciation. Required of all non-native English speaking students who demonstrate on the English Placement Exam a need for academic English instruction. Includes reading, listening, and writing. Admission to this course is by the English Placement Exam only. Meets four hours a week. A, B, C, F grading.

131 Composition for Non-Native Speakers of English (3) Paragraph and essay writing, organization, and development with emphasis on informative and persuasive writing. Includes grammar and mechanics. Individual conferences are a normal part of this course by the English Placement Exam only. A, B, C, NC grading.

132 Composition for Non-Native Speakers of English II
207 Honors British Literature I (3) Major literary works from three periods: Middle Ages, Renaissance, and Restoration and Eighteenth Century. Writing-emphasis course.

208 Honors British Literature II: Wordsworth to the Present (3) Major literary works from three periods: Romantic, Victorian, and the Twentieth Century. Writing-emphasis course.

238 Honors American Literature II: Civil War to the Present (3) Development of American literature from its beginnings to the Civil War. Writing-emphasis course.

239 Major Black Writers (3) Black American literature as a literary tradition. Writing-emphasis course.

301 British Culture to 1660 (3) Major literary works from the Middle Ages to Restoration and Eighteenth Century. Writing-emphasis course.

302 British Culture: 1660 to present (3) Major literary works from the eighteenth century to the present. Writing-emphasis course.

398 Junior-Senior Honors Seminar (3) Seminar for students admitted to English honors program. Variable 6 hours. (Same as African and American Studies 361.)

401 Medieval Literature (3) Reading and analysis of selected medieval literary masterpieces in modern English. Writing-emphasis course.

402 Chaucer (3) Study of one major genre or literary style. Emphasis limited to 15. See Director of Undergraduate Studies for approval. (Same as English Studies 405.)

404 Shakespeare I: Early Plays (3) Shakespeare’s dramatic achievement before 1601. Selected plays from the romantic comedies (e.g., Twelfth Night), the English histories (e.g., 1 Henry IV) and early tragedy (e.g., Hamlet).

405 Shakespeare II: Later Plays (3) Shakespeare’s dramatic achievement between 1601 and 1613. Selected plays from the great tragedies (e.g., Othello), the problem plays (e.g., Measure for Measure), and the dramatic romances (e.g. The Tempest).

406 Renaissance Drama (3) English theatre between 1560 and 1640. Study of play-writing by Shakespeare’s contemporaries (e.g., Marlowe, Webster, Jonson).

409 Spenser and his Contemporaries (3) Principal achievements in prose and poetry of the first two-thirds of the seventeenth century (such as the poetry of Milton, Donne, Marvell; and the prose of Browne, Bacon, Walton).

411 Literature of the Restoration and Early Eighteenth Century: Dryden to Swift (3) Survey of English literature and culture from 1660 to 1745.

412 Literature of the Later Eighteenth Century: Johnson to Burns (3) Survey of English literature and culture from 1745 to 1800.

413 Restoration and Eighteenth-Century Genres andModes (3) Study of one major genre or literary mode by major authors or groups of authors. Writing-emphasis course.

415 Romantic Poetry and Prose I (3) Emphasis on Wordsworth, Coleridge, and Blake, with readings from Lamb, De Quincey, and other prose writers.

416 Early Victorian Literature (3) May include poetry by Tennyson and the Brownings; prose by Carlyle, Newman, and Mill.

419 Later Victorian Literature (3) May include poetry by the Pre-Raphaelites, Arnold, Hopkins, and Hardy; prose by Arnold, Ruskin, and Carroll; plays by Gilbert and Wilde.

420 The Nineteenth-Century British Novel (3) Major novelists from Scott to Hardy.

421 Modern British Novel (3) Authors such as Joyce and Woolf through contemporary British fiction writers.

422 Women Writers in Britain (3) Emphasis on the literature and cultures of the works of women writers in Britain. Course content will vary. Authors covered may include Marie de France, Margery Kempe, Aemlia Lanyuer, Elizabeth Carr, VirginiaBehn, Frances Burney, Mary Wollstonecraft, Mary Shelley, George Eliot, Virginia Woolf, and Doris Lessing. May be repeated. Maximum 6 hours. (Same as Women’s Studies 422.)

431 Early American Literature (3) From the earliest texts to 1830, including exploration and discovery, Native American, colonial, revolutionary, and early national works.

432 American Romanticism and Transcendentalism (3) Prose and poetry of the American Renaissance, from c. 1830 to the end of the Civil War. Includes writers such as Cooper, Poe, Henry David Thoreau, Melville, Emerson, Thoreau, Stowe, Douglass, Whitman, and Dickinson.

433 American Realism and Naturalism (3) Literature from the time of the Civil War to World War I, including such writers as Twain, Howells, James, Jewett, Free man, Norris, and Norris.

434 Modern American Literature (3) World War II to the present.

435 American Novel Before 1900 (3) From earliest sentimental novels through Brown and Cooper, and major figures to 1900, including Hawthorne, Melville, Stowe, Clemens, and James.

436 Modern American Novel (3) Authors such as Faulkner, Steinbeck, Welty.

441 Southern Literature (3) Southern writing from colonial period into the twentieth century, including frontier humorists, local color writers, and southern literary renaissance.

442 American Humor (3) Development of American humor from the early eighteenth century to the twentieth century, with particular emphasis on Mark Twain. (Same as American Studies 442.)

443 Topics in Black Literature (3) Contents vary according to particular genres, authors, or theories from 1845 to the present, including Langston Hughes and the Harlem Renaissance. Richard Wright and Gwendolyn Brooks, writing by Black women, international Black literature in English, and Black American autobiography. (Same as African and American Studies 443.)

451 Modern British and American Poetry (3) From Yeats
and Frost to Auden, Stevens, and more recent poets.

452 Modern Drama, 1880-1945 (3) Survey of British, American, and international drama from the advent of modern drama to the end of World War II. (Same as Comparative Literature 452.)

453 Contemporary Drama (3) Survey of British, American, and international drama since World War II.

454 Twentieth-Century International Novel (3) Fiction in English translation from such writers as Kafka and Camus through contemporary authors. (Same as Comparative Literature 454.)

455 Persuasive Writing (3) Focuses on writing and analyzing persuasive texts in public, private, and academic contexts. Prereq: 355 or consent of instructor.

456 Contemporary/Postmodern Literature (3) Content varies. May be repeated once with permission of instructor.

460 Technical Editing (3) Editing technical material for publication. Disciplines, essays, articles, and journals, and the role of design and technology. Prereq: 360 or consent of instructor.

462 Writing for Publication (3) Principles and practices of writing for publication. Dissertations, theses, articles, and journals. Integrates writing and research. Prereq: 360 or consent of instructor.

463 Advanced Poetry Writing (3) Development of skills acquired in basic Writing Poetry course. Prereq: 360 or consent of instructor.

464 Advanced Fiction Writing (3) Development of skills acquired in basic Writing Fiction course. Prereq: 364 or consent of instructor.

466 Writing, Layout, and Production of Technical Documents (3) Principles of design for desktop publishing. Production of various documents to be incorporated into a professional portfolio. Prereq: 360 or consent of instructor.

470 Special Topics in Rhetoric (3) Topics vary. May be repeated with consent of department. Maximum 6 hours. Prereq: 355 or consent of instructor.

471 Sociolinguistics (3) Language in relation to society. Empirical and theoretical focus. Emphasis on large-scale units: tribes, nations, subcultures, groups; Prereq: 371 or 372 or Linguistics 200 or consent of instructor. (Same as Linguistics 471 and Sociology 471.)

472 American English (3) Phonomological, morphological, and syntactic characteristics of major social and regional varieties of American English, with attention to their origins, functions, and implications for cultural pluralism. Prereq: 371 or 372 or Linguistics 200 or consent of instructor. (Same as Linguistics 472.)

474 Teaching English as a Second or Foreign Language I (3) Introduces major issues surrounding teaching ESL/EFL, including political implications of teaching ESL/EFL; introduction to second language acquisition; learner variables in language learning; traditional and innovative approaches to ESL/EFL; basic features of American English grammar necessary for teaching ESL. Prereq: Second year of a foreign language or consent of instructor. (Same as Linguistics 474.)

475 Teaching English as a Second or Foreign Language II (3) Covers issues, principles, and techniques in teaching grammar, speaking, pronunciation, reading, and writing. Includes observations and teaching practice in ESL classes and development of ESL materials and tests. Prereq: 474. (Same as Linguistics 475.)

476 Second Language Acquisition (3) How humans learn second languages. Examines theoretical models and research on such issues as differences between first and second language acquisition; the effect of age; cognitive factors in language acquisition; learner variables; sociocultural factors; and implications for second/foreign language instruction. (Same as Linguistics 476.)

477 Pedagogical Grammar for ESL Teachers (3) Aspects of language development and morpho-syntactic difficulties for non-native learners of English. Basic and complex sentence structures; the noun and article system; and verb tense, aspect, modality, and complementation. (Same as Linguistics 477.)

479 Literary Criticism (3) Historical survey of major works of literary criticism.


481 Studies in Folklore (3) Topic varies. May be repeated with different topic. Maximum 6 hours.

482 Major Authors (3) Content varies. Concentrated study of at least one of the most influential writers in British or American literary history: e.g., Donne, Pope, Dryden, Tennyson, Wordsworth, Thackeray, Lawrence, Baldwin, or Morrison. May be repeated. Maximum 6 hours.

483 Special Topics in Literature (3) Topics vary. May be repeated. Maximum 6 hours.

484 Special Topics in Writing (3) Original writing integrated with readings usually taught by the author. Topics vary. May be repeated. Maximum 6 hours.

485 Special Topics in Language (3) May be repeated. Maximum 6 hours with consent. (Same as Linguistics 485.)

486 Special Topics in Criticism (3) Content varies. Special focus in theoretical and practical approaches to British and American literature. May be repeated with consent of department. Maximum 6 hours.

489 Special Topics in Film (3) Content varies. Particularly directors, film genres, national cinema movements, or other topics. May be repeated with consent of department. Maximum 6 hours. (Same as Cinema Studies 489.)

490 Language and Law (3) Language in the Anglo-American legal process: focus on differences between spoken and written language; lexical and syntactic ambiguity; pragmatics; speech act analysis; and the language rights of linguistic minorities. Prereq: 371 or 372 or consent of instructor. (Same as Legal Studies 490 and Linguistics 490.)

491 Foreign Study (1-15) Seeing, studying, and writing about drama as performed in London and Stratford-upon-Avon during the summer.

492 Off-Campus Study (1-15) Seeing, studying, and writing about drama as performed in New York City.

493 Independent Study (1-6) Tutorial in subjects not adequately covered in regular courses. May be repeated for a total of 6 hours credit.

495 Introduction to Rhetoric and Composition (3) Introduction to the historical, theoretical, and empirical modes of inquiry in rhetoric and composition and their implications for the teaching of composition. Prereq: 355 or consent of instructor.

496 The Rhetoric of Legal Discourse (3) Applying basic principles of persuasive writing to legal materials. Writing position papers, briefs, and memoranda, students learn issue identification and argument. Critical reading and discussion of both professional and student writing. Introductory legal research techniques. No prior legal knowledge necessary. Prereq: 355 or consent of instructor. (Same as Legal Studies 496.)

498 Senior Honors Paper (3) Second semester of English honors program. Working individually, the student produces a substantial creative or critical project under the direction of two members of the professional staff. Prereq: 398.

499 Senior Seminar (3) Intensive study in an author, period, genre, or of problems in language, literary history, or theory. Content varies, but all sections address problems of value from an interdisciplinary perspective. Substantial research paper required. Restricted to majors who have completed 15 upper-division hours in English. Writing emphasis course. Capstone experience.

ENGLISH EDUCATION (340)

141 Efficient Reading and Study Skills (2) Improvement in reading, vocabulary enrichment, study skills as they relate to content area subjects. Satisfactory/No Credit only. F, Sp

453 Adolescent Literature (3) Literature written or appropriate for adolescents.

456 Teaching Speech and Drama, Grades 7-12 (3) Purposes, techniques, materials and evaluation for teaching Speech and Drama in secondary schools. Required for certification in Speech. Prereq: Admission to Teacher Education Program. F

459 Teaching English in the Secondary School (3) Techniques of teaching composition, language, and literature. Prereq: Admission to Teacher Education Program. F

460 Teaching Reading and Literature in the Secondary School (3) Teaching basic reading skills and literature. Sp

461 Developing Reading Skills in Content Fields (3) Teaching reading and study skills in content areas of the school curriculum. Extensive use of textbooks. Emphasis on middle school and high school. F, Sp, Su

ENTOMOLOGY AND PLANT PATHOLOGY (341)

306 Forest Protection (3) Biological, economic and legal consideration of fire, pathogens, insects, vertebrates, wind, and pollinants in the forest ecosystem. One or more all day or overnight field trips may be required. Prereq: FWF 311, or consent of instructors. 2 hours and 1 lab. (Same as forestry 306.) Sp, E

313 Plant Pathology (3) Introduction to the microorganisms and environmental conditions causing disease in plants. Biology of pathogens, host-pathogen interactions, disease development, disease control. Prereq: Six hours of Biological Science. 2 hours and 1 lab. Sp, E

325 Veterinary Entomology (3) Identification, biology and control of arthropods that attack major livestock species. Emphasis on the study of parasites, disease control, major pest species, groups and strategies associated with specific host production operations. Prereq: Biology 122 or equivalent. 2 hours and 1 lab. F, E

410 Diseases and Insects of Ornamental Plants (3) Symptom identification and management of diseases and insect pests that affect plants in greenhouse, nursery, and landscape environments. Prereq: 313 or 321 (or consent of the instructor). 4 hours. Sp, A

EXERCISE SCIENCE (347)

100 Orientation to Exercise Science (1) Overview of discipline and areas for incoming Exercise Science majors. Must be taken prior to admission to the Exercise Science major.

260 Exercise Science Practicum (1) First practical experience to support and clarify career goals. Satisfactory/No Credit grading only. Prereq: 100.

276 Fitness for Life (2) Evaluation and discussion of factors related to optimal health: cardiorespiratory function, muscular strength and endurance, flexibility, low back function, nutrition, and stress. Emphasis on evaluation of current status with recommendations for change toward reasonable health-related goals. (Same as Physical Education 276.)

322 Fitness Activities (2) Methods of instructing and leading fitness activities, including jogging, exercise to music, senior activities, and senior games. 1 hour lecture; 3 hour lab. Prereq: At least junior standing and progression to the major.

325 Athletic Training Techniques (3) Prevention of athletic injuries through sound conditioning programs and pre-sports recognition and immediate treatment of injuries. Prereq: 332 and progression to the Exercise Science major or consent of instructor.

332 Applied Anatomy (3) Structure, identification and management of bones and muscles. 3 hour lecture, 1 hour lab. Prereq: 332.

350 Disease and Injury: Epidemiologic and Demographic Perspectives (3) Disease and injury mortality and morbidity patterns, trends, differentials and causes are examined from perspectives of population-based sciences of epidemiology and demography. Completion of college course in statistics or mathematics is recommended.
421 Investment Analysis (3) Principles and concepts of asset valuation in competitive and efficient financial markets. Basic analytical tools are developed and used to determine value of different types of securities. Major writing requirement. Prereq: 301.

422 Portfolio Analysis and Management (3) Portfolio theory and evidence of behavior of security returns with a view to determining rational investment policy. In- cludes emphasis on risk and return. Analysis of mode- los, portfolio evaluation and revision, capital market theory, and extensions of portfolio analysis. Prereq: 301, 421 and Major standing.

430 Financial Markets (3) Role of short and long term financial markets in the process of capital formation and allocation. Theories and mathematics of interest rates in money and capital markets. Prereq: 301.


460 Advanced Topics in Financial Management (3) Contemporary issues in corporate finance, liquidity and current asset management, corporate growth and con- trol, international financial management, and pension funds. Major writing requirement. Prereq: 301.

470 Risk Management and Insurance (3) Identification, measurement and decision making with regard to insurance-type risks facing the firm. Emphasizes han- dling these risks in the most cost-efficient manner. Prereq: 301.


482 Urban Development and Finance (3) Economic analysis of determination of urban land value and use, and discussion of current urban problems in the United States. Prereq: 140 and 240 or consent of instructor. 2 hours lecture and 1 lab.

493 Independent Study (1-6) Letter grade only. Prereq: Consent of Instructor and Department Head.

FIRST YEAR STUDIES (355)

101 Approaches to the University (2) Integration into the academic life of the campus, including the nature and purpose of a college education, career planning, the organization of university disciplines, and assessment of special needs in areas such as time management, study skills, counseling, and financial aid. Satisfactory/No Credit grading. Meets twice weekly.

401 Peer Mentor Techniques (1) Training of upperclass students as mentors and advisors for freshmen. In- cludes cognitive and developmental theories of the college-age student, teaching and learning styles, group communication, and communication and advising skills. Prereq: Consent of instructor.

402 Peer Mentor Practicum (1) Peer mentoring of First Year Studies Students. Prereq: 401 and consent of instructor. S/N/C only. May be repeated. Maximum 3 hours.

FOOD SCIENCE AND TECHNOLOGY (390)

140 The Food Industry (3) Introduction to the food industry and the production of fresh and processed foods. Major writing requirement. Prereq: 140.

240 Field Observations in Food Processing (2) Intro- duction to, observation of and familiarization with pro- cessing, packaging, quality control and distribution of different types of foods. Prereq: 140 and consent of instructor. 75-minute lecture/labs.

259 Evaluation and Grading of Dairy Products (2) Evaluation and scoring of milk, ice cream, cheddar cheese, cottage cheese, yogurt and butter. Prereq: 140 or consent of instructor. 75-minute lecture/labs.

269 Meat Evaluation and Grading (2) Grading stan- dards for quality and yield; principles for evaluating beef, pork and lamb, and application of standards for institu- tional meat cuts. Practice grading, judging carcasses and cuts, and application of purchase specifications. F

340 Food Preservation (3) Principles, methods and equipment used for preservation of foods. Prereq: 140 and 240 or consent of instructor. 2 hours lecture and 1 lab.

474 Food Technology and Science Seminar (1) Indiv- idual selection: group discussion on current topics. May be repeated; maximum 3 credit hours. Prereq: Senior standing or consent of instructor.

410 Food Chemistry (4) Reactions of water, proteins, lipids, carbohydrates, minerals, enzymes, vitamins, and additives in foods. Prereq: Chemistry 110 or equivalent. F


492 Food Microbiology (3) Chemical, physical and environmental factors moderating growth and survival of foodborne microorganisms; pathogenic and spoilage microorganisms affecting quality of foods and their control. Prereq: Microbiology 210. Coreq: 429. F

430 Sensory Evaluation of Food (3) Principles and methods of sensory evaluation of foods. Prereq: Basic statistics. 2 hours and 1 lab.

442 Special Topics In Food Science and Technology (1-3) Topics of current concern to the food industry. May be repeated; maximum 9 hours. Prereq: Consent of instructor. Letter grade or Satisfactory/No Credit grading. S

452 Science of Dairy Foods (3) Science and technol- ogy of the processing of milk and its products. Prereq: 290, 310, 320-29, and 340 or consent of instructor. 2 hours lecture and 1 lab.

460 Meat Products Technology (3) Carcass characteristics of meat animals, muscle structure and composi- tion, cut identification, curing, freezing and cookery. Prereq: 140 or consent of instructor.

469 Meat Science Lab (1) Slaughter and processing methods for beef, pork, lamb and poultry. Coreq: 460. 1 lab.

470 Food Crop Products (3) Food products from plants emphasizing types, manufacturing systems, quality at- tributes and utility. Prereq: 340, and 3 hours biological science or consent of instructor. 2 hours and 1 lab. A, S

480 Cereal Science and Bakery Products (3) Chem- istry and technology of processing cereal grains; inter- action of baking and making and storage of bread and baked products. Prereq: 290, 310 and 340 or consent of instructor. 2 hours and 1 lab. A, S

490 Food Laws and Regulations (3) A comprehensive examination of the laws and regulations designed to preserve the safety, wholesomeness, and nutritional quality of the United States food supply with an in-depth analysis and discussion of precedent case studies and their impact on laws and regulations. Coreq for courses in Food Science and Technology will serve as an essential basis for understanding of material covered in this course. Prereq: 140; non-majors must obtain consent of instructor.

493 Independent Study (1-12) Specialized research in areas of interest under faculty direction. Field experi- ence in supervised internship in the food industry. May be repeated; maximum 12 hours. Prereq: Consent of instructor.
FORESTRY (396)

100 Forests and Forestry in American Society (3)
Introductory course examining the role of forests in shaping American culture and society and exploring the evolution of the forestry profession in the North America. F


306 Forest Protection (3) (Same as Entomology and Plant Pathology 306.) Sp

314 Economics of Forest and Wildland Resources (2) Basic principles of forest resource economics; microeconomic applications in forestry; non-market valuation and analysis; financial analyses of private and public forest resource development and use. Prereqs: FWF 313, Economic Analysis 201, or consent of instructor. F

315 Forest Ecology (3) Ecological interactions in forests among tree species, other plant and animal species, and their environment. Forest ecosystem classification; energy, nutrient, and hydrologic cycles; site quality. Perturbations and growth, survival and forest composition; forest succession. Fire ecology. Regeneration ecology through establishment and stand dynamics. Physiological ecology, ecological strategies, and adaptations of trees. Prereq: FWF 311. 2 hours and 1 lab. Sp

321 Wildland Recreation (3) Philosophical foundation of recreation/planning, development, and management of forest recreation resources; interpretation of forest resources. Overnight weekend field trips may be required. Prereq: English 102 and Speech 210 or 240 or consent of instructor. F


323 People and Forest Practices (2) Examination of how people perceive, value, and respond to forest resources at large and are affected by forest management practices. Case studies and field applications will concentrate on the wide variety of linkages that exist in society among people and forests. Application of basic skills of collaborative problem solving will be emphasized. Overnight weekend field trips required. Prereq: Coreq: 305, 306, 322, 324, 326, 329 and 330. Sp

324 Forest Resource Analysis (2) Growth and yield prediction; financial analysis of forest management alternatives; incorporating computer simulation, risk and uncertainty, and investment decisions; goal setting under multiple use concepts; valuation and appraisal of forest uses. Prereq: 314. Coreq. 305, 306, 322, 323, 326, 329, 330. Sp


331 Wood Properties and Uses (2) Wood as a biological material; detailed examination of the woody cell wall; influence of environmental and site conditions on wood formation and quality; properties of wood and the relationship of the woody cell wall to these properties; wood use in important commercial products; day field trip may be required. Prereq: Forestry and Fisheries 110 or consent of instructor. Coreq: 332 for Forestry majors. Sp

332 Wood Identification (1) Cell structure and arrangement as a tool for species identification; microscopic and hand lens identification of important common trees. Textbooks, charts, mechanical keys, laboratory procedures for making temporary slides for microscopic examination; student use of reference collection of wood samples provided by the instructor. Prereq: Forestry, Forest, and Fisheries 311 or consent of instructor. Coreq. 332 for Forestry majors. Sp

415 Forest Conservation Workshop (1-3) How forest biology, ecology and management relate to conservation issues; how current conservation issues can be integrated into classroom work and student projects, environmental education strategies. Prereq: Consent of instructor. May not be taken by forestry or wildlife and fisheries majors. May be repeated. Maximum of 3 hrs. Su, F

420 Forest Resource Management (2) Introduction to forest-level management concepts from an economic perspective. Harvest determination; goal setting under multiple use concepts; development of harvest plans; linear programming and harvest scheduling; goal programming. Prereq: 314 and 324, or consent of instructor. F

421 Forest and Wildland Resource Economics (3) Production functions, supply-demand and market analysis; non-market programs and projects; economic analysis and decision models; investment and financial analysis; managerial economics; taxes; forest products marketing. Prereq. 324 or consent of instructor. F

422 Forest and Wildland Resource Policy (3) Policy formulation; criteria for policy determination; forest and wildland law and regulation; theory of conflict resolution, formal and informal in American society. Prereq: Senior standing or consent of instructor. F

423 Wildland Recreation Planning and Management (3) Planning processes, master and site planning, site design projects; management strategies, methods of visitor and recreation site management; case studies. Weekend field trips may be required. Prereq: 321 and Junior standing in Wildland Recreation concentration, or consent of instructor. 2 hours and 1 lab. Sp

432 Wood Adhesives and Glued Wood Products (2) Theory and practice of adhesive bonding; study of the wood substrate-adhesive interface for bonding; principles of adhesion; wood adhesives; gluing of solid wood; adhesives used in shop and mill. Laboratory manufacture and/or testing of adhesives, adhesive bond strength and glued-wood product performance; day field trips may be required. Prereq: 331 and 332, or consent of instructor. 1 hour lecture and 2 hour lab. F

434 Wood Processing and Machining (2) Processing of wood including primary log breakdown and secondary processing into major products. Fundamentals of machining technology for major types of cutting operations including sawing, boring, planing, veneer cutting, and laser/machining. Daily day field trip may be required. Prereq: 331 and 332, or consent of instructor. 1 hour lecture and 2 hour lab. Sp

435 Wood Drying and Preservation (2) Discussion of wood moisture relations. Introduction to commercial wood drying equipment and practices. Failure analysis, specification, and disposal of preservative treated wood. Day field trips may be required. Prereq: 331 and 332 or consent of instructor. F

436 Wood Industry Survey (1) Industry descriptions and analysis, case histories, survey of sawmill, plywood, pulp and paper, plywood, flooring, furniture and wood treatment. Day field trips may be required. Prereq. Senior status in Wood Utilization Concentration or consent of instructor. Sp

492 Practicum in Forestry (1-6) Supervised experience in departmental-approved employment. Prereq: Forestry, Junior standing. Satisfactory/No credit only. E

493 Independent Study in Forestry (1-15) Special research or individual problem in forestry. Letter grade or Satisfactory/No Credit. E

495 Internship in Wildland Recreation (1-6) May be repeated. Maximum 6 hours. A highly structured field experience guided by specific learning objectives pre-approved by the instructor and the field supervisor. The student is responsible for field placement. One credit per two weeks of full-time field experience. Prereq: Junior standing, consent of instructor. E

496 Internship in Forestry (1-6) Supervised experience at departmental-approved employment location arranged by the student. Internship learning objectives must be pre-approved by the advisor/instructor and the field supervisor. A highly structured field experience. Final report required. One credit per two weeks of full-time supervised field experience. Maximum. Prereq: Junior standing, consent of instructor. May be repeated. Maximum 6 hours.

FORESTRY, WILDLIFE AND FISHERIES (398)

100 Current Issues in Renewable Natural Resources (1) Current resource issues presented by invited guest speaker each week; student discussion and interaction with speaker; some written work required; topics and speakers change each offering; attendance required at all class meetings. May be repeated. Maximum 3 hours. Satisfactory/No credit only. F

211 Introduction to Forestry, Wildlife and Fisheries (3) History of natural resources policies and practices; sociopolitical objectives and methods concerning natural resources and their use; techniques of integrated natural resources management, ecological principles, current policies, social trends, and forest and wildland resource use. Sp

250 Conservation (3) Use and abuse of wildland resources. Historical perspectives and current management of forests, wildlife, and fish of North America including aspects of outdoor recreation and pollution problems. Sp

311 Dendrology and Silvics of North American Trees (3) Identification, classification and nomenclature of important North American trees and woody scrubs; forest applications; silvical characteristics of trees and stands as the basis for the practice of silviculture. Day-long field trips may be required. Prereq: 1 year of Botany or Biology. 2 hours and 1 lab. F

312 Principles of Silviculture (3) Principles for treating forest stands to achieve selected objectives. Prereq: Chemistry 100, Coreq. PSS 210, 311, and (for Forestry majors) 313. 2 hours and 1 lab. F

313 Measurements and Sampling (2) Measurement techniques and sampling methods for vegetation; estimation of animal populations; machine harvesting of forest products. Prereq: Statistics 201, Agriculture and Natural Resources 290, Mathematics 125. Coreq: FWF 312, 1 hour a lab. F

317 Principles of Wildlife and Fisheries Management (3) Ecological relationships of wild animals with other animals and their habitats. Biological, social and economic aspects of their management. Prereq: 211 or 250, Statistics 201, Wildlife and Fisheries 290, Mathematics 125, Chemistry 100 and Biology 230. F

410 Wildland Habitat Evaluation and Management (3) Ecological relationships between wildlife and their habitat. Evaluation, modeling, and management of wildlife habitat. Effectiveness of land-use practices on wildlife habitat. Weekend field trips required. Prereq: 317 or consent of instructor. 2 hours and 1 lab. F

412 Managing Natural Resource Organizations (3) Human, bureaucratic and managerial factors influencing effectiveness of natural resource organizations. Alternative stakeholder and public involvement objectives, strategies and mechanisms including client-customer relationship and adversarial; conflict resolution, pro-active collaborative problem solving and alliance building. Prereq: 317 or consent of instructor. (Formerly: 211, 317 and Junior standing) 2 hours and 1 lab. Sp

416 Planning and Management of Forest, Wildlife and Fisheries Resources (3) Application of field work and wildland resource management through developing land management plans and analyzing case studies including conflict resolution. Prereq: Senior standing. 1 hour and 2 labs. Sp
FRENCH (405)

111-112 Elementary French (3,3) Language Laboratory required. Must be taken in sequence. Not available to students eligible for French 150. E

150 Intermediate French Transition (3) Prereq: Two years of high school French and a placement score below the level required for admittance to French 211. Since 150 is a review of elementary French, students who receive credit in this course may not also receive credit for any other 100 level French course and therefore also forfeit the six hours of elementary language credit awarded through placement examination. For elective credit only.

199 French Language and World Business (2) The course will examine the importance of foreign trade at the local, state, and national levels. An interdisciplinary team of faculty from the colleges of Business and Arts and Sciences will provide an overview of the value of languages in foreign trade and international cultural awareness in world business. Restricted to students majoring in the Language and World Business major concentration. See the Director for further information. F

211-212 Intermediate French (3,3) Prereq: 150 or 112 or Departmental Placement Exam. Must be taken in sequence. Students who place in 200 level courses from high school will receive six hours of elementary French credit. E

217-218 Honors: Intermediate French (3,3) For students of superior ability in French.Incoming freshmen admitted on basis of diagnostic test, high school average, and performance on ACT. Class held to a maximum of 15 for individual attention. Students follow enriched program with emphasis on speaking ability and reading, including literary selections. Students with a grade of A in 211 may enter 218 with permission of instructor. Credit for 300 given to students receiving a grade of A or B in the course. F, Sp

300 Transitional Grammar Review and Reading (3) For students who have completed the intermediate level sequence and have completed additional preparation in reading comprehension, vocabulary acquisition, and key areas of grammar. Prereq: French 212 or equivalent or appropriate score on French placement test. May not be counted toward the major or minor.

301-302 Elements of French for Upper Division and Graduate Students (3,3) Elements of language, elementary and advanced readings. Open to graduate students preparing for language examinations, and upper division students desiring reading knowledge of the language. Undergraduate credit only. Not for credit for those having had 111-112 or equivalent. No auditors.

333 Intermediate Composition and Grammar (3) Emphasizes writing skills. Review of major grammatical points in French. Prereq: French 212, 218, French 300 or permission of instructor.

334 Intermediate Conversation (3) Emphasizes speaking skills. Further review of French grammar. Required of all majors. Prereq: French 212, French 218, French 300 or permission of instructor.

345 French for Business (3) Contemporary French language as it applies to business transactions. Understanding and composing business letters; oral communication of French culture related to business practices. Either 334 or 345 may be applied toward the major but not both. Prereq: 333 or consent of instructor.

351-352 History of French Literature (3,3) Chronological view of French literature in relation to the specific historical events and movements that have influenced it. Prereq: 333 or 334 or 345 or permission of department.

400-401 Consecutive and Simultaneous French-English and English-French Translation (3,3) Consecutive Translation to and from English. Introduction to simultaneous translation to English. 401-Simultaneous Translation to and from English, training of students with good knowledge of French for consecutive and simultaneous translation from French into English, and vice versa, on a variety of subjects such as business, politics, science. Prereq: 334, 335 or equivalent. Preferably taken in sequence.

410 Medieval French Literature (3) Major representative works of Medieval French literature. Texts in modern French. Prereq: a 300-level literature course. Writing emphasis course. (Same as English 410.)

411 French Literature of the 16th Century (3) Highlights of 16th-century French literature. Excerpts from Rabelais and Montaigne; readings of poems from the writers from Lyon and members of the Pleiade. Writing emphasis course. Prereq: a 300-level literature course.


413 French Literature of the 18th Century (3) Major works of the Enlightenment. Writing emphasis course. Prereq: a 300-level literature course.


416 Survey of Francophone Literature (3) Examination of French literature outside metropolitan France, particularly Africa and the Caribbean. Writing emphasis course. Prereq: a 300-level literature course.

420 French Cinema (3) The French cinema from its earliest days through the New Wave directors. Prereq: a 300-level literature course. Can be applied to major. Writing-emphasis course. (Same as Cinema Studies 420.)

421 Phonetics (3) Foundation in the science of phonetics. Practical exercises and individual performance. Graduate credit only to students majoring in a Romance language. Prereq: French 333 or 334 or 345 or permission of department.

422 Advanced Grammar (3) Improving one’s written French by studying basic and more refined structures of the language. Writing creative free-style compositions. Writing emphasis course. Prereq: French 333 or 334 or 345.

423-424 Advanced Conversation (1,1) Informal conversation with native speaker on contemporary topics. Strengths in class conversation rather than reading or writing. Meets two hours a week for one semester credit. Prereq: French 333 or 334 or 345.

425 Introduction to Descriptive Linguistics (3) Initiation into the theory and practice of techniques of linguistic analysis in the subfields of phonetics, phonology, morphology, syntax, semantics, pragmatics and historical linguistics; discussion of their relevance to the learning and teaching of foreign languages and to the study of literary texts. Writing emphasis course. Linguistics 200 strongly recommended. (Same as German 425, Linguistics 425, Russian 425, and Spanish 425.)

426 Methods of Historical Linguistics (3) (Same as Russian 426, German 426, Spanish 426 and Linguistics 426.)

429 Romance Linguistics (3) Development of Classical Latin through Vulgar Latin into major Romance Languages. Writing emphasis course. (Same as Spanish 429 and Linguistics 429.)

430 Theatrical French (4) Comprehensive introduction to theatrical production and performance in French. Students collaborate in the creative staging of a French play and they actively participate in its public performance. Prereq: 300-same as Medieval Studies 430 applied toward major.

431 Highlights of French Civilization (3) Survey of French civilization from the Gauls to World War II. Historical events, daily life, all forms of arts. Prereq: a 300-level literature course. Writing-emphasis course.

432 Contemporary French Culture (3) Current French cultural issues placed in historical perspective with a comparative emphasis. In English; readings in French for majors. May apply toward French major. Writing emphasis course.

433 French and Francophone Women Writers (3) Works by women writing in French considered in cultural context. In English; readings in French for majors. May apply toward French major. Writing emphasis course. (Same as Women’s Studies 433.)

434 Literature of Quebec (3) Survey of literature of Quebec as well as French literature connected with North America. Readings include explorer and missionary works, such as the Voyages de Champlain and the Itinéraires du Jésuite, as well as the literature of contemporary Quebec. Writing emphasis course. Prereq: a 300-level literature class.

440 Capstone Experience in French (3) Synthesizing senior colloquium and tutorial in which students reflect on the 200 level foreign language discipline from a multidimensional point of view. Writing-emphasis course. Prereq: a 400 level literature course.

445 Advanced French for Business (3) Study of advanced contemporary French language and culture as they relate to business transactions. A comparative approach is used to explore differences and similarities between Francophone business culture(s) and those of North America and Japan. Students build upon their knowledge of business terminology while being sensitized to cultural differences and the dangers of simplistic stereotyping. Writing-emphasis course. Prereq: 345 or consent of instructor.

490 Internship (1-15) Career-related experiences in the United States or abroad with permission of the Language & World Business Director. For Language & World Business majors only. Satisfactory/No Credit only.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

GEOGRAPHY (415)

101-102 World Geography (3,3) Selected topics and world regions, especially those with problems or situations of contemporary interest, to illustrate geographical points of view, concepts, and techniques. Must be taken in sequence.

108 Honors: World Geography (4) For freshmen and sophomores of superior ability who are interested in the geographical approach to world problems and related issues. Open to students who have received an "A" in Geography 101. Students may not receive credit for both 102 and 108.

131-132 Geography of the Natural Environment (4,4) Character of landscapes and processes of the earth’s surface and lower atmosphere; their interaction to produce a world pattern of distinctive environments significant to humanity. Must be taken in sequence. 3 hours lecture and 2 hours lab per week. Not open to students who have taken 330. Prereq: 131 is prerequisite to 132.

310 Introduction to Cartography (3,3) Properties, sources, uses, design and production of maps as tools for geographical analysis. Introduction to desktop mapping techniques and data display using basic thematic map styles. 2 hours lecture and 2 hours lab per week.

320 Cultural Geography: Core Concepts (3) Background and method of cultural geography; basic concepts and theories from landscape and cultural geography, landscape ecology, cultural region boundaries, and lower atmosphere; their interaction to produce a world pattern of distinctive environments significant to humanity. Must be taken in sequence. 3 hours lecture and 2 hours lab per week. Not open to students who have taken 330. Prereq: 131 is prerequisite to 132.

332 Behavioral Geography (3) Types of human behavior such as settlement patterns, commuting, residential mobility, and regional consciousness as they relate to distance, natural environment, and culture. (Same as Urban Studies 323.)

334 Meteorology (3) Dynamic atmosphere and resulting weather events. Nature of individual weather elements, and their measurement and analysis over time and space.

340 Economic Geography: Core Concepts (3) Concepts, theories, and practices in economic geography; Real and theoretical patterns in agriculture, manufacturing, and service activities.

345 Population and Environment (3) Global and local...
pattens of population distribution and change as they relate to culture, economic development, technology, and the environment and the future. Prereq: 101-102 or consent of instructor. Writing-emphasis course.


361 Regional Geography of the United States and Canada (3) Physical, economic, and social-cultural distributions as they interrelate with each other. Writing emphasis course. Regions of the United States and Canada. Writing-emphasis course.

363 Geography of the American South (3) Geographical appraisal of the southeastern United States, including physical environment and human resources. Origin and development of contemporary economic and cultural traits of the area. Writing-emphasis course.

365 Geography of Appalachia (3) Interrelation of physical, economic, and social patterns that give distinctive character to the region and its parts, especially in southern Appalachia. Appalachia in perspective in the current American scene. Writing-emphasis course.

371 Geography of Europe (3) Physical, cultural, and economic characteristics of Europe. Emphasis on the geographical dimensions of change in contemporary Europe. Writing emphasis course.

372 Geography of Middle America (3) Physical, cultural, and economic characteristics of Mexico, Central America, and the West Indies. (Same as Latin American Studies 372.) Writing-emphasis course.

373 Geography of South America (3) Physical, cultural, and economic characteristics of the countries of South America. (Same as Latin American Studies 373.) Writing-emphasis course.

375 Geography of Russia and Central and East Europe (3) Theoretical and field emphasis to understanding physical processes, people, and their regional interrelationships. People as evaluators and agents of change. Prereq: 131-132 or consent of instructor.

419 Practicum in Cartography/Remote Sensing (2-4) Letter grade. Practicum in Cartography/Remote Sensing. 2 hours lecture and 2 hours lab per week.

420 Introduction to Geographic Information Systems (3) Geographic Information Systems guidelines. Students may not receive credit for both Geography 101 and 107.

421 Advanced Cartography Techniques (3) Cartographic design and data display techniques for reference and thematic maps. Principles and methods of map reproduction. Prereq: 310 or consent of instructor. 2 hours lecture and 2 hours lab per week.

423 Geography of American Popular Culture (3) Geographical study of regional variation in popular cultures, especially focused on youth cultures in the United States. Prereq: Geography 320 or consent of instructor. Writing emphasis course. (Same as American Studies 423.)

423 The Land-Surface System (3) Characteristics of surface form, water, vegetation, and surface materials, and their regional interrelationships. People as evaluators and agents of change. Prereq: 131-132 or consent of instructor.

431 Urban Geography of the United States (3) Examination of transportation systems, emphasizing their effects on trade patterns, community planning, and development. Prereq: 340 or consent of instructor. Writing intensive.

434 Climatology (3) Study of the changing distribution of patterns of plants and animals on a variety of spatial and temporal scales. The effects of continental drift, Pleistocene climatic change, and human activity on world biota are emphasized. Prereq: 131-132 or consent of instructor.

435 Biogeography (3) The changing distribution of patterns of plants and animals on a variety of spatial and temporal scales. The effects of continental drift, Pleistocene climatic change, and human activity on world biota are emphasized. Prereq: 131-132 or consent of instructor.

441 Urban Geography of the United States (3) Examination of transportation systems, emphasizing their effects on trade patterns, community planning, and development. Prereq: 340 or consent of instructor. Writing intensive.

443 Rural Geography of the United States (3) Examination of rural American communities. Prereq: 101-102 or 340 or consent of instructor. Writing intensive.

450 Process Geomorphology (3) Study of processes that modify the earth's surface. Prereq: Geography 107 or permission of thesis advisor. Writing-emphasis course. (Same as Geology 450.)

466 Teaching and Learning Geography (3) Preparing prospective teachers in the content, skills, strategies, and understandings needed for the effective teaching and assessment of geography in the K-12 schools. Course organization and content based largely on that of the National Geography Standards.

493 Independent Study (1-3) Prereq: Consent of department head. Prereq: Open to second semester juniors and first semester seniors who have a 3.2 or better overall average. May be repeated once. Maximum 9 hrs. S/N grading.

497 Honors: Senior Thesis (3) Students develop under-graduate thesis topic under the guidance of a faculty advisor. Prereq: Open to second semester juniors and first semester seniors who have a 3.2 or better overall average. May be repeated once. S/NC or letter grade.


499 Proseminar in Geography (3) Major themes in geography, especially those related to economic and environmental issues. May be taken in sequence. 3 lecture hours and 1 2-hour lab or field period.

101 The Dynamic Earth (4) Physical processes within and upon the Earth’s surface, including the formation of rocks, plate tectonics and earthquakes, and landslides. Must be taken in sequence. 3 lecture hours and 1 2-hour lab or field period.

102 Earth, Life and Time (4) Fossils, evolution and ancient environments, plus a review of 4.5 billion years of earth history. Must be taken in sequence. 3 lecture hours and 1 2-hour lab or field period.

103 The Earth’s Environments (4) Contemporary problems and solutions related to human disturbance of the environment. Topics include climate change, population, resource depletion. Prereq: 101. 3 lecture hours and one 2 hour lab or field period. Fulfills laboratory science sequence requirement for College of Arts and Sciences.

107 Honors: The Dynamic Earth (4) Laboratory and field emphasis to understanding physical processes, including the formation of rocks, plate tectonics, earthquakes, and landslides. 3 lecture hours, 1 2-hour lab, and 2 field trips. Consult current College of Arts and Sciences guidelines. Students may not receive credit for both Geology 101 and 107.

108 Honors: Earth, Life and Time (4) Laboratory and field emphasis to understanding fossils, evolution, and ancient environments throughout 4.5 billion years of earth history. 3 lecture hours, 1 2-hour lab, and 2 field trips. Prereq: Grade of B or better in Geology 107, grade of A in Geology 101, or permission of the instructor. Students may not receive credit for both Geology 102 and 108.

201 Biodiversity: Past, Present, and Future (3) Introduction to the biodiversity that has evolved through time, especially past mass extinctions and current extinction from human activities. Topics include measurement of biodiversity, how biodiversity originates, and the dynamics of extinction. May not be applied toward the Geology major.

202 Earth as an Ecosystem: Modern Problems and Solutions (3) Study of the earth as an integrated system between physical and biological processes. Focus is on human impacts and changes such as deforestation and pollution. No prerequisite. May not be applied toward the Geology major.

203 Geology of National Parks (3) Geologic principles, processes, and earth materials responsible for the spectacular landscapes of national parks. Focus on interactions among internal earth processes, surficial earth processes, and human interactions. 3 lecture hours and an optional field trip or lab period. Prereq: 101, Chemistry 120-130 or equivalent. 3 hours lecture and 1 lab.

320 Paleobiology (3) Fossils and their uses in functional, phylogenetic, paleoecological, biostratigraphical, and evolutionary studies. Prereq: 102 or consent of instructor. 2 lecture hours and one 2-hour lab or field period.

330 Igneous and Metamorphic Petrology (3) Classification and properties of igneous and metamorphic rocks, the processes that produce them, and the tec-tonic environments in which they form. Prereq: 310, 2 lecture hours and one 2-hour lab.
460 Principles of Geochemistry (3) Applications of chemical principles to geologic systems with emphasis on problem-solving techniques. Topics include phase diagrams, partition coefficients, and the role of complexing agents in ore deposition. Prerequisites: Chemical Geology 210, Mathematics 214-215, and Physical Geology 210.

470 Applied Geophysics (3) Basic principles of the study of the earth's interior through the use of physical methods. Prerequisites: 6 hours of geology courses number above 300, Physics 211-222.

471 Fieldwork in Geophysics (2) Summer field course for advanced undergraduates or graduate students. Taught off-campus, and requires the full time of the student for 2 or more weeks. Geophysical investigations include problems in tectonics, hydrogeology, or the environment. Prerequisites: 470 or consent of instructor.

475 Physical and Chemical Systems of the Earth (3) Development of the physical earth from the solar nebula to the present. Formation, composition and evolution of the hydrosphere, crust, mantle, and core. Interdependence of plate tectonics, volcanism, climate, tectonic, and isotopic processes of the interior, and the earth's temperature. Historical perspective on major controversies of the past, and problems unresolved today. Writing-emphasis course. Prerequisites: 6 hours of geology courses above 300 and above. 2 lectures and 1 discussion period.

480 Principles of Economic Geology (4) Ore-forming processes, classification of mineral deposits, survey of different types of mineral deposits with examples, and metallogenesis. Prerequisites: 310 and 330, or equivalents. Recommended: 460. 3 lecture hours and one 2-hour lab.

485 Principles of Hydrogeology (3) Physical principles of flow, flow equations, geologic controls, aquifer analysis, groundwater recharge and transport processes. Prerequisites: 101, Math 141 and 142, Physics 133 or 134 or equivalent, or consent of instructor. (Same as Civil Engineering 485.)

486 Hydrogeology Laboratory (1) Application and demonstration of hydrogeological principles in the field and laboratory. Prerequisites: Geology 485, or Environmental Engineering 535, or consent of instructor.

490 Special Problems in Geology (1-3) Directed study or special topic. Prerequisites: Consent of instructor. May be repeated. Maximum 6 hours.

491 Foreign Study (1-15) 2-5 hour foreign study or travel to countries. May be repeated for credit. Maximum 6 hours.

492 Off-Campus Study (1-15) 2-5 hour foreign study or travel to countries. May be repeated with the approval of the department. Maximum 6 hours. (Same as English Studies 350.)

493 Independent Study (1-15) Designed to prepare students for enrollment in any advanced study, concentration. See the Director for further information.

201-202 Intermediate German (3,3) Must be taken in sequence. Prerequisites: 102 or 150 or appropriate placement exam score.

215 German, Special Topics (3) If content varies, may be repeated for credit. Maximum 6 hours.

301-302 Introduction to German Literature (3,3) Prerequisites: 202 or equivalent. Need not be taken in sequence.

305 Readings in German (3) Topics in both literary and nonliterary fields. Students or student groups are encouraged to suggest topics for future courses. May be repeated twice with approval of department. Prerequisites: 202 or equivalent.

311-312 Conversation and Composition (3,3) Prerequisites: 202 or equivalent.

323 German Film (3) A study of the German cinema from the earliest days to the present. Writing-emphasis course. (Same as Cinema Studies 323.)

331-332 Elements of German for Upper-Division and Graduate Students (3,3) Elements of language, elementary and advanced readings and a final 10,000 word translation project. Open to graduate students preparing for language examination, and upper-division students desiring reading knowledge of the language. Undergraduate credit only. No credit for students who have completed 101-102. 332 may be repeated only once for credit.

350 German-Jewish Topics in Literature and Culture (3) Selected themes, issues, figures, movements, and problems in the German-Jewish relationship from literature and culture from the 1750s to the present. Variable content. Available for both majors and non-majors. May be repeated with the approval of the department. Maximum 6 hours. (Same as Judaic Studies 350.)

363 Modern German Culture (3) German culture from the mid-nineteenth century to the present: customs, art, music, literature, society, state. Readings in English for non-majors and in German for majors. Major credit, but no foreign language credit. A writing-emphasis course. Fulfills Upper-level Distribution Requirement for Foreign Studies for those who have not satisfied the history requirement with Western Civilization. Writing-emphasis course.

411-412 Advanced Conversation and Composition (3,3) Prerequisites: 311-312 or equivalent or consent of department.

415 German, Special Topics (3) If content varies, may be repeated for credit. Maximum 6 hours.

420 Selected Topics in German Literature from 1770 to the Present (3) Prerequisites: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

421 German Lyric Poetry (3) Prerequisites: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

422 German Drama (3) Prerequisites: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

423 German Narrative Prose (3) Prerequisites: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

424 German Literary Movements (3) Major periods in the development of German literature since 1750, with emphasis on the problems and pitfalls of periodization.

425 Introduction to Descriptive Linguistics (3) (Same as Russian 425, French 425, Spanish 425, and Linguistics 425.)

426 Methods of Historical Linguistics (3) Phonetics, distinction and analysis; sound changes and their relationship to language change, principles of reconstruction and fundamental assumptions about language change through time. Non-phonological linguistic change, language families,Proto-Indo-European and other proto languages. Prerequisites: 6 hours of upper-division foreign language courses excluding courses in translation or graduate reading courses. (Same as Russian 426, French 426, Spanish 426, and Linguistics 426.)
435 Structure of the German Language (3) Contrastive English-German segmental and suprasegmental phenomena, contrastive English-German linguistic structures, selected topics in advanced German grammar and syntactic analysis. Prereq: 6 hours of upper-division German language courses excluding courses in translation and graduate reading courses. (Same as Linguistics 435.)

436 History of the German Language (3) Development of the German language from Indo-European through Proto-Germanic, Old German, Middle High German. New High German. Internal and external linguistic history of German speech. Prereq: 6 hours of upper-division German language courses excluding courses in translation and 331 or 332. (Same as Linguistics 436.)

477-478 German Honors (1,1) Preparation of honors paper portfolio and oral presentation. Prereq: Permission of the department.

485 Business German (3) German used in fields of business, government, administration, and economics. Prereq: 6 hours of upper-division German excluding courses in translation and 331 or 332.

490 Internship (1-15) Career-related experiences in the United States or abroad with permission of the Language & World Business Director. For Language & World Business majors only. Satisfactory/No Credit only.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

497 Senior Honors (1-6) Admission by consent of department. May be repeated. Maximum six hours.

GREEK (257)

121-122 Beginning Greek (3,3) Must be taken in sequence.

261 Intermediate Greek: Grammar Review and Readings (3,3) Syntax, vocabulary and readings from selected authors. Prereq: 122.

264 Intermediate Readings in Greek (3) Content varies. Prereq: Classics 261.

401 Greek Poetry (3) Epic, lyric, drama. Authors vary. Prereq: 261.

402 Greek Prose (3) History, philosophy, and oratory. Authors vary. Prereq: 261.

405-406 Selected Readings from Greek Literature (3,3) For advanced students in Greek, the study of plays, the history of ancient Greece, and the poetry of ancient Greece in the original Greek. May be repeated for credit. Maximum 9 hours. Prereq: 401-402 or consent of instructor.

HEALTH (449)

110 Personal Health and Wellness (3) Information and behavior necessary to approach health and wellness scientifically and to develop confidence in judgments affecting personal health and wellness. Students who have received credit for Health 330 may not thereafter receive credit for this course. E

200 Seminar in Human Sexuality (2) Problems and responsibilities of being male and female as they relate to health and wellness. Satisfactory/No Credit only.

225 Alcohol/Drugs and the College Student (2) Providing essential information for developing responsible and constructive use of media. Prereq: Health 300, Public Health 300, Sp

400 Consumer Health (3) Major consumer health care providers and health care services; selecting, purchasing, evaluating and financing medical and health care services/products. (Same as Public Health 400.) Sp

405 Alcoholism and Alcohol Education (3) Factors which make alcoholism a serious health and safety problem. Various types of instructional/educational and intervention programs. F

406 Death, Dying and Bereavement (3) Aspects of dying, death and handling the trauma of loss. Medical, financial, physical, legal and social implications of death. F, Sp

420 Sex Education As It Relates to Human Sexuality (3) Science of human sexuality. Emphasis on the trends, issues, content of sex education. F, Su

425 Women's Health (3) Factors influencing women's health and women as consumers in nation's health service delivery systems. Study of health problems, concerns of women and techniques for prevention, maintenance and/or correction. (Same as Women's Studies 425.) E

440 Health Education Program Planning (3) Principles of curriculum development, administrative, instructional, implementation, methodology, and evaluation. Prereq: Health 300, Health 375, Public Health 300, and Psychology 430, F

430 Suicide and Crisis Intervention (3) Factors which make suicide a serious health problem. Assessment, intervention, and prevention techniques. Sp

435 Substance Use and Abuse (3) Drug and alcohol abuse problems and suspected causes; pharmacology of drugs and effects on society; strategies for intervention and education. Sp, Su

465 Aging and Health (3) Aging process in a health perspective as it relates to health promotion and wellness of the aged. F, Sp

470 Special Topics (1-3) For advanced students, teachers, school administrators, nurses and other paramedical personnel. Lectures, demonstrations, films, field trips, and supervised research in special health/wellness or health promotion issues. May be repeated. Maximum 12 hours.

475 Directed Independent Studies (1-3) Individual identification and study of a health/wellness or health promotion problem/issue. Prereq: Consent of instructor. May be repeated. Maximum 12 hours. E

483 Field Practice (12) Off-campus internship or field practice in an educational or other agency with coursework in classroom, seminar, and supervised practice. Field practice experience. Satisfactory/No Credit only. Usually taken in final semester. E

HEBREW (458)

141-142 Elementary Modern Hebrew I,II (4,4) (Same as Asian Studies 141-142.)

241-242 Intermediate Modern Hebrew I,II (4,4) (Same as Asian Studies 241-242.)

HISTORY (462)

221-222 History of the United States (3,3) 221-Settlement to 1877. 222-1877 to present. E

227-228 Honors: History of the United States (3,3) Consent of department required. Students will attend the appropriate 221-222 lectures and the designated honors discussion sessions.

241-242 Development of Western Civilization (3,3) Historical survey of the civilization of the western world. 241-Ancient world to 1715. 242-1715 to present. Writing-emphasis course.

247-248 Honors: Development of Western Civilization (3,3) Consent of department required. Writing-emphasis course. Students will attend the appropriate 241-242 lectures and the designated honors discussion sessions.

255-256 Introduction to Latin American Studies (3,3) Selected readings in Latin American history with special emphasis on dominant culture patterns, social changes, and impact of nationalism. 255—Pre-Colonial and Colonial periods through Independence era. 256—Latter 19th century and the Modern period. Writing emphasis course. (Same as Latin American Studies 251-252.)

261-262 A History of World Civilization (3,3) Historical survey of world civilization. 261-Orignis to 1500. 262-1500 to present. Writing-emphasis course.

307 Honors: Introduction/Historical Problems (3) Historical analysis, philosophy of history, principles and techniques of research emphasizing the roles of climates of opinion and frames of reference and the problems of evidence, interpretation and objectivity. Required of students working for honors in history. Prereq: Consent of the department.

310-311 The Ancient World (3,3) 310-Development of Athenian democracy: its successes and failures; polis crisis of the fourth century B.C.; emergence of hellenistic civilization. 311-Origins of Roman imperialism and its consequences: militarism, empire, socioeconomic changes, constitutional crises, emergence of military and political autocracy.

312-313 Medieval History (3,3) 312-Early Middle Ages: 300-1100. Formation of medieval society and institutions. 313-Later Middle Ages 1100-1400. Height of medieval civilization, and its waning in the fourteenth century. (Same as Medieval Studies 312-313.)

314 Renaissance Europe (3) The period traditionally seen as a transition from the Middle Ages to the modern world. Interrelationship of cultural, social, economic, political and intellectual developments, with an emphasis upon historical interpretation.

315 Reformation Europe, 1500-1650 (3) The period during which Europe witnessed religious disunity, economic dislocation and insecurity, political centralization, intellectual skepticism, the origins of modern science, war and the witch craze. (Same as Religious Studies 315.)

316 Early Modern Europe, 1650-1800 (3) Dynamic conflict of a search for order in an age of revolutions, seen in the continued push for political centralization, the impact of the scientific revolution, the intellectual flowering known as the “Enlightenment”, and the English and French revolutions.

319 Modern Europe, 1750-1914 (3) Political, industrial and intellectual revolutions against traditions. Topics such as the modern population explosion, urbanization, the political emergence of the middle class and the masses, nationalism, imperialism, rationalism and Romanticism in social thought and politics. Writing-emphasis course.

320 Contemporary Europe, 1900-Present (3) The transformation from industrial to post-industrial society and the transformation of the European nation-state. Topics such as war and deconstruction, the subsequent political and social instability; totalitarian control, decolonization; the impact of Freud, Einstein and existentialism; welfare states; and the problems of Euro- pean unification. Writing-emphasis course.
321 New Testament Origins (3) (Same as Religious Studies 321.)

322 Christian Thought (3) (Same as Religious Studies 322.)

323 Deviance and Persecution in the Christian West 1100-1700 (3) Emergence and shifts in movements of dissent, and religious, political, and ideological conflict. Social history of the medieval church; class conflict, the welfare state, world wars, economic crisis.

333 History of France (3) France since the Revolution, 1789 to the present.

334-335 History of Germany (3,3) 334—Germany I, to 1815. The First Reich's Fortune and Failure. The development of the German lands, from the medieval empire to the disintegration, through dynastic and religious realignments, to the Austrian-Frussian dualism in the time of Frederick the Great and Maria Theresa, culminating with the end of the older order in the Age of Napoleon. 335—Germany II, Since 1800. The Quest for Nationality. The evolution of modern Germany through revolution, industrialization and wars, from Metternich's Confederation, to Bismarck's Second Reich, to the Weimar republic to Hitler's Third Reich, to Adenauer's Federal Republic, to present national and international status.

339 Modern Ireland, 1760-1953 (3) Ireland's social, political, economic, and cultural history. Themes include: Ireland's status as England's first colony from the Norman period to Cromwell and beyond; peasant revolt, Catholic pressures for religious freedom, and national liberation movements; the Famine; and Home Rule, Partition, and independence in the 20th century, with continuing sectarian conflict.

340-341 History of Russia (3,3) 340—To the middle of the 19th century. 341—From the middle of the 19th century. 

346 The Environment in U.S. History (3) Environmen- tal consequences of competition for scarce resources among Indians, European Americans, and Hispanic Americans in eras of colonization; migration; industrialization; urbanization; conservation; and environmentalism. Writing emphasis course.

350 Colonial America to 1763 (3) Social and cultural developments in the colonies from the time of initial contact between Europeans and Native peoples through the mid-eighteenth century. Writing emphasis course.

351 The American Revolution, 1763-1789 (3) The growing estrangement of the American colonies from the British Empire, the War for Independence, and the creation of a new American republic. Writing emphasis course.

352 The United States during the Jacksonian Era, 1815-1860 (3) An examination of the major economic and political developments in antebellum America within the framework of the struggle between nationalism and sectionalism.

353 The Civil War and Reconstruction, 1860-1877 (3) An examination of the major political, economic, and social developments in the United States during the Civil War and Reconstruction eras.

354 United States, 1877-1933 (3) America's political, economic, and social development from the Gilded Age through the Great Depression.

355 United States, 1933 to the Present (3) American history from Roosevelt's New Deal through World War II and the postwar era. Emphasizes domestic history but includes military and foreign policy.

359 History of the US Economy (3) Evolution of US economic institutions with particular emphasis on the financial, labor, banking, business organization, labor relations, and changing government participat- ing emphasis course.

360-361 History of Latin America (3,3) 360-Colonial- ism and Independence, 1500-1825, 361-National Development, 1825 to present. (Same as Latin American Studies 360-361.) Writing emphasis course.

362-363 History of East Asia (3,3) 362-East Asia: History and Culture to 1600. Chiefly China and Japan; Korea and Vietnam also included. Confucianism, Bud- dhism, social stratification, and Japanese feudalism. Comparison and contrast with Western history and culture. 363-Medieval East Asia since 1600. China, Japan, and Korea; Contact with Westernization: Western impact, cultural transformation, communist movement, and Japan's militarism and post- war economic success. Writing emphasis course.

364 History of China (3) Changes and continuities of the world's longest uninterrupted civilization with a quarter of the human race; similarities and differences between China and Western civilizations; Chinese revo- lutions in historical context. Writing emphasis course.

365 History of Japan (3) Japanese history from mytho- logical origins to empire with emphasis on political and social developments. Themes include: the influence of disease on society, Japanese Feudalism, popular cul- ture in the 1700s and 1800s, and Japanese militarism. Writing emphasis course.

366 History and Archaeology of Mesopotamia (3) Mesopotamia (Assyria and Babylonia) from the fifth millennium to the Iron Age. Specific topics will include the development of village and state-level societies, and the emergence of social and political institutions, liter- acy, imperialism, and intersocietal interaction. Writing emphasis course.

369-370 History of the Middle East (3,3) 369—Rise and spread of Islam; relations with Europe from the fall of the Roman Empire to the sixteenth century. 370—The Middle East from the sixteenth century to the present. Impact of the West and background of current problems. Writing emphasis course. (Same as Judaeic Studies 369-370.)


373 Historical Issues (3) Variable content. Broad the- matic issues in world history. Especially suitable for non-majors; also open to majors. May be repeated. Maximum 9 hours.

374 A History of Imperialism since 1850 (3) Relation- ships between the West and Africa, Asia, and Latin America since 1850 across a broad spectrum of critical issues. Includes economic interdependence and under- development, ideologies in conflict with non-Western world views, and the search for individual identity in circumstances of cultural disruption. Writing emphasis course.

375 Revolutions in Historical Perspective (3) Com- parative history of major revolutions which transformed political, social, and economic structures and values, such as those in France, Russia, China, Japan, and Iran. Contrasts and common patterns in their causes, phases and outcomes. Relationships between leaders and masses. Major theories of revolution. Writing emphasis course.

381 History of South Africa (3) South African history from the pre-colonial period through the apartheid and post-apartheid eras. Topics include African state forma- tion and resistance to European colonialism; the impact of industrialization, the evolution of modern resistance movements, and the first democratic elections in 1994. (Same as African and Afri- can-American Studies 381.)

383 History of Jewish Civilization I (3) Biblical-Talmu- dic Periods (1200 BCE-600CE). Origins of the Israel- ites, development of independent Israelite and Jewish states in the Near East, rise of Israel; Jewish diaspora communities, cultural convergences with Hellenism and early Christianity, and the development of Rabbinic Judaism. Writing emphasis course. (Same as Judaeic Studies 383.)

384 History of Jewish Civilization II (3) Medieval - Present. The resiliency of Jewish civilization in the face of external pressures; of Sephardic and Ashkenazi Jews in Europe; of North Africa and the Middle East; Jewish mysticism; Judaism's encounter with modern- ity; Hasidism, the Haskala; the Reform movement and Zionism; the Holocaust; the foundation of the State of Israel; and assimilation and the future of Judaism. Writing emphasis course. (Same as Judaeic Studies 384.)

385 Studies in World History (3) Variable content. Selected topics in world history involving analysis of two or more world cultures. May be repeated. Maximum 9 hours.

395 The Crusades and Medieval Christian-Muslim Rela- tions (3) The major Christian crusades in the Middle East and Spain, 1050 to 1500; their political and military history, and the larger context of the medieval religious, cultural, intellectual, and diplomatic confronta- tion between Christians and Muslims. Writing emphasis course. (Same as Judaeic Studies 395.)

407 Honors: Senior Paper (3) Bibliographic search, research and conceptual clarification for the senior paper. Required of students working for honors in history.

408 Honors: Senior Paper (3) Organization and writing of the senior honors thesis. Required of students work- ing for honors in history. Grade of A or B required for honors credit.

415 Western Economic Thought since the 18th Cen- tury (3) (Same as Economics 415.)

421 Comparative Studies in African and African-American Societies (3) (Same as African and African-American Studies 421.)

429 Medieval Intellectual History (3) The evolution of thought in Europe from late antiquity to the advent of Humanism, especially connections between major think- ers and their social, economic, and professional contexts. Writing-emphasis course.

430-431 European Intellectual and Cultural History (3,3) 430-European Romanticism to Realism. 1769-1879. 431- Romanticism to Relativism, 1750-Present.

432 Women in European History (3) Comparative analysis of the roles of women in Medieval, Renaiss- ance and Victorian Europe. Relationships between fam- ily, structure, sexual attitudes and the economic and political roles of women with an emphasis on autobiogra- phical writings by women. Writing-emphasis course. (Same as Women's Studies 432.)

439 Southeastern Indian History (3) Southeastern Indians from the prehistoric period to the present. Interaction of Euroamerican, African-American, and Native-American peoples; warfare, slavery, resettlement and other policies from the American Revolution to twentieth-century problems such as tribal sovereignty and dependency. Writing-emphasis course.

441 The American West (3) From 1803 to present, with emphasis on diverse ethnic cultures, colonial status, extractive industries, aridity, and the ongoing debate over the conservation of natural resources on federal lands. Writing emphasis course.

442 Indian-White Relations in United States History (3) Dilemma of two cultures existing side by side; background and formation of the social Indian policy; understanding of policy by former circumstances; Indian wars and campaigns; present-day relationship. Writing emphasis course.

443-444 History of the South (3,3) 443—Old South from colonial period through the Civil War. 444— New South from Reconstruction through the Second Reconstruction.

445 The African-American Experience from the Co- lonial Period to the Present (3) Topics in 19th and 20th centu- ry African-American history, such as Pan-Africanism and the effect of education on the status of Blacks. (Same as African and African-American Studies 445.)

446 History of American Culture (3) Topical examina- tion of the origins and development of American culture, values, attitudes and beliefs from the formation of the nation to the present. Illustrative topics: creation of a national culture; Civil War as cultural conflict; challenge of cultural relativism; race and ethnic values; cultural upheaval 1920s-30s; present nature of American cul- ture. Writing emphasis course.

447 History of Tennessee (3) Tennessee's history from the 18th century to the present.

450 History of U.S. Foreign Relations to World War II (3) The major diplomatic and political relations of the United States, from independence to entry into the Second World War.
451 United States Military History, 1754 to the Present (3) The nation’s broad strategic aims and means used to attain them, shifting strategy, tactics and weaponry involved in the relationship between American society and its armed forces. (Same as Military Science 430.)

452 The American Experience in World War II (3) Diplomacy and warfare in Europe and Asia and the impact of the war on American society. May be repeated. Maximum 6 hours.

453 Women in American History (3) Approaches of 432 applied to American society. Writing-emphasis course. (Same as Women's Studies 453.)

454 Cities and Urbanization in American History (3) Origins, growth, and influence of American cities in the development of modern urban society. Emphasis on social, cultural, economic and political impact of both spectator and participatory sports in 20th century. (Same as American Studies 454.)

455 Environmental History of Urban America (3) Pre-industrial, industrial, and modern environmental cities, including animal pollution; epidemic disease; infrastructure construction; hinterland resource exploitation; and urban renewal and clean-up. Writing emphasis course.

456 History of Sports in the United States (3) Development of sports and their significance in American life from colonial America to the present. Emphasis on social, cultural, economic and political impact of both spectator and participatory sports in 20th century. (Same as American Studies 456.)

459 Jefferson's America, 1789-1815 (3) Nation-building in the United States from the Constitution to the War of 1812. Economic modernization, the new national government, the first political party system, foreign relations, the growth of the cities, and changing ideas about deference, class, and community. Writing emphasis course.

460 History of Brazil (3) History of Latin America’s largest nation. History of boom and bust economic cycles, slavery and the abolition of slavery, populism, military rule, and redemocratization. Writing-emphasis course. (Same as Latin American Studies 460.)

461 Cuban Revolution in Historical Perspective (3) Cuban history with major emphasis on Cuban Revolution and Cuban-U.S. Relations. Writing-emphasis course. (Same as Latin American Studies 461.)

462 History of Mexico (3) Pre-Columbian, colonial, national, and modern Mexican history, emphasizing the twentieth century's first true social revolution, the Mexican Revolution, and contemporary social and economic problems. Writing-emphasis course. (Same as Latin American Studies 462.)

463 Modern Latin American History in Film (3) Major events and trends in Latin America since 1945 as represented in fictive films made by Latin Americans. Topics include economic development, the Cuban Revolution, and Authoritarianism. Writing-emphasis course. (Same as Latin American Studies 463.)

470 Studies in British History (3) Variable content. Selected themes as they relate to British history. May be repeated. Maximum 9 hours.

471 Studies in Western European History (3) Variable content. Particular aspects of Western European history such as witchcraft, revolutions, or nationalism. May be repeated. Maximum 9 hours.

472 Studies in Central European History (3) Variable content. May be repeated. Maximum 9 hours.

473 Studies in Eastern European History (3) Variable content. Selected aspects of Eastern European history, especially on Russian and Polish history. May be repeated. Maximum 9 hours.

474 Studies in Medieval and Early Modern European History (3) Variable content. Particular aspects of me-dieval and early modern Europe. May be repeated. Maximum 9 hours.

475 Studies in Latin American History (3) Variable content. Significant issues in Latin American history. May be repeated. Maximum 9 hours. Writing-emphasis course. (Same as Latin American Studies 475.)

476 Studies in Asian History (3) Variable content. Particular aspects of Middle Eastern and East Asian history such as modernization in the Middle East, Revolu-tion in China, Japanese Feudalism, and others. May be repeated. Maximum 9 hours.

479 Studies in United States History (3) Variable content. Particular aspects of United States history. May be repeated. Maximum 9 hours.

480 Studies in African History (3) Variable content. Different areas of the continent and diverse aspects of the African experience such as African resistance move-ments, African political parties, the relationship of social and economic development under colonialism to social and economic development in modern African nations, and Apartheid and resistance in South Africa. May be repeated. Maximum 9 hours.

481 Studies in History (3) Variable content. Subject matter not covered in other courses. May be repeated. Maximum 9 hours.

482 Colloquium in History (3) Historical theme or problem; emphasis on questions and skills, with special reference to historical writing, including critical analysis of both primary and secondary sources. Recommended for seniors. Writing-emphasis course.

483 History of U.S. Foreign Relations Since WW II (3) Examines the ideology and practice of U.S. international relations since World War II.

485 Studies in Cross Cultural History (3) Variable content. Comparative analysis of specific historical is-sues or specific facets of the relationships between more or cultures. May be repeated. Maximum 9 hours.

489 Oral Histories of War and Peace (3) Oral history methodologies and interviews with veterans and others who have shaped modern American military history. Students perform oral histories on the Korean War, History 451, U.S. Military History, is recommended but not required.

490 Internship in the Center for the Study of War and Society (3) A structured field work experience in public history at a research center documenting modern U.S. military history, including special projects such as grant writing, interviewing, and archival processing. Prereq: Consent of the Director of the Center for the Study of War and Society. May be repeated. Maximum 6 hours.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

HOTEL AND RESTAURANT ADMINISTRATION (512)

101 Food Quality Principles (3) Scientific principles applied to American society. Writing-emphasis course. (Same as RCS 323.)

119 Introduction to the Service Industry (3) Organiza-tion and basic operating systems for the career paths available in the hospitality and retail industries. Man-agement competencies necessary for success in these fields. (Same as RCS 119.)


211 Hotel Operations (3) Operational theory of lodging and an exploration of the lodging industry in terms of nature of work, organizational structure of lodging seg-ments, the meaning of guest services, differentiation of brands, current issues, and evaluations of the market place. Prereq: Coreq: HRA 119/RCS 119.

311 Developing the Service Workforce (3) Personnel management procedures and policies to develop the service workforce. Topics include leading organiza-tional change, labor costs, and review of retention issues. Prereq: HRA210/RCS 210, or RCS 211. (Same as RCS 311.)

321 Quantity Food Procurement, Production and Service Laboratory (1) Application of principles in determining needs, planning, processing and serving foods in volume. Prereq: 120, 220, NTR 100 or 107, HRA 101, Micro 210 or PH 310; progression into HRA210 or consent of the instructor. Coreq: 320.

322 Diversity in the Service Marketplace (3) Survey of diversity in the service marketplace. Implications for the manager of a diverse workforce in the delivery of goods and services to a multiplicity of consumer groups. Prereq: RCS/HRA 311 (Same as RCS 323).

345 Advanced Food Production and Service Man-agement (3) Application of management concepts in menu design, personnel, cost control and production and service of food. 2 hours and lab. Prereq: HRA 210.
400 Professional Experience in Restaurant and Food Service Management (III) (4) Supervised professional experience in selected restaurant and food service operations that builds upon first professional experience. Prereq: HRA 410, 420, HE 410. Coreq: HRA 485.

481 Professional Experience in Hotel/Tourism Management II (3) Supervised professional experience in selected hotel operations that builds upon first professional experience. Prereq: HRA 421, 424, HE 410. Coreq: HRA 486.


490 Management Experience in Restaurant and Food Service Management (9) Supervised managerial training with sponsoring restaurant and food service operations. Prereq: HRA 410, 420; HE 410; Coreq: HRA 485.

491 Management Experience in Hotel/Tourism Management (9) Supervised managerial training with sponsoring restaurant and food service operations. Prereq: HRA 410, 420; HE 410; Coreq: HRA 485.

494 Directed Study: Hotel and Restaurant Administration (1-3) Individual student: faculty experience. Prereq: Junior and Senior Standing, consent of the instructor. Satisfactory/No Credit only.

497 Honors: Hotel and Restaurant Administration (1-3) Senior project. Prereq: Senior standing, consent of the instructor.

HUMAN ECOLOGY (520)

100 Special Topics in Human Ecology (1-3) Topics variable. Prereq: Consent of the instructor. Satisfactory/No Credit only. May be repeated. Maximum 3 credits.

310 Design in Everyday Life (3) Aesthetic environment, Planning and organizing interior spaces to meet personal and family needs. Relationship of materials and furnishings to architectural space.


491 Directed Study: Hotel and Restaurant Administration (1-3) Individual student: faculty experience. Prereq: Junior and Senior Standing, consent of the instructor. Satisfactory/No Credit only.

497 Honors: Hotel and Restaurant Administration (1-3) Senior project. Prereq: Senior standing, consent of the instructor.

HUMAN RESOURCE DEVELOPMENT (529)

161 Graphic Communications (3) Drafting as a means of communicating. Orthographic, isometric, isometric, and multifield drawing, conventional practices, pictorial techniques and applications, sheetmetal development, auxiliary and auxiliary views, trimming and cutting, and design transmission of power. Engine tune up and overhaul and small engine maintenance and repair is stressed through experimental and applied laboratory experiences.


201 Field Experience in Teaching (1-3) Field experience in public school Business Marketing, Family and Consumer Sciences, or Technology Education programs. May be repeated for a maximum of 3 hours. S/NC credit only.

210 Microcomputer Applications (3) Introduction to Microcomputer use and five software programs; operating systems, word processing systems, data base systems, spreadsheets, etc. Design and graphic design of a management information system; spreadsheet, word processing, and database. Prereq: declared major in College of Human Ecology. Satisfactory/No Credit graduation only. Prereq: HRA 421, 424, HE 410.

285 Introduction to Human Resource Development (3) This online course will be an overview of online instructional methodology; issues and problems associated with employee training and development; strategic training; needs assessment; learning theories and program design; transfer of training; career development; organizational development, employee empowerment and reorganization. F. Sp Prerequisites: HRA 210.

300 Individuals, Society, and Technology (3) An overview of how technology and human innovation is used to meet needs and solve problems. Hands-on opportunities to experience and solve group and individual problems in a tools and material context.

305 Construction Systems (3) Introduction to construction technology, preparing for the construction project, designing and planning the project, managing construction activities, building the structure, installing systems, finishing the project, and closing the contract.

306 Manufacturing Systems (3) Introduction to manufacturing, engineering materials, primary manufacturing processes, secondary manufacturing processes, establishing a manufacturing enterprise, designing and engineering products, producing the product, marketing the product, and performing financial activities.

320 Program Planning for Training, Development, and Education (3) An on-line course, the first in a four-course sequence, providing skills and knowledge in analyzing, designing, implementing and evaluating educational programs. Each student will plan an educational program. Prereq: HRA 210 or 421.

325 Development of Instructional Resources (3) The second in a series of four online core courses designed to prepare instructors for the learning environment. It includes the design and development of instructional materials, the use of research aids, and sequencing instruction based on the Instructional Systems Development (ISD) model. Each student will develop a training module. Prereq: HRA 320.

330 Instructional Strategies and Techniques (3) The third in a series of four online core courses focuses on methods and techniques of facilitating learning through application of communication theory, teaching and training concepts, and delivery methods and skills. Students will provide demonstrated competence in facilitated learning as a final course product. Prereq: HRA 320 and 325.

336 Teaching Technical Skills-Based Business Education (3) Principles and Methods (3) Methods and techniques for teaching Business Education and Marketing Education technology-based content that results in learner acquisition and refinement of technical skills.

350 Related and Applied Theory in Occupations (1-15) Applicants must show evidence of bona fide occupational experience compatible with State Plan requirements. Written theory tests and the submission of a comprehensive portfolio are used to award variable credit. Measures evaluated by technical specialist and departmental faculty may be repeated. Maximum 15 hours. Satisfactory/No Credit only. Prereq: Junior standing and departmental approval.

351 Manipulative Skills in Occupations (1-15) Applicants must show evidence of bona fide occupational experience compatible with State Plan requirements. Written theory tests and the submission of a comprehensive portfolio are used to award variable credit. Measures evaluated by technical specialist and departmental faculty may be repeated. Maximum 15 hours. Satisfactory/No Credit only. Prereq: Junior standing and departmental approval.

352 Practicum in Industrial Education (1-3) Updating and upgrading experiences in nontraditional settings for technical teachers. May be repeated. Maximum of 4 hours. Satisfactory/No Credit only.

361 Graphic Reproduction Processes (3) Principles of printing, duplicating, photography, and other forms of graphic communication; includes laboratory experience in SLR camera applications, camera copy preparation, line and halftone photography, layout, stripping, plate-making, and offset presswork.

369 Plastic Technology (3) Characteristics and applications of thermoplastic and thermosetting materials. Plastics production equipment related product design and processing of plastics. Prereq: 165 and admission to Teacher Education Program.

370 Technology Systems I (3) A systems approach to the field of technology systems. Prerequisites: Field experience in the design process with emphasis on the production and measurement tools used to create products and structures. Prereq: 161, 305, and 306.

371 Technology Systems II (3) An advanced study of technology systems, including an overview of their contribution to manufacturing, construction, communication, and transportation. Management and assessment of technological systems. Prereq: 370.

411 Managing Occupations Education Programs (3) Unique needs of instructors of occupational education: laboratory organization and safety; community resources and relations; advisory committees; operation of youth-clubs; and adapting instruction for special needs learners. Prereq: 320, 325.

415 Coordination Techniques (3) An online course with an overview of policy, procedures, roles, and responsibilities necessary for the analysis, design, development, implementation and evaluation of a cooperative and comprehensive education program in vocational education. Prereq: HRA 210.

420 Introduction to Adult Education (3) Breadth of adult education activities and the diversity of adult learning styles, including the role of adult professional practice apart from traditional instructional settings.

421 Adult Education Program Design and Management (3) Processes of program development and special application to adult training programs.

422 Adult Development and Training (3) Application of adult development concepts to design and manage training programs for adults. Prereq: 15 hours.

423 Methods of Teaching Basic Business and Accounting (3) Instructional methodology for teaching secondary-level and post-secondary-level basic business and accounting. Integrative strategies are introduced and developed.

430 Principles and Best Practices of Business Education and Marketing Education (3) This course provides an overview of how Business Education and Marketing Education integrate and support student learning. Special attention is given to the national standards, state-based curricular frameworks, and learner competency expectations. Emphasis is placed upon how Business Education and Marketing Education instruction is developed.

434 Teaching Conceptual and Human Skills-Based Business Education and Marketing Education (3) Methods and techniques for teaching Business Education and Marketing Education conceptual skills and human skills-based on subject matter content. Involves exploration of theoretical models, research and practical applications.
441 Materials and Processes I (3) Classification systems of materials, control methods, survey of production processes, ie. Separating, forming, conditioning, and combining.

442 Materials and Processes II (3) Production of industrial materials, primary process, product planning and design, materials specification matching to product. Includes problem solving and hands-on activities. Prereq: 371 and 441.

452 Technology in Learning Environments (3) The fourth in a series of four online courses addresses the use of diverse technology for creating and facilitating instruction and learning. Involves posting and managing an online lesson. Interactive strategies that aid in stimulating, channeling, and sustaining learning. Prereq: HRD 320, 325, and 330. E

455 Learner and Program Evaluation (3) This online course teaches students to assess the effectiveness of training or educational programs, develop performance-based measures, evaluate job performance, and measure learner progress. Prereq: HRD 210 or equivalent and HRD 320.

471 Principles of Supervision/Leadership (3) This online course examines management problems such as motivation, communication, interpersonal relationships, and leadership. Prerequisite: HRD 210 or equivalent. Sp

473 Integrating Organizational and Career Development (3) This online course examines methods of organizational development, issues and problems associated with employee empowerment, involvement, and reorganization. Effective utilization of human resources through teambuilding and organizational behavior. A research-oriented course that covers contemporary work and communication in groups, meetings, and training programs. Prereq: HRD 210 or equivalent and HRD 471.

475 Human Resources Policies, Practices, and Procedures (3) This course examines employer-organizational activities related to personnel and human resource programs, employee recruitment, employee assistance programs, exit considerations, and aspects. Prereq: HRD 210 or equivalent and HRD 471.

476 Supervised Occupational Experience (3) Practical field experience in business/industry/community-based settings related to the area of study. May be repeated for a maximum of 9 credits. Prerequisites: Senior standing and approval of advisor. E

479 Internship in Human Resource Development (3-9) Assessing, planning, implementing, and evaluating the effectiveness of training programs in an industrial setting. May be repeated to a maximum of 9 semester hours. Satisfactory/No Credit only. E

480 Directed Study in Human Resource Development (3) Topic arranged by student in collaboration with a supervising faculty member. Approval form must be filed in the departmental office. May be repeated for a maximum of 6 hours. Prereq: Junior or senior standing. Sp

482 Directed Study in Family and Consumer Sciences Education for working or planning to work in managing secondary school programs in Family and Consumer Sciences.

485 Special Topics in Human Resource Development (1-3) Topics to be assigned. May be repeated.

HUMAN SERVICES (532)

220 Introduction to Human Services (3) Focus on related societal values and contemporary issues in human services. Emphasis on the various professions, settings, and roles as students examine the complexities of human needs and social problems.

330 Thinking About People (3) Development of thoughtful, informed and empathetic attitudes toward human beings—those providing services as well as those receiving service. Prereq: Progression to the major. F, Sp

380 Human Services Methodologies I (3) Basic helping skills essential to the effective delivery of Human Services. Prereq: Progression to the major or consent of instructor. F

390 Information Interpretation and Assessment (3) Information gathering and assessment for human services are examined in terms of their application to human services practice. Formulating questions, identifying relevant data, using related resources, interpreting information and applying this information in a practical setting. Prereq: Progression to the major. Sp

400 Prefield Seminar (2) Prefield Seminar (2) Preparation for field sequence. Exploration of field/work settings within human service through in-class activities, field trips, and guest lectures; includes current topics and professional behavior. S/NC only. F, Sp

420 Human Services Methodologies II (3) Includes reality therapy, behavior modification, family systems, client-centered and rational emotive therapy. Discussion of role of the supervisor, and ethical dilemmas. Prereq: Approval form must be used during the field experience. Prereq: Progression to the major, 330, senior standing or consent of instructor. Sp Writing emphasis is required.

440 Human Services Field Work (6) Human Services Field Work (6) Practical field experiences within an approved and supervised human services setting. Explores day to day activities within a human services organization. Develops specific helping skills; involvement in roles and function of human services profession; provides direct service in a supportive learning setting. For majors only. Prereq: Progression to the major, 380, 400, 420. S/NC only. F, Sp, S

441 Human Services Field Work II (6) Human Services Field Work II (6) Practical field experience within an approved and supervised human service setting in a different venue than previous 440 field placement. Explores day to day activities within a human service organization. Develops specific helping skills; involvement in roles and function of human services profession; provides direct services in a supportive learning setting. For majors only. Prereq: 420, 440. S/NC only. F, Sp, S

450 Special Topics in Human Services (3) Issues, methods, values, and trends with implications for helping practitioners, such as art therapy, legal and ethical issues, and self-awareness education. May be repeated. Maximum 9 hours.

491 Foreign Study (1-15) Sp

492 Off-Campus Study (1-15) Sp

493 Independent Study (1-15) Sp

INFORMATION SCIENCES (560)

101 Information Foundations (3) Nature of information systems, values, cognition, organization, and transfer, uses in society. Issues: ethics, privacy, copyright, preservation, national information policy, equity of access. Information oriented careers. Undergraduate credit only. E

102 Technologies for Information Retrieval (3) Principles, selection, and use of computer-based information management applications; software identification and task appropriate uses; telecommunications, utilities, and memory management systems; multiple operating systems and technology for national network connections; information services via computers. Undergraduate credit only. Sp

310 Information Seeking: Resources and Strategies (3) Information as critical resource for research and decision making; emphasis on planning, executing, and evaluating information searches. Focus on topic of student's major. Undergraduate credit only. E

330 Books and Related Materials for Children (3) Materials for children in leisure time or classroom activities; criteria for selecting books, magazines, recordings, films and related materials; storytelling and other devices for encouraging reading. Undergraduate Credit only. E

350 Information Consumer (3) Information in society, information economy, knowledge/learning society; publishing and information providers: hosts, bulletin boards, nets; information overload/anxiety, science fraud, gatekeeping concepts; updating systems, environmental scanning; information consumption techniques. Undergraduate credit only. E

430 History of the Book (3) History of writing and various methods of bookmarking.

450 Writing About Science, Technology and Medicine (3) (Same as Journalism 450).

485 Introduction to Electronic Communications and Information Resources on the Internet (3) Exploration of worldwide information and communications resources including e-mail, newsgroups, and the world wide web. Discussion of information issues including copyright, censorship, privacy, and access. E

486 Advanced Electronic Communications and Information Resources on the Internet (3) Exploration of electronic communication issues, including information and user behavior, information industry, economics of information products and services, technological and organizational change, information professions, and issues. E, Su-A

INSTRUCTIONAL TECHNOLOGY, CURRICULUM, AND EVALUATION (577)

203 Field Study in Education (1-3) Problems of persons in active service in the field, includes methods of teaching, curriculum materials, school-community relations, and school organizations. May be repeated. Maximum 6 hours.

304 Microcomputers and Instructional Design (3) Applications to basic operations and application of the microcomputer as related to curriculum development and instructional design. Prereq: Admission to the Teacher Education Program.

324 Applications of Instructional Technology in Elementary and Middle School Teaching (1-3) Applications of instructional technology in the elementary and middle schools with an emphasis on computers. Exposure to and experience with using educational software. May be repeated. Maximum 3 hours. Prereq: Admission to Teacher Education Program.

355 Introduction to Secondary Schools (3) Aspects of teaching in grades 7-12, including curriculum program and roles and responsibilities of secondary school teachers and administrators. Prereq: Admission to Teacher Education Program.

404 Problems in Improvement of Instruction (1-3) Special conferences, workshops, or in-service programs. May be repeated. Maximum 6 hours. Satisfactory/No Credit grading only.

475 Utilization of Instructional Media (3) Basic communication process, need for instructional media, instructional development, selection and utilization of basics, and basic selection and evaluation techniques. (Same as Library and Information Science 475). E

476 Instructional Media in Elementary Education (1) Basic operation of audiovisual hardware, selection and utilization of materials, and basic production skills needed for effective communication in the elementary classroom. Media Lab experience in production of AV software.

486 Introduction to Instructional Computing (3) Classroom uses of computers, applications for teachers, overview of computer operations and software for teachers of all grades. Prereq: Admission to Teacher Education. E

INTERDISCIPLINARY PROGRAMS (581)

100 Selected Topics (1-3) May be repeated. Maximum credit 6 hours.

400 Selected Interdisciplinary Topics (1-12) Acceptable for major or minor credit in any Interdisciplinary Program with the consent of the Director of Interdisciplinary Programs and the respective chairperson. May be repeated for credit to a maximum of 12 hours. Letter grade or S/NC grading.

491 Foreign Study (1-15) Registration by permission of director of Interdisciplinary Studies.

492 Off-Campus Study (1-15) Registration by permission of director of Interdisciplinary Studies.
INTERIOR DESIGN (582)

141 Introduction to Interior Design (2) Orientation to the profession; relationship to allied fields; contemporary development; philosophical approaches. Open only to majors in interior design and architecture or consent of instructor. F

171 Visual Studies (3) Classification and properties of two and three-dimensional visual organization; design principles; visual and spatial elements within simple and complex systems; role of movement in experiencing scale and volumetric space. Three hour studio. Open only to majors in interior design and architecture. Prereq: 141 or consent of instructor. Sp

200 Human-Environment Systems (3) Role of culture in defining environment; physical, social and conceptual aspects of human-environment systems; impact of environment on human behavior, feelings and values; mutual-utility of behavior-environment systems. (Same as Urban Studies 200.) F

221 Theory of Color (2) Introduction to basic color theory and its application to interior environments. Explores aesthetics and psycho-physiological effects. Sp

231 Micro-Computers for Interior Design (3) Introduction to computer-based spreadsheets, drawing, desktop publishing, database and other software applications in various aspects of product design and management, including cost estimating and budget constraints, optimization, 3D rendering, exerix analysis, project management and information and resource management. Three hour studio. Prereq: Math 119 or consent of instructor. Coreq: 271. F

261 Materials and Resources for Interiors (2) The development and application of materials and resources used in interior architectural space. Prereq: 171 or Arch 172 or consent of instructor. Sp


272 Fundamentals of Interior Design II (6) Problem solving, spatial organization of micro environments, increasingly larger scale; communication of total design solution graphic, audio and photographic techniques; emphasis on the use of color. Five hour studio. Prereq: 271. Sp

311 History of Interior Architecture (4) Interior architecture, decoration and decorative arts within cultural context, ancient through nineteenth centuries, emphasis on Italian, French, and American, Renaissance to present. Three hour studio. Prereq: Consent of instructor. F

312 History of the Contemporary Interior Architecture (2) Interior architecture, furniture, design philosophies, nineteenth century roots for twentieth century developments, Europe and America. Design as influenced by movements in the fine arts, technological advances, cultural context. Prereq: 311 or consent of instructor. Sp


371 Intermediate Interior Design I (6) Studio problems of intermediate complexity with emphases on conceptual design phases; in-depth analysis of current programming methods; integrates and extends previous knowledge of spatial organization and planning of micro and macro environments. Five hour studio. Prereq: 272 and Third year standing in interior design. F

372 Intermediate Interior Design II (6) Studio problems of intermediate complexity with emphases on conceptual design phases; in-depth analysis of current programming methods; integrates and extends previous knowledge of spatial organization and planning of micro and macro environments. Five hour studio. Coreq: 231, 371. Sp

380 Proxemics (2) Analysis of space and behavior; within a cultural context. Application to design and the design process. Examination of theoretical foundations and concepts from environment and behavior. Simulation techniques and methods for identifying behavioral design requirements. Two hour studio. Prereq: 200, 231. Coreq: 471 or consent of instructor. F

411 History of American Interior Architecture (3) Historical developments in interior architecture and decorative arts within cultural context, colonial era through nineteenth century. Prereq: 311 or consent of instructor. F

417 Honors: Interior Design I (1-4) Advanced research in interior design problems for juniors or seniors. May be repeated. Maximum 8 hours. Consent of Interior Design faculty.

420 Practicum for Interior Design (3) Supervised experience in a professional design firm; business practices, project management and design philosophy. Prereq: 360, 372 and consent of instructor. F

431 Computer-Aided-Design (3) Interaction between computer-aided-design process, database, spreadsheet software, cost estimating, construction drawings related to space planning. One hour lecture and two hour studio. Prereq: 231, 371. Coreq: 372 or consent of instructor. Consent of Interior Design majors only. Sp

464 Environmental Factors in Design (3) Human factors and associated research techniques and design methodologies related to the built environment.

471 Advanced Interior Design I (4) Non-residential studio problems of advanced complexity; integrates and extends previous experiences utilizing systematic design methodologies. Four hour studio. Prereq: 372, 420. Coreq: 400, or consent of instructor. F

472 Advanced Interior Design II (6) Comprehensive studio problems of advanced complexity; integrates and extends previous experiences utilizing systematic design methodologies. Six hour studio. Prereq: 471 or consent of instructor. Sp

480 Furniture Design (4) Human factors data applied to design of body support, task support, storage and systems, construction drawings and scale models; advanced millwork design; materials and manufacturing processes. Two hour lecture and four hour studio. Prereq: 471 or Arch 372 or consent of instructor. Sp

484 Needs Assessment and Design Programming (3) Systematic methodology and multidisciplinary research methods as a part of design problem solving experience. Appropriate for evaluating various environments: commercial, corporate, hospitality, institutional, and retail. Seminar. May repeated for maximum six hours credit. Prereq: Fourth year standing or graduate student in architecture and/or planning or consent of instructor.

491 International Study (1-15) Individual or group studio and/or study abroad; academic research, field investigation, or studio experiences. Not available for credit to students majoring in interior design problems for juniors or seniors. May be repeated. Maximum 8 hours. Consent of Interior Design faculty.

493 Directed Studies in Interior Design (1-4) Independent research in environmental design analysis. Prereq: Consent of instructor. E

499 Directed Readings (3) Seminar.  May repeated for maximum six hours. Consent of Interior Design faculty.

511-512 History of Italian Literature (3,3) Chronological view of Italian Literature in relation to the specific historical developments that have influenced it. Prereq: Consent of instructor.

514 Highlights of Italian Civilization (3) Survey of Italian civilization with special attention to major social, political and cultural achievements. Prereq: 212 or consent of instructor.

341-342 Intermediate Grammar, Composition and Conversation (3,3) Comprehensive analysis of Italian in prose; review of grammatical principles and their application in translation from English to Italian, both written and oral; exercises in free composition. Prereq: 212 or equivalent.

401 Dante and Medieval Culture (3) Introduction to the significance of this great Italian writer. Prereq: 212 or consent of instructor. (Same as Medieval Studies 401.)

402 Petrarch and Boccaccio (3) Prereq: 212 or consent of instructor. (Same as Medieval Studies 402.)

405 Modern Italian Poetry (3) Prereq: 212 or consent of instructor.

406 The Modern Italian Novel (3) Prereq: 212 or consent of instructor. 

409 Directed Readings (3) Seminar.  May repeated for maximum six hours. Consent of Interior Design faculty.

410 Italian Theatre (3) Survey of Italian theatre from Renaissance to present. Prereq: 212 or consent of instructor.

414 Cultural Studies (3) This course will examine Italian culture as a set of practices characteristic of Italian society, from its mode of material production to its eating habits, dress codes, celebrations, and rituals. The objective of the course is to achieve a greater understanding of contemporary Italian culture.

421 Topics in Italian Literature and Cinema (3) Examination of Italian literature and cinema from 1930 to the present focusing on literary works translated into English and adapted into film. Objectives of the course are to investigate the relationship between literature and cinema and to achieve a greater understanding of Italian culture since 1930. Films will be shown in Italian with English subtitles. May be repeated. Maximum of 6 hours. (Same as Cinema Studies 421.)

490 Internship (1-15) Career-related experiences in the United States or abroad with permission of the Language and World Business Director. For Language and World Business majors only. Satisfactory/No Credit only.

491 Foreign Study (1-15) 

JAPANESE (589)

151-152 Elementary Japanese I,II (5,5) (Same as Asian Languages 151-152.)

251-252 Intermediate Japanese I,II (5,5) (Same as Asian Languages 251-252.)

313-314 Japanese Literature in English Translation (3,3) (Same as Asian Languages 313-314.)

351-352 Advanced Japanese I,II (4,4) (Same as Asian Languages 351-352.)

451 Readings in Japanese Literature (3) (Same as Asian Languages 451.)

JOURNALISM (594)


456 Science Writing as Literature (3) Survey of important science writing for the general public across the spectrum of science, engineering, and medicine. Works by authors such as Arthur C. Clarke, Stephen J. Gould, and Richard Selzer will be analyzed for literary qualities in a quest to understand why some science writing succeeds. Prereq: Consent of instructor.


465 Women and Mass Media (3) Media effects on women. Media coverage and portrayal of women. Historical and current status of women in mass communications industries. (Same as Women’s Studies 465.)


491 Foreign Study (1-15) Advance approval of hours and topics by advisor required for registration. May be repeated for maximum of 15 hours credit.

492 Field Experience (1-2) Approved internships and other supervised practice in journalism. May be repeated for a maximum of 4 credit hours. Prereq: 360, senior standing, and consent of instructor. Satisfactory/No Credit grading only.

493 Independent Study (3) May be repeated for maximum of 6 hours. Prereq: Consent of instructor.

JUDAIC STUDIES (595)

311 Ancient Hebraic Religious Traditions (3) Writing emphasis course. (Same as Religious Studies 311.)

312 Religious Aspects of Biblical and Classical Literature (3) Writing emphasis course. (Same as Religious Studies 312.)

320 Women and Religion (3) (Same as Religious Studies 320 and Women’s Studies 320.)

322 Medieval Philosophy (3) Writing emphasis course. (Same as Philosophy 322 and Medieval Studies 322.)

350 German-Jewish Topics in Literature and Culture (3) May be repeated. Maximum 6 hours. (Same as German 350.)

369 History of the Middle East (3) Writing emphasis course. (Same as History 369.)

370 History of the Middle East (3) Writing emphasis course. (Same as History 370.)

381 Introduction to Judaism (3) Writing emphasis course. (Same as Religious Studies 381.)

383 History of Jewish Civilization I (3) (Same as History 383.)

384 History of Jewish Civilization II (3) (Same as History 384.)

385 Contemporary Jewish Thinkers (3, 3) Writing emphasis. May be repeated. Maximum 6 credit hours. (Same as Religious Studies 385.)

386 Voices of the Holocaust (3) (Same as Religious Studies 386.)

395 The Crusades and the Medieval Christian-Muslim Relations (3) (Same as History 395)

405 Modern Jewish Thought (3) Writing emphasis course. (Same as Religious Studies 405.)

425 Early Christian and Byzantine Art, to 1350 (3) Writing emphasis course. (Same as Art History 425 and Medieval Studies 371.)

431 Medieval Art of the West, 800-1400 (3) Writing emphasis course. (Same as Art History 431 and Medieval Studies 381.)

LATIN (257)

111-112 Beginning Latin (3,3) Must be taken in sequence. Not available to students eligible for Latin 150.

150 Latin Transition (3) This course is designed to prepare students for enrollment in Latin 251. Prereq: Two years of high school Latin and a score on the Latin placement exam below that required for admission to Latin 251. Since 150 is a review of elementary Latin, students who receive credit in this course may not also receive credit for any other 100 level Latin course and therefore also forfeit the six hours of elementary language credit awarded through placement examination.

251 Intermediate Latin: Grammar Review and Readings (3) Prereq: 112 or 150 or placement through the Latin placement examination.

252 Intermediate Latin: Vergil’s Aeneid (3) Prereq: 251 or equivalent.

351 Cicero and Sallust (3) Prereq: 252 or equivalent.

352 Roman Lyric Poetry (3) Poetry of Catullus, Horace, and the elegists. Prereq: 252 or equivalent.

414 Cicero and Techniques of Latin Prose Composition (3) For advanced students in Latin. Practice in prose composition, the writings of Cicero the model. Prereq: 351-352 or consent of instructor.

431-432 Selected Readings from Latin Literature (4) For advanced students in Latin. Oratory, historical writings and poetry of ancient Rome, in the original Latin. May be repeated for credit. Maximum 9 hours. Prereq: 351-352 or consent of instructor.

435 Medieval Latin (3) Selected readings from the Latin prose and poetry of medieval Europe. Prereq: Consent of instructor.

LATIN-AMERICAN STUDIES (600)

251-252 Introduction to Latin American Studies (3,3) (Same as History 255-256.)

311 Aspects of Luso Brazilian Literature (3) (Same as Portuguese 311.)

313 Peoples and Cultures of Mesoamerica (3) (Same as Anthropology 313.)

314 Peoples and Cultures of South America (3) (Same as Anthropology 316.)

315-116 Aspects of Luso-Brazilian Literature (3,3) (Same as Portuguese 315-316.)

319 Caribbean Cultures and Societies (3) (Same as Anthropology 319 and African and African-American Studies 319.)

331 Introduction to Hispanic Culture (3) (Same as Spanish 331.)

333 Survey of Spanish-American Literature: 1700 to Present (3) (Same as Spanish 333.)

360 History of Latin America (3) (Same as History 360.)

361 History of Latin America (3) (Same as History 361.)

372 Geography of Middle America (3) (Same as Geography 372.)

373 Geography of South America (3) (Same as Geography 373.)

401 Cultural Plurality and Institutional Changes in Latin America (3) (Same as Spanish 401.)

402 Latin American Studies Seminar (3) (Same as Spanish 402.)

431 Topics in Literature and Language of the Portuguese Speaking World (3) (Same as Portuguese 431.)

432 Topics in the Language and Language of the Portuguese Speaking World (3) (Same as Portuguese 432.)

456 Latin American Government and Politics I (3) (Same as Political Science 456.)

460 History of Brazil (3) (Same as History 460.)

461 Cuban Revolution in Historical Perspective (3) (Same as History 461.)

462 History of Mexico (3) (Same as History 462.)

463 Modern Latin American History in Film (3) (Same as History 463.)
LEADERSHIP STUDIES (615)
200 Student Leadership Development (3) Designed to enhance the knowledge and skill of emerging student leaders and includes theoretical and experiential content related to leadership role, skill, and effectiveness. Satisfactory/No Credit grading only.

LEGAL STUDIES (617)
300 Mass Communication Research Methods (3) (Same as Communications 300.)
330 Law in American Society (3) (Same as Political Science 330.)
331 Sociological Research (3) (Same as Sociology 331.)
340 Women, Politics, and the Law (3) (Same as Women's Studies 340.)
344 Professional Responsibility (3) (Same as Philosophy 344 and Religious Studies 344.)
362 Roman Law (3) (Same as Classics 362.)
400 Mass Communication Law and Ethics (3) (Same as Communication 400.)
424 Psychology and Law (3) (Same as Psychology 424.)
430 United States Constitutional Law: Sources of Power and Restraint (3) (Same as Political Science 430.)
431 United States Constitutional Law: Civil Rights and Liberties (3) (Same as Political Science 431.)
442 Administrative Law (3) (Same as Political Science 442.)
451 Criminal Justice (3) (Same as Sociology 451.)
455 Society and Law (3) (Same as Sociology 455.)
469 Freedom of Speech (3) (Same as American Studies 469 and Speech Communication 469.)
470 International Law (3) (Same as Political Science 470.)
490 Language and Law (3) (Same as English 490.)
496 The Rhetoric of Legal Discourse (3) (Same as English 496.)

LINGUISTICS (623)
200 Language, Linguistics and Society (3) Introduction to linguistics with focus on language development and use of language by individuals and groups. Prereq: Completion of Freshman English or equivalent.
371 Foundations of the English Language (3) (Same as English 371.)
372 The Structure of Modern English (3) (Same as English 372.)
400 Topics in Linguistics (3) Content varies. May be repeated. Maximum 6 hours.
411 Linguistic Anthropology (3) (Same as Anthropology 411.)
423 The Development of Diachronic and Synchronic Linguistics (3) Development of Western linguistic thought from the Hebrews and Greeks through modern times. Readings from Boas, Sapir, Bloomfield, and others. Prereq: 9 hours of courses required for the Linguistics major (300-level or above) or consent of instructor.
425 Introduction to Descriptive Linguistics (3) (Same as French 425, German 425, Russian 425, and Spanish 425.)
426 Methods of Historical Linguistics (3) (Same as French 426, German 426, Russian 426, and Spanish 426.)
429 Romance Linguistics (3) (Same as French 429 and Spanish 429.)
431 Topics in Hispanic Linguistics (3) (Same as Spanish 430.)
435 Structure of the German Language (3) (Same as German 435.)
436 History of the German Language (3) (Same as German 436.)
471 Sociolinguistics (3) (Same as English 471 and Sociology 471.)
472 American English (3) (Same as English 472.)
474 Teaching English as a Second or Foreign Language I (3) (Same as English 474.)
475 Teaching English as a Second or Foreign Language II (3) (Same as English 475.)
476 Second Language Acquisition (3) (Same as English 476.)
477 Pedagogical Grammar for ESL Teachers (3) (Same as English 477.)
485 Special Topics in Language (3) (Same as English 485.)
490 Language and Law (3) (Same as English 490.)
491 Foreign Study (1-15)
492 Off-Campus Study (1-15)
493 Independent Study (1-15)

LOGISTICS AND TRANSPORTATION (624)
301 Introduction to Logistics (3) Business logistics as a strategic area within the firm. Role of materials management and physical distribution, activities such as customer service, order processing and information flow, transportation, warehousing, purchasing, inventory, and system design and organization. Overview of supply chain operation.
302 Introduction to Transportation (3) Transportation and distribution as a vital part of the nation’s economic and social structure; U.S. transportation system; society’s demands for mobility and policies of public and private sectors to meet those demands. Prereq: Economics 201.
303 Special Topic in Logistics and Transportation (3-6) Seminar in current problem area in logistics and transportation. Topic announced prior to offering. May be repeated once for additional credit provided topic is different. Maximum 6 hours. Prereq: Consent of instructor.
411 Logistics and Transportation Analytical Methods (3) Introduction to the principle analytical tools and models used in logistics and transportation; applications of analytical tools to logistics and transportation problems; using analytical methods to support negotiations.
441 Global Logistics and Transportation (3) Multinational logistics strategy, import-export process, global sea, surface, and air operations comparative transport systems analysis. Prereq: 301, 302.
450 Logistics Information Infrastructure Strategy and Design (3) An introduction to the use of information tools to design and create applications to support business processes in networked organizations. Students will be expected to design and use groupware, both static and dynamic web sites, relational-data base applications and e-commerce applications.
460 Seminar in Logistics and Transportation Strategy (3) Senior seminar in development of strategy for logistics and transportation in a supply chain perspective. Prereq: 411, Statistics 365, Senior Standing.
493 Independent Study (1-6) Directed research on subject of mutual interest to student and staff member. May be repeated. Maximum 6 credit hours. Prereq: Consent of instructor.

MANAGEMENT (625)
203 Management Information Systems (3) Management of information concepts and applications. Using the computer as a tool to source, organize, and analyze data. Designing information systems to meet business needs. Emphasis on spreadsheets, database management systems, telecommunications, and information technology. Prereq: Open to College of Business Administration students only. E

301 Principles of General and Operations Management (3) Basic functions of general management and the concepts and techniques used in operations management. Includes lectures and discussion/problem solving sessions. Prereq: Statistics 201. E

311 Labor Relations and Collective Bargaining (3) American labor history, structure, and function of contemporary unions, nature of collective bargaining, and dispute settlement.

321 Organizational Structure and Behavior (3) Behavioral processes in organizations; motivation, leadership, decision making, communication; behavioral consequences; group behavior, informal organizations, organizational structure, conflict, politics, change and development. Prereq: 301. F, S


401 Business Strategy/Policy (3) Strategy and policy which affect the character and success of the total enterprise. Capstone course which integrates all functional areas in the formulation and implementation of strategy which will enable the organization to reach objectives. Major writing requirement. Prereq: Completion of business core courses and senior standing. Must be admitted to a business major. E

421 Total Quality Management (3) TOM is characterized by three main principles: customer focus, continuous improvement, and teamwork. Course focuses on the managerial perspective that is necessary to successfully implement and sustain a TQM philosophy, while briefly introducing its underlying statistical concepts. Prereq: Statistics 201, Management 301. F, S

431 Personnel Management (3) Theory, methods and issues pertaining to successful personnel management. Prereq: 301, senior standing. F, S

432 Implementation and Evaluation of Personnel Programs (3) Methods of identifying, developing, implementing and evaluating various personnel programs. Prereq: 431, senior standing. S

440 Organizational Psychology (3) (Same as Psychology 440.)

441 Operations Management II (3) Planning and control of logistics systems: Aggregate planning; scheduling; surveying logistics systems, materials management. Prereq: 341.

471 International Management (3) Factors significant to the manager in international business activities.

492 Management Off-Campus Study (1-6) Satisfactory. No Credit grading only. Prereq: Consent of Instructor.

493 Independent Study (3) Readings, research, and special projects. Prereq: Consent of instructor. May be repeated one time for credit.
MANAGEMENT SCIENCE (627)

310 Management Science and Managerial Decision Support Systems (3) An introduction to quantitative decision models and their integration into microcomputer-based decision support systems. Topics include linear, dynamic and stochastic, as well as decision analysis, Markov, inventory and queueing models. Prereq: Mathematics 123, 125 and Statistics 201.

311 Buyer Behavior—Analysis for Marketing (3) Comprehensive framework of consumer behavior concepts and processes. Emphasis on the role of marketing design, control and feedback, and control of marketing programs. Prereq: Marketing 301 and Statistics 201.

320 Marketing Research and Information Planning (3) Marketing Research process from its inception to implementation of study results. Student will be able to critically evaluate the merit of a research project as well as possess the ability to design a sound market project. Major writing requirement. Prereq: Marketing 301 and 302.

400 Special Topics in Marketing (3) Topics of current interest in marketing. Topic announced prior to offering. May be repeated once for additional credit provided topic is different. Maximum 6 hours. Prereq: Marketing 301 and 302.

410 Advertising Management (3) Business side of advertising including budget, account representation, strategic planning, measuring ad effectiveness, advertising ethics. Managerial focus emphasizing types of decisions continually confronting promotion executives. Prereq: Accounting 201-202; Economics 201; Statistics 201; Marketing 301; and Marketing 310; or consent of instructor.

420 Sales Force Management (3) Personal selling function and its management in the business firm. Focuses on the activities and problems of first line sales managers. Subjects include organization, recruiting, motivating, forecasting, territory design, and evaluation, Prereq: Marketing 301 and 302.

430 Marketing Analysis and Strategy (3) Approaches for finding markets and evaluating them for opportunity. Concepts, types of information and analysis techniques combined into a framework for strategic decisions. Major writing requirement. Prereq: Accounting 201; Economics 201; Statistics 201; Marketing 301; and Marketing 310; or consent of instructor.

440 International Marketing (3) Specific issues involved in entering overseas markets and conducting marketing operations on a global as opposed to a "domestic" scale. Topics include international operations, assessing marketing opportunity, joint ventures, timing and sequencing of entry, global strategic planning. Prereq: Marketing 310.

450 Services Marketing (3) Specific issues involved in developing marketing strategy for service firms. Takes the perspective of both customer and the manager, understanding determination and delivery of service quality. Prereq: Marketing 310.

470 Marketing Forecasting (3) Overview of techniques, systems, and management approaches used to develop sales forecasts of markets. Performance measurement of sales forecasting and the use of forecasts in business planning are also covered. Prereq: Marketing 301, 310, and 315.

492 Marketing Off Campus Study (1-6) Satisfactory. No Credit grading only. Prereq: Consent of instructor.

493 Independent Study (1-6) Directed research on subjects of mutual interest to student and staff member. May be repeated. Maximum six hours credit. Prereq: Consent of instructor.

497 Honors I (3) Topics may include nonbusiness marketing applications, macroenvironmental issues, market segmentation, international marketing, services marketing, marketing channels and related issues. Prereq: Consent of instructor.

MATHEMATICS (641)

100 Intermediate Algebra (3) First degree equations and inequalities, polynomials, rational expressions, exponents, graphing, second degree equations and inequalities, systems of equations, introduction to exponential and logarithmic functions. The course is designed to prepare students for enrollment in Mathematics 110, 115, 119, 130, 201, and 202. Course does not count toward the number of hours required for graduation, but it does fulfill any mathematics requirement. A, B, C, NC grading.

109 Algebra Workshop (1) Self-paced tutorial-centered program for students taking Math 119, 130, or 141 who need additional help (as determined by placement exams, assessment exams, or classroom performance). Individual and computerized instruction on various pertinent algebraic topics. Topics include order of operations, solving linear equations, factoring, and basic algebraic fractions. Prereq: Math 119, 130, or 141. Students having excellent high school mathematics background and a satisfactory placement test score may not subsequently receive credit for 209. Prereq: Math 141. S/NC only.

110 Algebraic Reasoning (3) A course in the applications of elementary mathematics to life in the modern world. Includes applications in financial mathematics, consumer mathematics, and other areas. Students preparing to take 123-125 should take 119 instead of 110. Prereq: Two years of high school algebra and either satisfactory placement test scores or Math 100. This course should not be taken to remove an entrance requirement.

115 Statistical Reasoning (3) An introduction to probability and statistics without calculus. Not available for credit to students in the College of Business Administration. Prereq: Two years of algebra and one year of geometry and either satisfactory placement test scores or Math 100.

119 College Algebra (3) A review of algebraic functions, equations, and inequalities for students who satisfy the course prerequisites for 123 or 125 but whose placement test scores indicated additional preparation is necessary. Students who receive a grade of C or better in any course numbered 123 or higher (except for 203, 205, and 257) may not subsequently receive credit for 119. Prereq: Two years of algebra and one year of geometry and either satisfactory placement test scores or Math 100. This course should not be taken to remove an entrance requirement.

123 Finite Mathematics (3) For students not planning to major in the physical sciences, engineering, mathematics, or computer science. Exponential and logarithmic functions, interest and annuities, linear systems and matrices. Prereq: Two years of algebra, and one year of geometry in high school and either satisfactory placement test scores or Math 100.

125 Calculus I (4) A course in basic calculus applicable to majors in the biological sciences, the social sciences and economics. Topics are developed with an emphasis on applications to problems in biology, economics and social sciences. Prereq: Two years of algebra and one year of geometry in high school plus satisfactory placement test score, or 119 or 130.

127 Calculus II (4) A course in basic calculus applicable to majors in the biological sciences, the social sciences and economics. Topics are developed with an emphasis on applications to problems in biology, economics and social sciences. Prereq: Calculus I. S/NC grading only.

130 Precalculus (4) Review of algebraic, logarithmic, exponential, and trigonometric functions for students who satisfy the course prerequisites for 141 or 151, but whose placement test scores indicate additional preparation is necessary. Students who receive a grade of C or better in 141 or 151 may not subsequently receive credit for 130. Prereq: Two years of algebra, a year of geometry, and a half year of trigonometry in high school. Students who did not study trigonometry in high school may take the noncredit course in trigonometry simultaneously with 130.

141-142 Calculus I, II, (4,4) Standard first-year course in single variable calculus emphasizing students of science, engineering, mathematics, and computer science. Differential and integral calculus with applications. Prereq: Two years of algebra, a year of geometry, and a half year of trigonometry in high school, plus satisfactory placement test scores, or Math 130.

147-148 Honors: Calculus I, II, (4,4) Honors version of 141-142 for well-prepared students. Qualified students are selected by the department. Prereq: Two years of algebra, a year of geometry, and a half year of trigonometry in high school, plus satisfactory placement test scores, or Math 130.

151-152 Mathematics for the Life Sciences I, II, (3,3) For students majoring in the Life Sciences. Does not serve as a prerequisite for 231 or 241. Topics include: descriptive statistics, linear regression, discrete probability, matrix algebra, difference equations, calculus, and differential equations. Emphasis on applications in the life sciences. Prereq: Two years of algebra, a year of geometry, and a half year of trigonometry in high school, plus satisfactory placement test scores, or Math 130. Credit will not be given for both 147 and 141 or 152.

151 Computer Literacy for Mathematics (3) Introduction to computers, the internet, mathematical packages and programming for prospective mathematics majors. Prereq: Math 141. S/NC only.

200 Matrix Computations (1) Introduction to matrix operations, linear equations, determinants, eigenvalues and eigenvectors. For students in the College of Engineering and College of Business Statistics majors only. Students may receive a grade of C or better in 251, but may not subsequently receive credit for 200. Prereq: 241 or 247.

201 Structure of the Number System (3) Problem solving, sets and relations, number systems, integers, elementary number theory, rational numbers and decimals. Prereq: Two years of algebra and one year of geometry in high school and satisfactory placement test score.

202 Probability, Statistics, and Euclidean Geometry (3) Statistics, probability, and Euclidean geometry; measures of central tendency and variation. Basic plan and three-space geometry, congruence and similarity, constructions with compass and straightedge, transformational geometry, and coordinate measurement. Turtle graphs. Prereq: Two years of algebra and one year of geometry in high school and satisfactory placement test score.


241 Calculus III (4) Calculus in functions of two or more dimensions. Includes solid geometry, partial differentiation, multiple integration, and selection of problems in vector calculus. Prereq: 142 or 148.

247 Honors: Calculus III (4) Prereq: 147-148 or invitation of the department.

251 Matrix Algebra I (3) First course in the algebra of simultaneous linear equations and matrices. Includes Gaussian elimination, determinants, vector spaces, linear transformations, eigenvalues, and eigenvectors. Prereq: 141-142.

257 Honors: Matrix Algebra I (3) Prereq: 148 or invitation of the department.

299 Studies in Mathematics (1-3) May be repeated. Maximum 9 hours. Prereq: Consent of instructor.

300 Introduction to Abstract Mathematics (3) Algebra of sets, functions, relations, mathematical induction, algebraic structure of the real number system, order properties, and completeness. Prereq: Math 142.

323 Probability and Statistics (3) Discrete and continuous random variables; conditional probability; expectation, moment generating functions; law of large numbers, central limit theorem. Elements of statistical inference, estimation, and hypothesis testing. Prereq: 241 (or 247) and 300.

341 Analysis I (3) Introduction to the theory of the real number system, limits of sequences, and functions of a real variable. Prereq: 241 (or 247) and 300.

351 Algebra I (3) Introduction to abstract algebra, emphasizing integers and polynomial rings. Prereq: 251 (or 257) and 300.

371 Numerical Algorithms (3) Development and application of fundamental algorithms for finding roots of equations, solving systems of linear equations, interpolation, fitting data using least-squares, differentiation, integration, and solving ordinary differential equations. Prereq: A high level programming language (e.g., 171 or Computer Science 102), 231, 241 (or 247), and basic matrix algebra (e.g., 200 or 251 or 257).

399 Studies in Mathematics (3) May be repeated. Maximum 9 hours. Prereq: Consent of instructor.
400 History of Mathematics (3) Development of major ideas in mathematics from ancient to modern times and the influence of these ideas in science, technology, philosophy, art, and other areas. Prereq: 251 or 257 and 300. Writing emphasis course: at least one in-class essay examination and 3000 words of writing outside the classroom.

401 Mathematics and Microcomputers (3) Primarily for students seeking certification as mathematics teachers at the secondary level. The use of microcomputers to study concepts and problems in mathematics. Does not satisfy major requirements for a B.S. or M.S. in mathematics. Prereq: 141 or 147.

404 Applied Vector Calculus (3) Topics from multivariable and vector calculus including line and surface integrals, the divergence theorem and the theorems of Stokes. Prereq: 241 or 247.

405 Models in Biology (3) Difference and differential equation models of biological systems. Prereq: 142 or 148 or 152.

411 Mathematical Modeling (3) Construction and analysis of mathematical models used in science and industry. Projects emphasized. Prereq: 231, 241, and 251 or 257. Writing emphasis course.

421 Combinatorics (3) Introduction to problems of construction and enumeration for discrete structures such as sequences, partitions, graphs, finite fields and geometries, and experimental designs. Prereq: 323 or consent of instructor.

423 Probability I (3) Axiomatic probability, multivariate distributions, conditional probability and expectations, methods of moment generating characteristic functions. Laws of large numbers and the central limit theorem. Prereq: 300-level probability or consent of instructor.

424 Probability II (3) Elements of stochastic processes: Random walk, Markov chains and Poisson processes. Other topics as selected by the instructor. Prereq: 423.

425 Statistics (3) Derivation of standard statistical distributions including t, F and X2; independence of sample statistics; basic limit theorems; point and interval estimation, Bayesian estimates; statistical hypotheses, Neyman-Pearson theorem; likelihood ratio and other parametric and nonparametric tests; sufficient statistics. Prereq. 423 or consent of instructor.


443 Complex Variables (3) Introduction to the theory of functions of a complex variable, including residue theory and contour integrals. Prereq: 241 and 247.

445-446 Advanced Calculus I, II (3,3) Introduction to the theory of sequences, series, differentiation, and Riemann integration of functions of one or more variables. Prereq: 241 or 247 and 300, or consent of instructor.

447-448 Honors: Advanced Calculus I, II (3,3) Honors version of 445-446. Prereq: 241 or 247 and 300, or consent of instructor.

453 Matrix Algebra II (3) Advanced topics in matrix theory, including the Jordan canonical form. Prereq: 251 or 257.

455-456 Abstract Algebra I, II (3,3) Introduction to algebraic structures such as groups, rings, fields, vector spaces and linear transformations. Prereq: 251 (or 257) and 300, or consent of instructor.

457-458 Honors: Abstract Algebra I, II (3,3) Honors version of 455-456. Prereq: 251 (or 257) and 300, or consent of instructor.

460 Geometry (3) Axiomatic and historical development of neutral, Euclidean, and hyperbolic geometry stressing proof technique and critical reasoning. Models of Non-Euclidean geometries. Prereq: 300, or consent of instructor.

461 Topology (3) Includes topology of line and plane, separable topologies, compactness, connectedness, continuous functions, homeomorphisms, continua, and topological invariants. Prereq: 241 (or 247) and 300, or consent of instructor.

471 Numerical Analysis (3) Introduction to computation, instabilities, and rounding. Interpolation and approximation by polynomials and piecewise polynomials. Quadraature and solution of systems of linear equations. Solution of a single nonlinear equation and nonlinear systems. Orthogonal decomposition, least squares and the algebraic eigenvalue problem. Prereq: 371 or consent of instructor. (Same as Computer Science 471.)

472 Numerical Algebra (3) Direct and iterative methods for systems of linear equations, eigenvalues, and eigenvectors. Prereq: 371 or consent of instructor. Recommended: 453. (Same as Computer Science 472.)

475 Industrial Mathematics (3) Modeling, analysis, and computation applied to scientific/technical/industrial problems. Prereq: 231 and familiarity with an operating system and a programming language (e.g., 171, 371, or C.S. 102).

490 Readings in Mathematics (1-3) Open to superior students with consent of department head. Independent study with faculty guidance. May be repeated. Maximum 9 hours. Prereq: Agreement of faculty mentor to supervise independent work.

495 Seminar in Actuarial Mathematics (1-3) Introduction to principles and problem solving techniques in actuarial sciences with emphasis on the mathematical topics included in the initial Actuarial Exams. Prereq: 241, 251, and 323.

499 Seminar in Mathematics (1-3) Topics will vary. Will require out-of-class projects and in-class presentations by students. Students must register for the number of credits desired and permission for seminar credits. May be repeated. Maximum 9 hours. Prereq: Consent of instructor.

MATHEMATICS EDUCATION (642)

485 Teaching of Mathematics, Grades 7-12 (3) Preparation of teaching plans, evaluation, materials for teaching mathematics; teaching simulation and directed observation. Prereq: Admission to Teacher Education Program F.

MEDICAL TECHNOLOGY (669)


420-421 Clinical Chemistry (5,5) Clinical aspects of biochemistry, including overview of principles and instrumentation with practical laboratory application of analytical procedures, specimen collection and handling, significance of results, and quality assurance. Includes blood gas analysis, including radiometric, immunosassay, and analysis of blood and other body fluids for enzymes, hormones, and other constituents of clinical interest, utilizing both automated and manual techniques, physical characteristics, detection, and use of short half-life radioactive materials for in vivo procedures such as radioimmunoassay which utilize radioisotopes.

430-431 Hematology and Clinical Microscopy (4,4) Principles, theories, and instrumentation related to quantitative and qualitative examination of cellular elements of blood and other body fluids; factors of hemostasis, quantitative and qualitative examination of urinary and genital tract fluid studies. Emphasis on microscopic identification of cells and the significance and correlation of laboratory data.

440-441 Immunohematology (3,3) Theory and practice in blood bank operation, erythrocyte antigens and their nomenclature and alloimmunization. Standard techniques practiced in using blood typing, crossmatching, antibody detection, and preparation of blood components for transfusion. Safety control methods standard to efficient blood bank.

450 Clinical Serology and Immunology (2) Performance and interpretation of broad range of clinical serological and immunological methods with emphasis on principles and clinical correlation. Formal lecture series included.

470 Orientation and Basic Techniques (1) For facilitation of students from campus to hospital community and clinical laboratory. Introduction to medical terminology, ethics, and health team concept. Orientation to basic techniques including procedures for collection and handling of specimens, principles of operation of many laboratory devices, review of laboratory math, and introduction to quality control procedures. Portions of course extend over entire clinical year.

480 Principles of Supervision and Education in Medicine (1) Seminars in basic principles of management, ethical and health team concept. Examination of clinical practices used in evaluating blood typing, their normal and abnormal immunology. Standard techniques, physical characteristics, detection, and evaluation of general bacteria and fungi, their sources, methods of culture, techniques of identification, and correlation of laboratory data. Prereq: Biology 140. (Same as Political Science 475.)

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

MICROBIOLOGY (684)

210 General Microbiology (3) General properties of bacteria and viruses including physiology, metabolism, genetics, applied bacteriology, pathogenesis, and immunity. May not be used as part of the major in microbiology. 2 hours and 2 labs. E

310 Introduction to Microbiology (3) Introduction to bacteria and viruses including physiology, metabolism, and genetics of bacteria and replication and expression of viral genetic material; bacterial and viral pathogenesis; mechanisms of resistance to disease. Prereq: Biology 140. Coreq: Biology 240. F, Su

319 Introductory Microbiology Laboratory (2) Basic
techniques for the examination, cultivation, and identification of microorganisms. Coreq: 310. F


329 Advanced Microbiology Laboratory (2) Laboratory exercises designed to accompany 320. Prereq: 319. Coreq: 320. Sp

400 Laboratory Problems in Microbiology (2-4) Re- search projects under the direction of a faculty member. May not be used to fulfill major requirements for a major. May be repeated. Maximum 9 hours. Satisfac- tory/No Credit only. Prereq: Consent of instructor. E

401 Undergraduate Research in Microbiology (3) Research experience in laboratory of faculty member with faculty committee guidance. Prereq: Junior or senior standing, 310-319-320-329, 3.2 minimum grade point average in all course work, consent of department head. E

402 Microbiology Senior Honors Thesis (4) Sup- ervised research, preparation and presentation of the senior honors thesis. Prereq: Senior standing, 401, 3.2 minimum grade point average in all course work and 3.5 in Microbiology courses, and consent of department head. E

410 Bacterial Physiology (3) Modern concepts of the structure and function of the bacterial cell. Prereq: 310, 320. Sp

411 Bacterial Genetics (3) Transmission and expres- sion of genetic information by bacteria. Prereq: 310, 320. Sp

420 Medical Microbiology (3) Disease producing mi- croorganisms including bacteria, rickettsia, chlamydia, and fungi. Prereq: 310. Sp

429 Medical Microbiology Laboratory (2) Laboratory exercises in medically important areas of microbiology including methods of isolation and identifi- cation, physiological diversity and morphology, formation and diversity; complement, hypersensitivi- ties, cell cooperation and recognition in immune mecha- nisms; soluble factors. Prereq: Biology 240. F


470 Microbial Ecology (3) Physiological diversity and taxonomy of microorganisms from natural environments. Emphasis on the functional role of microorganisms in natural and simulated ecosystems. Prereq: 310. F

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

495 Senior Seminar (3) In-depth consideration of mi- crobiological problems of current interest requiring an integration of two or more disciplines. Emphasis on original literature and the experimental basis of current knowledge. Historical background, impact on society, predictions of the future, and the basis of moral and ethical judgements. Written reports required. A capstone course. Prereq: 320 and Senior standing. Writing-em- phasis course. May be repeated 6 hours. Only 3 hours may be counted toward the major. F, Sp

MILITARY SCIENCE (688)

110 Basic Military Science I (2) Formation and func- tioning of the American defense establishment and its relationship with American society, customs and tradi- tions of the army, aspects of military physical fitness training; selected topics dealing with current world af- fairs; challenges facing the military in the future. Adven- ture training skills lab introduces mountaineering, rifle marksmanship, and optional field training exercises. Prereq: United States citizen; freshman or sophomore standing. Students with higher standing require consent of instructor. Letter grade only. F, Sp

120 Basic Military Science II (2) Introduction of basic leadership theory, principles and skills, with emphasis on effective oral communication. Students present a military subjects subject briefing. Skills taught include rifle marks- manship, individual marksmanship, and optional field navigation. Leadership lab focuses on adventure training which includes rappelling, tactical formation, drill and ceremony and optional field exercises. Prereq: United States citizen or sophomore standing. Letter grade only. Sp

130 Army Conditioning Program (1) Challenging instruc- tion that concentrates on students’ individual weak- nesses and directly applies exercises designed to in- crease flexibility, muscular strength, and cardiorespira- tory endurance. Student also develops the ability to design and lead a fitness program. May be repeated.

200 Basic Military Studies - Practicum (4) 240 contact hours of instruction and evaluation at Fort Knox, Ken- tucky over a five week period during the summer. Prereq: United States citizen; physically qualified; at least sophomore standing with two years remaining at the University (either undergraduate, graduate or in pursuit of additional course work; cumulative GPA 2.00 or above; legally qualified. Letter grade only. Su

210 Basic Officer Skills I (2) The study of American Military History from 1775 to present. Study includes the record of military forces in peace and war and focuses on the history of military art, memoirs, battle history, technical studies, and the relationship of armed forces with society. Labs teach rappelling, physical training, drill and ceremony, field trips, and historical field trips. Prereq: United States citizen; physically qualified; at least sophomore standing with two years remaining at the University (either undergraduate, graduate or in pursuit of additional course work; cumulative GPA 2.00 or above; legally qualified. Letter grade only. F

220 Basic Officer Skills II (2) Practical application of small unit operating techniques to include aid- marksmanship and unit training, map reading and land navigation, drill and ceremony, processing of enemy prisoners of war (EPW), execution of indi- vidual/unit movement techniques, and the exercise of leadership. Prereq: 210 or consent of the Professor of Military Science. Letter grade only. Sp

310 Advance Military Studies I (4) Discussion and prac- tical exercise of leadership including operation of the platoon, team, battle formation and unit training, and physical fitness. Tactical and administrative roles in the military are developed in the classroom and applied during leadership labs and field training. Prereq: United States citizen; minimum of 55 credit hours passed and have at least two years remaining to complete degree (undergraduate or graduate); physically qualified; cu- mulative GPA 2.00 or higher; legally qualified; 3 or 4 years of JROTC (or) 110, 120, 210, 220 completion completion (or) 200 completion (or) basic training completion. Letter grade only. 3 hours and 1 hour lab. Sp

320 Advance Military Studies II (4) Preparation of the future officer leadership of Army to excel at MS 400 Advanced Camp Practicum. Instruction builds on lessons- learned in the 310 and refines small unit leader- ship skills, map reading and land navigation, techniques of oral and written communication skills, and physical fitness. Includes written exercises, course leadership, 3 field exercises and a leadership laboratory. Prereq: 310. Letter grade only. 3 hours and 1 hour lab. Sp

400 Advanced Camp-Practicum (4) 249 contact hours of instruction and evaluation of leadership skills, group dynamics, communication skills, decision-making skills during the summer between the Junior and Senior year. Prereq: 310, 320. Letter grade only. Su

410 Command and Staff Functions (4) Command and staff duties and relationships including logistics, person- nel systems, efficiency reports, correspondence, train- ing management, briefing, counseling, soldier force- positioning, and noncommissioned officer relationships. Prereq: 310 and 320, 400 or consent of instructor. Letter grade only. 3 hours and 1 hour lab. F

420 Military Ethics and Law (4) Military profession, ethical reasoning, staff operations, military briefings and leadership, military justice system, individual leader- ship, Law of Land Warfare. Prereq: 310, 320 and 400. 4 hours. Letter grade only. Consent of instructor. Letter grade only. 3 hours and 1 hour lab. Sp

430 U.S. Military History, 1754 to the Present (3) (Same as History 451.)

493 Military Leadership Topics (1) Topics on prin- ciples and styles of military leadership. May be repeated for additional credit provided topic is different. Maximum 4 hours. Letter grade only. Prereq: Consent of instruc- tor. F, Sp

200 Conducting Laboratory (1) A laboratory course designed to afford conducting opportunities for student conductors and to acquaint students with a variety of musical sending and receiving techniques. May be repeated. Can be taken as an elective credit by any student except those registered for MUS Ed 310 and 320. Letter grade only.

201 Field Experience in General Music (1) Observing and assisting in an approved elementary or middle school classroom. May be repeated. Maximum 2 hours. Satisfactory/No Credit only.

210 Class Woodwind Methods I (1) Structure, use, techniques of playing, care and repair of the oboe and bassoon in school instrumental organizations. Emphasis on tech- niques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

211 Class Woodwind Methods II (1) Structure, use, techniques of playing, care and repair of the flute and saxophone in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

220 Class Brass Methods (1) Structure, use, tech- niques of playing, care and repair of the upper brass instruments in school instrumental organizations. Em- phasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

221 Class Brass Methods III (1) Structure, use, tech- niques of playing, care and repair of the lower brass instruments in school instrumental organizations. Em- phasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

223 Class Percussion Methods I (1) Structure, use, techniques of playing, care and repair of the percussion accessory in school instrumental organizations. Em- phasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

224 Class Percussion Methods II (1) Structure, use, tech- niques of playing, care and repair of the drum kit in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

240 Class String Methods I (1) Structure, use, tech- niques of playing, care and repair of upper string instru- ments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

241 Class String Methods II (1) Structure, use, tech- niques of playing, care and repair of lower string instru- ments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. May be repeated. Letter grade only.

250 Functional Piano for Teachers (1) Practical piano skills for the general/vocal teacher who does not have a keyboard instrument as the applied principal. Transpo- sition, accompaniment, simple reductions. May be repeated once for credit. F, Sp

260 Eurhythms (1) Principles and practice of eu- rhythms, as developed by Emile Jaques-Dalcroze. Prereq: Consent of Instructor. May be repeated once for credit. Maximum 2 hours. Letter grade only. F, Sp

300 Music for Elementary Teachers (2) Singing, rhythm- lic activities, instrumental activities, listening, music

MUSIC EDUCATION (707)
reading, and creative activities appropriate for the elementary grades. For elementary education majors only. Prereq: Admission to Teacher Education Program. Letter grade only. F.

310 Conducting I (3) Basic skills of conducting; baton, time beating of traditional patterns, preparatory beat, cutoffs, cueing. Development of the left hand, fermata, subdividing. Mechanics of full score. Conducting "live" groups. Prereq: Two years of music theory or consent of instructor. Letter grade only.

320 Conducting II (2) Developing advanced baton technique. Multiple rhythms, modern beat patterns and their variations. Studying, analyzing and interpretation of the full score. Achieving complete physical control. Rehearsal techniques. Conducting "live" groups in advanced works. Prereq: Conducting I or consent of instructor. Letter grade only.

330 Music Methods for the Elementary School (3) Methods and materials for teaching music in the elementary grades. Primarily intended for music education majors. Prereq: Consent of instructor and admission to Teacher Education Program. Letter grade only. F.

340 General/Vocal Music Methods (3) School methods and materials for teaching music in the elementary, middle and high schools. Intended for the instrumental music education (Sch) or vocal education (V) major only. Letter grade only.

350 Field Experience in Music Education (1) Prereq: Consent of instructor and admission to Teacher Education Program. May be repeated. Maximum 3 hours. Satisfactory/No Credit only. E.

400 Student Teaching in Music (12) Full time teaching practice in an approved public school. Prereq: admission to the teacher education program and completion of all Music Education courses required for the Bachelor of Music degree (four-year alternative) in Music Education. Coreq: Music Education 401.

401 Senior Seminar (0) Issues related to the music teaching profession as experienced in Student Teaching. Coreq: Music Education 400.

420 Music Methods for the Junior High School and Middle School (3) Methods and materials for teaching vocal, instrumental, and general music at the junior high school or middle school level. Prereq: Admission to Teacher Education Program and consent of instructor. Letter grade only.

430 Music Methods for High School (3) Methods and materials for vocal and instrumental music at the high school level, including charting for the marching band. Prereq: Admission to Teacher Education Program and consent of instructor. Letter grade only. F.

440 Marching Band Techniques (2) Functions, organization, and direction of a school marching band. Letter grade only.

441 String Orchestra Pedagogy and Rehearsal Techniques (2) Function, organization and direction of a school orchestra program. Letter grade only.

482 Internship II: Grades K—12 (3-6) Demonstration of professional competence in planning, instruction and classroom management. Internship is completed in local public schools. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. Sp.

490 Special Topics in Music Education (1-3) Prereq: Consent of instructor. May be repeated. Maximum 9 hours. Letter grade only. E.

493 Independent Study in Music Education (1-5) Prereq: Consent of instructor. May be repeated. Maximum 9 hours. Letter grade only. E.

MUSIC ENSEMBLE (708)

301-501 Woodwind Choir (1,1) May be repeated.

302-502 Jazz-Saxophone Ensemble (1,1) May be repeated. Maximum 4 hours.

303-503 Small Jazz Ensemble (1,1) May be repeated. Maximum 12 hours.

304-504 Jazz Ensemble (1,1) May be repeated.

305-505 Studio Orchestra (1,1) May be repeated. Maximum 12 hours.

306-506 Trombone Choir (1,1) May be repeated.

309-509 Tuba Ensemble (1,1) May be repeated.

310-510 Percussion Ensemble (1,1) May be repeated.

311-511 Marimba Choir (1,1) May be repeated.

312-512 Baroque Ensemble (1,1) May be repeated.

314-514 Brass Choir (1,1) May be repeated.

315-515 Chamber Music Ensemble (1,1) May be repeated. Maximum 12 hours.

316-516 Steel Band (1,1) May be repeated.

320-520 UT Singers (1,1) May be repeated.

330-530 Chamber Singers (1,1) May be repeated.

334-534 Saxophone Choir (1,1) May be repeated.

340-540 Opera Theatre (1,1) May be repeated.

350-550 Concert Band (1,1) May be repeated.

352-552 Symphonic Band (1,1) May be repeated.

353-553 Wind Ensemble (1,1) May be repeated.

354-554 Pep Band (1,1) May be repeated.

356-556 Laboratory Band (1,1) May be repeated.

359-559 Marching Band (1,1) May be repeated.

370-570 Symphony Orchestra (1,1) May be repeated.

380-580 Concert Choir (1,1) May be repeated.

383-583 Men’s Chorale (1,1) May be repeated.

389-589 Women’s Chorale (1,1) May be repeated.

399-599 Accompanying (1,1) May be repeated.

MUSIC GENERAL (698)

140 Fundamentals of Performance (1-2) Private instrumental or vocal study, one or two half lessons per week. (1 hour credit - elective, secondary or minor; two hours credit - major.) This course is designed to prepare students for entry into a major performance program. Cannot be used to satisfy applied music requirements at the principal level in the B.M. or the B.A. degree in Music. May be taken for a maximum of 12 credit hours per semester. Admission by audition. A, B, C. NC. Requires application of Applied Music fee. F, Sp.

200 Solo Class (0)

301 Junior Recital (0)

310 Practical Experience in Arts Management (3) Arts management practicum with approved arts organization. Individualized work with music instructor in conjunction with supervised experience in arts organization management. For music majors only. Prereq: Consent of instructor. May be repeated for credit in another area of arts management.

401 Senior Recital (0)

411 Lecture Recital (0)

421 Special Topics in Performance (1-3) Prereq: Consent of department head. May be repeated. Maximum 4 hours.

431 Special Topics in Pedagogy (1-3) Prereq: Consent of department head. May be repeated. Maximum 4 hours.

MUSIC HISTORY (709)

110 Introduction to Music in Western Culture (3) Developing listening skills and understanding of Western music from the ancient world through the 20th century. For non-music majors. Writing-emphasis course. E.

115 Music in the United States (3) Explores musical traditions of the United States. For non-music majors. Writing-emphasis course.

120 History of Rock (3) Study and appreciation of rock music, its origins in blues and rock and roll, its development and cultural dimensions to the present. Writing-emphasis course.

200 Introduction to Music Literature (3) Basic forms of music and accepted masterworks through chronological approach. For music majors and minors only. Sp.


290 Introduction to World Musics (3) Survey of music of representative cultures from Africa, Asia, Oceania, and the Americas with a focus on music as sound and as part of the human condition. Also includes an emphasis on applying basic music terminology to developing listening skills.

310 Introduction to African-American Music (3) History of African music, blues, gospel music, and jazz with emphasis on Black artists and their contributions. (Same as African and African-American Studies 310.)

330 Women in Music (3) History of women in music from the Middle Ages to present as composers, performers, educators, and patrons. (Same as Women’s Studies 330.)

340-341 Contemporary Trends in American Church Music I, II (2, 2) Survey of sacred music in popular contemporary style, emphasizing analysis and evaluative criteria. Must be taken in sequence. 340 includes theory and keyboard harmony appropriate to the style. 341 includes composition and arranging within the style. Prereq: Music Theory 210-220.


380 Music in World Cultures (3) Examines music from an ethnomusicological perspective focusing on musical performance and the interrelationships of music, culture, and daily life. The course surveys music from a variety of cultures through a series of case studies. Prereq: 210-220, or permission of instructor.

390 World Music (3) Basic attitudes and techniques of ethnomusicology. Survey of music cultures throughout the world with emphasis on the Pacific, Near East, Asia, and Europe.

400 Music History Survey (3) History of music with emphasis on genres, style changes, and cultural forces. Western European tradition from 400 to 1900. Recommended as a review course for graduate students. Prereq: Consent of instructor.

410 Music History Genre (3) Topics vary. May be repeated for credit. Maximum 6 hours.

420 History of Opera (3) Dramatic, vocal, and orchestral elements in opera of Italian, French, and German schools. 1600-present.

430 Symphonic Literature (3) Survey of literature for orchestra from Baroque to the present, with emphasis on the evolution of the symphony.

450 Composer Seminar (3) Life and works of a single composer. Subjects vary.

460 Music Aesthetics (3) Nature of music and musical experience, sense perception and emotions, music, and role of artistic society. Aesthetic viewpoints of individuals and historical eras through selected writings. Writing-emphasis course.

480 Music in Christian Worship (3) Hymnody, liturgies, and liturgical music.

493 Independent Study (1-15) Prereq: Consent of department head. May be repeated for credit.

MUSIC INSTRUMENT (710)

310 Brass Literature and Pedagogy (3) Survey of brass solo and ensemble literature, including institutional materials and methods. Application of pedagogical procedures to individual instruction and performance; demonstration lessons by applied brass faculty and class members. Prereq: Consent of instructor.

320 Woodwind Literature and Pedagogy (3) Survey of woodwind solo and ensemble literature, including institutional materials and methods. Application of pedagogical procedures to individual instruction and performance; demonstration lessons by applied woodwind faculty and class members. Prereq: Consent of instructor.

330 Percussion Literature and Pedagogy (3) Survey of percussion solo and ensemble literature, including instruc-
MUSIC JAZZ (711)

110 Jazz Theory (2) Fundamentals of the jazz language, including terminology, chord symbols, chord scales, and analysis. Prereq: Consent of instructor.

120 Analysis of Jazz Styles (2) Individual improvisatory styles through analysis of their transcribed solos. Training and function of the ear in music. Transcription of solos from recordings and preparation of analysis. Prereq: 110.

130-140 Jazz Piano I, II (2,2) Harmonic language of jazz. Interpretation of chord symbols, formulae for voicing chords, chord progressions, and fundamental melody-playing and improvisation for right hand. Must be taken in sequence.

160 Introduction to Styles in Jazz Drumming (2) Examination of major composers and performers who have contributed significantly to the creation of principal styles of jazz drumming.

210-220 Jazz Improvisation I, II (2,2) Study and application of principles of improvisation, including nomenclature, chord progressions, chord-scales, patterns, melodic development, and tune styles. Prereq: 110.

310 Jazz Composition and Arranging (2) Prereq: Consent of instructor.

320 Jazz Band Arranging (2) Arranging and scoring for the Big Jazz Band. Prereq: Consent of instructor.

410 Advanced Improvisation (3) Development of individual skills and solving individual problems in jazz improvisation. Prereq: 210 and 220.

420 Jazz Pedagogy (1) Methods and materials relating to teaching of jazz, designing and administering jazz programs, and rehearsal techniques for jazz ensembles. Prereq: Studio Music and Jazz major or consent of instructor.

MUSIC KEYBOARD (712)

110-120 Class Piano I, II (1,1) Development of keyboard skills in reading, technique, repertoire, harmonization, and transposition. Must be taken in sequence. Prereq: successful completion of music audition and theory placement exam. Intended for music majors and minors.

210-220 Class Piano III, IV (1,1) Continuation of 110-120. 220 prepares piano competency requirement; must be taken in sequence.

230 Keyboard Harmony (1) melody harmonization, figured bass realization, and improvisation. Prereq: Music Theory 110-120.

240 Church Service Playing I (1) Practical skills applicable to the use of the organ in church services, including improvisation, hymn playing, and accompanying. Prereq: 230 and organ proficiency at the 200 level.

260 Early Keyboard Instruments (1) An introduction to the harpsichord, clavichord, and baroque organ. Emphasis on appropriate playing techniques. Brief survey of instrument history, concepts, and performance practice issues. Prereq: Ability to perform keyboard literature at the 180, 185, or 190 level.

310-320 Church Service Playing II, III (1,1) Continuation of 240. Prereq: 240.

330 Sight Reading at the Keyboard (1) Prereq: Consent of instructor.

340-350 Piano Pedagogy I, II (3,3) Pedagogical methods and materials related to the development of principles of learning; collateral teaching experience. Must be taken in sequence.


420-430 Piano Literature I, II (3,3) 420—from 1750 to middle 19th century; 430—middle 19th century to present.

470 The Organ and Its Literature I, II (3,3) Development of the organ and organ literature from the Middle Ages to the present; problems of style and interpretation; pedagogical literature and methods; organ design. Prereq: 300-310 or Coreq: Music History 220 and consent of instructor.

480 Teaching Class Piano (3) Historical survey and evaluation of teaching materials and methodology for college and/or adult beginning piano classes, with collateral teaching experience. Prereq: Consent of instructor.

485 Suzuki Piano Method I (2) Study of the psychology, procedures, and literature of the Suzuki piano method. Must be taken in sequence. Prereq: Consent of instructor.

490-491 Internship (2,2) Opportunity for pedagogy students to gain experience in teaching pre-college students under the supervision of experienced instructors.

495 Suzuki Piano Method II (2) Study of the psychology, procedures, and literature of the Suzuki Piano Method. Prereq: Consent of instructor.

MUSIC PERFORMANCE (713)

Prerequisites: By audition only. Music General 140 or equivalent.

103-203-303-403-503 Flute (1-4) May be repeated.

105-205-305-405-505 Oboe (1-4) May be repeated.

110-210-310-410-510 Bassoon (1-4) May be repeated.

115-215-315-415-515 Clarinet (1-4) May be repeated.

120-220-320-420-520 Saxophone (1-4) May be repeated.

125-225-325-425-525 Horn (1-4) May be repeated.

130-230-330-430-530 Trumpet (1-4) May be repeated.

135-235-335-435-535 Trombone (1-4) May be repeated.

140-240-340-440-540 Baritone (1-4) May be repeated.

145-245-345-445-545 Tuba (1-4) May be repeated.

150-250-350-450-550 Percussion (1-4) May be repeated.

155-255-355-455-555 Voice (1-4) May be repeated.

160-260-360-460-560 Violin (1-4) May be repeated.

165-265-365-465-565 Viola (1-4) May be repeated.

170-270-370-470-570 Cello (1-4) May be repeated.

175-275-375-475-575 String Bass (1-4) May be repeated.

176-276-376-476-576 Electric Bass (1-4) May be repeated.

179-279-379-479-579 Guitar (1-4) May be repeated.

180-280-380-480-580 Piano (1-4) May be repeated.


190-290-390-490-590 Organ (1-4) May be repeated.

294-394-494-594 Composition (1-3) May be repeated. Prereq: Music Theory 210 and 230, grade C or higher, or consent of instructor.

395-495-595 Composition with Electronic Media (1-3) May be repeated. Prereq: Music Theory 210 and 230, grade C or higher, or consent of instructor.

499 Improvisation (1-2) May be repeated. Prereq: Consent of instructor. Cannot be used to satisfy applied music requirement.

MUSIC TECHNOLOGY (717)

290 Sound Recording Techniques (3) Theory and application of tape recording and reproduction systems. Topics include room acoustics, audio measurements, microphones, studio and realtime processing, noise reduction, mixing, editing, monitors, system wiring, and maintenance.

340 Introduction to Computer Music Transcription (3) Exercise in notation, playback and publishing incorporating elements of word processing, graphic design, sequencing and page layout. Study of Music Instrument Digital Interface protocol as it applies to music computer work station design. Prereq: consent of instructor.

390 Sound Synthesis Techniques (3) Studio and real-time applications of synthesizers. Historical background, theory, concepts, equipment interface and usage, analysis of sounds and compositions. Prereq: 290 or consent of instructor.

MUSIC THEORY (714)

100 Fundamentals of Music (3) Theory and practice of basic elements of music. Writing-emphasis course. F, S

110-120 Theory I, II (3,3) Materials of music including basic elements through secondary dominants and modulation. Exercises in analysis, composition, and improvisation with emphasis on common practice. Must be taken in sequence. Prereq: 110 - successful completion of music audition and theory placement exam; 120 - Music Theory 110, grade C or higher.


140 Ear Training II (1) Development of proficiency in identifying and notating melodic, harmonic and rhythmic models. Includes computer lab. Should be taken concurrently with 120.

210-220 Theory III, IV (3,3) Materials of music including advanced chords and analytical methods. Emphasis on the literature of the Classic, Romantic, and Contemporary periods. Exercises in analysis, composition, and improvisation of music. Must be taken in sequence. Prereq: 210 - Music Theory 120, grade C or higher, or consent of instructor; 220 - Music Theory 210, grade C or higher, or consent of instructor.


310 Form and Analysis (3) Study and practice in analysis of forms of music from smallest structural units to large compound forms. Prereq: Music Theory 210 and 240, grade C or higher.

320 Instrumentation (2) Basic techniques in scoring for voice, brass, woodwind and string choirs and percussion. To be taken by jazz and music education majors. Prereq: Music Theory 210 and 230, grade C or higher.

400 Survey of Music Theory (3) Emphasis on harmonic practice of Baroque, Classic, and Romantic periods. Exercises in writing and analysis. Recommended as a review course for graduate students. Prereq: Consent of instructor.

410 Ear Training Review (1) Review and application of harmonic and melodic dictation skills for graduate and advanced undergraduate students. Prereq: 240 or the equivalent. Required of entering graduate students with a deficiency in ear-training. Satisfaction/No credit grading only.

420 Orchestration (3) Advanced techniques in instrumental writing with emphasis on scoring for the concert orchestra. To be taken by theory and composition majors. Prereq: Music Theory 210 and 230, grade C or higher.

430-440 Counterpoint, II, (3,3) 430—Species counterpoint in modal and tonal styles with emphasis on works of Palestina and J.S. Bach. Prereq: 220. 440—Writing of contrapuntal forms of the 18th century and fugue analysis of works from the 18th through the 20th centuries. Prereq: 430. Music Theory 210 and 230, grade C or higher. 440: Music Theory 430, grade C or higher.
MUSIC VOICE (715)

110 Class Voice I (1) Development of basic vocal skills. May be repeated for credit. Maximum 2 hours.

120 Class Voice II (1) Prereq: Consent of instructor. May be repeated for credit. Maximum 2 hours.

320 Acting for Singers (1) Advanced work on song presentation and interpretation; scene study and characterization. Prereq: Music Vocal 140 or consent of instructor. May be repeated. Maximum of 4 hours.

240-250 Diction I, II (2,2) Sounds by phonetic symbols. Opera and art songs used for examples. Performance practice.

330 Opera Production (1-3) Supervised work on opera productions. May be repeated for credit. Prereq: Consent of instructor. Maximum 12 hours.

410-420 Song Literature I, II (2,2) 410-German songs. 420-French, Italian, Russian, Scandinavian, Czecho-slovakian, British, and American art songs. No graduate credit for students in the M.M. concentration in Vocal Performance. Development of basic vocal skills.

415 Physics for Nuclear Medicine II (3) Further study of physics topics and techniques for safe practice of nuclear medicine. Topics include imaging systems.


304 Nursing Assessment and Wellness Promotion (4) Developmental, psychosocial, cultural, environmental, spiritual, and physical dimensions of health assessment. Collection, analysis, and application of assessment data in formulation of wellness-oriented nursing diagnoses and interventions. Implications for the helping professions and wellness. Evaluation and expansion of the nursing role in wellness promotion and education. Laboratory and practical experiences related to nursing assessment skills. For RNs this course is prereq. to 330, 401, 411, 431 , and 433. 3 lectures, 1 lab. F

305 Transitions to Professional Nursing (5) Builds on the knowledge base and experience of RNs in transition to professional nursing. Focuses on the conceptual foundations of nursing practice and issues in health care delivery. For RNs only. 4 lecture, 1 lab. Su

306 Health Deviation Concepts I (4) Content related to the nursing process as applied to patients with physiologic and behavioral deviations associated with dysfunction in selected physiologic systems. Prereq: or Coreq: 301. F

311 Foundations of Professional Nursing Practice (5) Emphasis on patient centered communication, therapeu tic interventions, and critical thinking as key ele ments in the use of the nursing process. Clinical laboratory experiences provide opportunity for the application of these processes in the care of adults in selected health care settings. 2 rec, 3 lab. Prereq: 201; Coreq: 319, 333, 341, F

313 Introduction to Nursing Research (3) Language of research, types of research designs, methodological approaches, sample sizes, and significance levels of findings. Evaluation of existing and ongoing nursing research studies. Prereq: 302 or 305 or consent of instructor. Sp

314 Wellness and Lifestyle (3) Models of wellness and holistic health within the framework of modern medicine, eastern philosophy, and recent discoveries about the interaction of mind and body. Biopsychosocial interactions of lifestyle and genetic risk factors for cardiocircu lar and malignant diseases, wellness potential, and potential longevity. Process of lifestyle changes will be facilitated by faculty. Open to undergraduate students in all colleges.

316 Health Deviation Concepts II (4) Continuation of 306 with emphasis on the nursing process as applied to patients with physiologic and behavioral deviations under lying or associated with complex and critical ill nesses. Prereq: 301, 306. Sp

319 Pathophysiology of Health Deviations (4) Appli cation of physiological concepts to health promotion, maintenance, and deviation. Emphasis on interactions of body systems, psychoneuroimmunology, and impact of disease processes on the human body. F

330 Nursing of Adults (6) Didactic and clinical labora tory experiences related to nursing care of clients in early, middle and late adulthood with various health needs. Emphasis on the provision of planned nursing care for selected clients in a variety of settings. 2 lectures, 4 lab. Prereq.-301, 302, 304, 306 or RN status. Prereq. or Coreq: 316. Sp

332 Community Health Nursing: Aggregates (3) In troduction to the history, philosophy, and scope of community health nursing. Identifying aggregates as a basis for developing care plans as well as planning for health risk factors, and an overview of the nursing process and nursing theories. Pre req: Application for progression to Nursing Major. Sp

202 Health and Culture (3) An exploration of the beliefs and practices of health care systems and groups within the United States in relation to health, illness and the health care delivery system. Implications for the helping professions are emphasized. 2 lectures and is open to all UT undergraduate students.

301 Clinical Pharmacology (3) Biochemical and phar macological effects of therapeutic drugs on the human body; positive and negative reactions to drugs and interaction effects between drugs. I—Human body: Chemistry 100-10 and 6 semester hours of anatomy and physiology. F

302 Foundations of Professional Nursing (5) History, philosophy, and scope of nursing practice with emphasis on communication, therapeutic interventions, and critical thinking as a basis for the nursing process. Clinical laboratory experiences provide the opportunity for the application of these processes in the care of adult clients. 2 lectures, 3 labs. Coreq: or Prereq: 301, 304, 306.

304 Nursing Assessment and Wellness Promotion (4) Developmental, psychosocial, cultural, environmental, spiritual, and physical dimensions of health assessment. Collection, analysis, and application of assessment data in formulation of wellness-oriented nursing diagnoses and interventions. Implications for the helping professions and wellness. Evaluation and expansion of the nursing role in wellness promotion and education. Laboratory and practical experiences related to nursing assessment skills. For RNs this course is prereq. to 330, 401, 411, 431 , and 433. 3 lectures, 1 lab. F

305 Transitions to Professional Nursing (5) Builds on the knowledge base and experience of RNs in transition to professional nursing. Focuses on the conceptual foundations of nursing practice and issues in health care delivery. For RNs only. 4 lecture, 1 lab. Su

306 Health Deviation Concepts I (4) Content related to the nursing process as applied to patients with physiologic and behavioral deviations associated with dysfunction in selected physiologic systems. Prereq: or Coreq: 301. F

311 Foundations of Professional Nursing Practice (5) Emphasis on patient centered communication, therapeu tic interventions, and critical thinking as key ele ments in the use of the nursing process. Clinical laboratory experiences provide opportunity for the application of these processes in the care of adults in selected health care settings. 2 rec, 3 lab. Prereq: 201; Coreq: 319, 333, 341, F

313 Introduction to Nursing Research (3) Language of research, types of research designs, methodological approaches, sample sizes, and significance levels of findings. Evaluation of existing and ongoing nursing research studies. Prereq: 302 or 305 or consent of instructor. Sp

314 Wellness and Lifestyle (3) Models of wellness and holistic health within the framework of modern medicine, eastern philosophy, and recent discoveries about the interaction of mind and body. Biopsychosocial interactions of lifestyle and genetic risk factors for cardiocircu lar and malignant diseases, wellness potential, and potential longevity. Process of lifestyle changes will be facilitated by faculty. Open to undergraduate students in all colleges.

316 Health Deviation Concepts II (4) Continuation of 306 with emphasis on the nursing process as applied to patients with physiologic and behavioral deviations under lying or associated with complex and critical ill nesses. Prereq: 301, 306. Sp

319 Pathophysiology of Health Deviations (4) Appli cation of physiological concepts to health promotion, maintenance, and deviation. Emphasis on interactions of body systems, psychoneuroimmunology, and impact of disease processes on the human body. F

330 Nursing of Adults (6) Didactic and clinical labora tory experiences related to nursing care of clients in early, middle and late adulthood with various health needs. Emphasis on the provision of planned nursing care for selected clients in a variety of settings. 2 lectures, 4 lab. Prereq.-301, 302, 304, 306 or RN status. Prereq. or Coreq: 316. Sp

332 Community Health Nursing: Aggregates (3) In troduction to the history, philosophy, and scope of community health nursing. Identifying aggregates as a basis for developing care plans as well as planning for health risk factors, disability, or chronic illness. Emphasis on the treatment of the nursing process to the care of these aggregates with emphasis on health education for promotion and disease prevention. 1 lecture, 1 sem., 1 lab. Prereq.- 301, 302, 304, 306 or RN status. Coreq: 316, 330 or consent of instructor. Sp

333 Health Assessment (3) Theory and laboratory practices in systematic assessment of health status, including history taking and performance of physical assessment skills. For RNs this course is prerequisite to any clinical course beyond 305 Transitions. 2 lecture, 1 lab. F

341 Health Promotion (3) Introduction to health promo tion concepts and nursing interventions for health pro motion and disease prevention. F

351 Pharmacology I (2) Biochemical and pharmacolo gical effects of therapeutic drugs on the human body.
Basic concepts of drug action and interactions. Major drug classifications. Prereq: Chem 100-110, and at least 6 semester hours of Anatomy and Physiology. Sp

361 Health Maintenance and Restoration Across the Life Span (4) Focus on health maintenance and restoration in nursing practice with children or adults experiencing common occurring acute or chronic illness. 2lec, 3lab. Prereq: N311, N319, N333, or N411, or RN status. Coreq: N313, N341 or RN status. F, Sp

381 Professional Leadership Issues I (2) Focus on concepts and strategies for management and leadership as a professional nurse. Emphasis on problem identification, individual responsibility, decision making, communication, confrontation, collaboration, conflict resolution, coordination, delegations, supervision, and team building to support safe client care. Prereq: N311, N333, or RN status. F, Sp

382 Health Promotion and Maintenance in Community (4) Focus on nursing care of at risk populations. Design and implement interventions to promote and maintain health. Includes assessment of socio-cultural values, environmental factors, health education, and community resources. Prereq: 311, 319, 333, 341, or RN status. Co or Coreq: 351, 361. 2lecture, 2lab. F, Sp

401 Family Health Nursing (6) Nursing needs of families in health and in crisis. Provision of comprehensive care to families with emergent and acute phases of family development. Application of theories of human growth and development, family dynamics, and crisis intervention to nursing care to families experiencing normal pregnancy and child birth and to those experiencing such health problems or complications as congenital anomalies, high risk births, or other critical care conditions. Prereq: 314. F, Sp

402 Family Health Nursing (6) Nursing needs of families in health and in crisis. Provision of comprehensive care to families with emergent and acute phases of family development. Application of theories of human growth and development, family dynamics, and crisis intervention to nursing care to families experiencing normal pregnancy and child birth and to those experiencing such health problems or complications as congenital anomalies, high risk births, or other critical care conditions. Prereq: 314. F, Sp

405 Professional Nursing Seminar (2) Focus on concepts and strategies for management and leadership as a professional nurse. Emphasis on problem identification, individual responsibility, decision making, communication, confrontation, collaboration, conflict resolution, coordination, delegations, supervision, and team building to support safe client care. Prereq: N311, N333, N411. F

410 Nursing Management (3) Focus on the organizational management of health care services. Prereq: All required 300 level courses or RN status. F

411 Oxygen Therapy (3) Focus on the principles of oxygen therapy. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

412 Nursing Management (3) Focus on the organizational management of health care services. Prereq: All required 300 level courses or RN status. F

413 Nutrition and Dietetics (3) Focus on the principles of dietetics and nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

414 Community Mental Health Nursing (6) Nursing needs of clients whose health problems are of a developmental, behavioral, or long-term nature. Emphasis on quality of care, continuity of care, coordination of care and end of life care. Prereq: All required 300 level nursing courses. 3lec, 2lab, 2credit. F

415 Clinical Nutrition I (3) Focus on the principles of nutrition. Prereq: 302, 415. F

416 Health Maintenance Across the Life Span (5) Focus on health restoration in nursing practice to support and care for children or adults and their families with acute, complex health needs. Emphasis on quality of care, continuity of care, coordination of care and end of life care. Prereq: All required 300 level nursing courses. 3lec, 2lab, 2credit. F

417 Nursing Process Topics (1-3) Includes topics not covered in other nursing courses. Prereq: Senior standing. May be repeated. Maximum 3 credits.

419 Nursing Leadership (3) Focus on the principles of nursing leadership. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

420 Nutrition and Dietetics (3) Focus on the principles of dietetics and nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

421 Medical Nutrition Therapy (3) Focus on the principles of medical nutrition therapy. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

425 Community Health Nursing: Individuals and Families (3) Focus on the principles of community health nursing. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

426 Critical Care Nursing (3) Focus on the principles of critical care nursing. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

427 Adult Health Nursing (3) Focus on the principles of adult health nursing. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

428 Ambulatory Health Nursing (3) Focus on the principles of ambulatory health nursing. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

429 Geriatric Nursing (3) Focus on the principles of geriatric nursing. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

430 Maternal and Child Health Nursing (3) Focus on the principles of maternal and child health nursing. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

431 Independent Study (1-3) Includes topics not covered in other nursing courses. Prereq: Senior standing or consent of instructor.

NUTRITION (726)

432 Nutrition and Dietetics (3) Focus on the principles of nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

433 Community Nutrition (3) Focus on the principles of community nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

434 Pediatric Nutrition (3) Focus on the principles of pediatric nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

435 Nutrition and Dietetics (3) Focus on the principles of nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

436 Maternal and Child Nutrition (3) Focus on the principles of maternal and child nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.

437 Nutrition and Dietetics (3) Focus on the principles of nutrition. Prereq: Consent of instructor. Credit only. May be repeated. Maximum 3 credits.
HORTICULTURE AND LANDSCAPE DESIGN (740)

110 Introduction to Ornamental Horticulture (3) Survey of the history, science, crafts, professions, and businesses of ornamental horticulture. F

220 Basic Landscape Plants (3) Identification, classification, adaptation, culture and landscape design uses of basic ornamental trees, shrubs, and vines. Prereq: 8 hours biological sciences or consent of instructor. F; Sp 2 hours and 1 lab

230 Interior Plantscaping (3) History and introduction of the interior plantscaping industry, identification, culture, propagation, and use of plants for the interior plantscaping industry. Management of the interior environment including light, humidity, growing media, insects, and diseases, presentation media. Prereq: 110 or consent of instructor. F

231 Interior Plantscaping II (3) Commercial application of design, sales, sales proposals, plantscaping management, and basic plantscaping business management for the Interior Plantscaping industry. Prereq: 230 or consent of instructor. Sp

280 Fundamentals of Landscape Design (3) History of landscape design and its impact on communities. Writing emphasis course. (Same as Religious Studies 362.) F

330 Plant Propagation (3) Physiology, methodology, and environmental requirements for propagation. Prereq: 8 hours of biological sciences or consent of instructor. 2 hours and 2 labs. E

340 Turfgrass Management (3) Practical turfgrass management; cultivar selection, identification, and establishment; basic applied fertility programs, mowing, and irrigation practices, and thatch and compaction control; pest identification and basic controls. Prereq: Plant and Soil Science 210; 8 hours biological sciences or consent of instructor. 2 hours and 1 lab. F

350 Basic Landscape Construction (3) Basic materials and detailing. Introduction to the landscape construction and contracting industry; application of landscape materials, wood, concrete and masonry construction, site drainage and landscape grading. Prereq: 280, 2 hours and 1 lab. F

360 Practicum in Landscape Construction (3) Practical experience in implementation of landscape development projects. Directed lab and field instruction in planting operations and basic landscape construction including interpreting and implementing landscape design drawings and specifications. Prereq: 350. Two three hour labs. Sp

370 Grounds Maintenance (3) Identification and understanding of maintenance tasks; transplanting, soil amendments, growth control, irrigation, climate protection and pest control. Maintenance and use of equipment; management practices. 2 hours and 1 lab. F

380 Supplemental Landscape Design Graphics (2) Refinement of graphic skills. Sketches, elevations, sections, isometric projections, and perspectives. Lettering, plan graphics, color rendering, and other visual presentation media. Prereq: 280. Two 2 hour labs. F

390 Fall Herbaceous Ornamental Plants (3) Identification, culture, and landscape use of late summer and fall herbaceous ornamental plants including annuals, perennials, herbs, and ornamental grasses. Basic gardening practices and design elements using such herbaceous ornamental plants. Prereq: 110 or consent of instructor. F

391 Spring Herbaceous Ornamental Plants (3) Identification, culture, and landscape use of Spring and early summer herbaceous ornamental plants including perennials, herbs, and bulbous/wildflower plants. Basic gardening practices and design elements using such herbaceous ornamental plants. Prereq: 110 or consent of instructor. Sp

410 Nursery Management and Production (3) Management of products offered to retail and wholesale nurseries and landscape contracting firms. Methods of producing liners, container and field-grown woody ornamental plants. Prereq: 230, 330, and Plant and Soil Science 210. 2 hours and 1 lab

421 Native Plants in the Landscape (3) Native plants and plant communities as a basis for landscaping and environmental restoration. Weekly lecture coupled with either an outing or service practicum of invasive exotic plant removals and planting of natives. Study and work sites will primarily be demonstration projects of the UT Environmental Landscape Design Lab. They include local schoolyard habitats, greenways, wetlands, streambanks, and shorelines. Prereq: OHLD 220, Botany 330 or consent of instructor. F

426 Public Horticulture (2) Indepth study of the public horticulture industry. Attention given to the diversity of public horticulture institutions, career opportunities, and research. Discussion of current topics and issues. Senior standing or consent of instructor. Sp

429 Field Study of Public Horticulture Institutions (3) Extended 10-12 day field study of various public horticulture institutions, such as botanical gardens, arboreta, historical grounds, zoos, conservatories, cemeteries, and nature preserves. Application and travel fee required. Prereq: OHLD 426. Sp mini-term

430 Greenhouse Floral Crop Production (3) Principles of greenhouse operation and management for commercial production of floral crops. Greenhouse construction and operation, crop scheduling and cost accounting. Environmental inputs and cultural practices as they affect plant physiological processes and influence plant growth and development. Prereq: Agriculture and Natural Resources 290 or consent of instructor. Sp

431 Greenhouse Floral Crop Production Laboratory (1) Greenhouse production of floriculture crops. To be taken concurrently with 430. Prereq: Agriculture and Natural Resources 290 or consent of instructor. Sp

440 Advanced Turfgrass Management (4) Principles and practical aspect of turfgrass culture; soil science, ecology, physiology, soil fertility, and grass nutrition; climatic influences on grass culture; physiology of clipping and water management; design, construction, and management of golf courses; physiological influences of pest infestation and control measures. Prereq: 340 or consent of instructor. 3 hours and 1 lab. F

450 Specialty Landscape Construction (3) Methods of design, materials, and construction techniques in specialized components of the landscape industry. Irrigation systems, outdoor lighting, garden ponds and water features. F

451 Plant Tissue Culture (3) (Same as Botany 451.)

460 Professional Practices in Landscape Construction and Management (2) Professionalism, salesman- ship, proposals, bidding, estimating, specifications, and contract management in landscape services industry. Computer technology applicable to landscape construction and contracting business. Prereq: two industry representatives. Prereq: 350 or consent of instructor. 2 hours. Sp

480 Advanced Landscape Design (3) Comprehensive application of landscape design skills to a variety of projects with an emphasis on landscape planning and analysis, planting design, and materials estimating. Prereq: 280, 380. Two 3 hour labs. F

485 Computer Aided Landscape Design (3) Overview of Computer Aided Design (CAD) as it relates to landscape design and construction. Emphasis on development of landscape design drawings through utilization of LANDCAD software. Prereq: 280, 380, and Agriculture and Natural Resources 290, F, Sp

490 Seminar (1-3) May be repeated. Maximum of 6 hours.

492 Off-Campus Internship (1-3) Work experience in approved ornamentals, turf or landscaping industry. May be repeated. Maximum of 6 credits. E

493 Individual Problem Study (1-3) May be repeated. Maximum of 6 credits. E

494 Professional Horticultural Communications (3) Communication for public horticulturists with an emphasis on print media, brochure design using desktop publishing, slide show development, oral presentations, and video use for educational and informational presentations in Ornamental Horticulture. Prereq: Agriculture and Natural Resources 290 and senior standing. F, A

PERSIAN (744)

161-162 Elementary Persian II (4,4) (Same as Asian Studies 141-142.) F

261-262 Intermediate Persian II (4,4) (Same as Asian Studies 261-262.)

PHILOSOPHY (745)

110 The Human Condition: Values and Reality (3) The meaning of life, the existence of God, freedom of the will, human nature and values. Writing-emphasis course.

111 The Human Condition: Knowledge and Reality (3) The place of mind in a material universe and the nature and possibilities of human knowledge. May be taken before 110. Writing-emphasis course.

120 Foundations of Western Thought: Antiquity through 1500 (3) Plato, Aristotle, Late Antiquity and the Medieval Period. Writing-emphasis course.

121 Foundations of Western Thought: 1500 through Early Twentieth Century (3) Development of Rationalist and Empiricist thought, Nineteenth Century and early Twentieth Century Philosophy. May be taken before 120. Writing-emphasis course.

130 Critical Thinking (3) An introduction to practical reasoning in natural language, designed to enhance critical skills in recognizing, analyzing, evaluating and constructing arguments. Satisfies Arts and Sciences Basic Skills Requirement “Mathematics, Computer Science or Logic.”

135 Formal Logic (3) Introduction to formal deductive systems; propositional and predicate logic. Satisfies Arts and Sciences Basic Skills Requirement “Mathematics, Computer Science or Logic.”

200 Special Topics (3) When content varies, may be repeated. Maximum 6 hours.

240 Ethics (3) Theories of ethical values. Writing-emphasis course.

242 Ethical Theory and Its Applications (3) A study of moral values and principles in theoretical and practical contexts. Open only to students registered in the College of Business Administration.

290 Social and Political Philosophy (3) Basic problems and concepts of social and political philosophy.

300 Special Topics (3) May be repeated. Maximum 6 hours.

320 Ancient Western Philosophy (3) Writing-emphasis course.

322 Medieval Philosophy (3) Development of medieval thought from St. Augustine to William of Occam, secondary and primary sources. (Same as Medieval Studies 322 and Judaic Studies 322.) Writing-emphasis course.

324 Seventeenth- and Eighteenth-Century Philosophy (3) Writing-emphasis course.

326 Nineteenth- and Twentieth-Century Philosophy (3) Writing-emphasis course.

342 Business Ethics (3) Ethical problems as they confront both business as a social institution and individuals in business. Writing-emphasis course.

344 Professional Responsibility (3) Critical analysis of selected classic texts from philosophy, religious studies, and social sciences dealing with responsibility and the nature of professionalism. Theoretical principles and analytical skills applied to selected case studies and other detailed descriptions of professional practice from engineering/architecture; business/accounting; and at least one of law/politics; helping professions (social work, human services, ministry); teaching. (Same as Legal Studies 344 and Religious Studies 344.) Writing-emphasis course.

345 Bioethics (3) Ethical issues in health care such as abortion, end of life decisions, cloning, and the use of technologies in health care delivery and the doctor-patient relationship. Writing emphasis course. (Same as Religious Studies 345.)

346 Environmental Ethics (3) Issues concerning the nature of the environment and the place of humanity within it.
PHYSICAL EDUCATION ACTIVITY PROGRAM (764)

200 Special Topics (1-2) Selected topics in various activities not covered in the regular program. When content varies, may be repeated. Maximum 6 hours.

202 Badminton (1) Fundamental badminton technique, game strategy, and rules for singles and doubles play.

206 Bowling (1) Introduction to ball selection, approach, spot bowling, rules, scoring, etiquette, and basic terminology necessary for enjoyable recreational bowling.

211 Golf (1) Introduction to chipping, putting, full swing, rules, etiquette, and scoring necessary for enjoyable recreational play.

213 Ice Skating (1) Beginning skills and etiquette in ice skating. Satisfactory/No Credit grading only.

216 Martial Arts (Special Topics) (2) Special Topics. Selected topics in various forms of martial arts, including but not limited to juitsu, judo, karate, and tai chi. When Content varies, may be repeated. Maximum 6 hours.

222 Paddleball (1) Introduction to forehand, backhand, drive, drop and lob shots, footwork, court position.

223 Personal Safety and Self Defense (1) Develop and practice the defense skills necessary so they may become viable considerations for personal safety. Satisfactory/No Credit grading only.

242 Physical Fitness: Conditioning (1) Program of flexibility, strength, and cardiovascular endurance through exposure to various exercise forms. Satisfactory/No Credit grading only.

245 Physical Fitness: Exercise to Music (1) Total body workout to music with lecture emphasis on basic fitness components of flexibility, strength, and cardiovascular fitness.

246 Exercise and Weight Control (1) 226 Body exercise and weight control. Lecture and practical application of weight control and exercise. Individual and team activities not covered in the regular program. Satisfactory/No Credit grading only.

247 Physical Fitness: Swimming (1) Introductory course outlining basic principles of fitness, evaluation, and workout design in the aquatic environment.

250 Tumbling (1) (1) Front and back handsprings, front and back somersaults, and combinations.

251 Volleyball (1) Introduction to individual and team fundamentals, rules, and strategy.

252 Weight Training (1) Introduction to the principles of strength development for large muscle groups through the use of weights and machines.

254 Yoga and Relaxation (1) Introduction to yoga and various forms of relaxation, with the majority of class time spent learning and refining the postures. Satisfactory/No Credit grading only.

255 Water Safety Instructor (2) Preparatory training for American Red Cross lifeguarding and aquatic techniques. ARC certification. Prereq: Swim test second day of class.

259 Snow Skiing (1) Development of skills necessary to balance, walk and slide while on skis. Learn ski etiquette and “Skier’s Responsibility Code.” Satisfactory/No Credit grading only.

260 Western Dance (1) Popular western dance forms including line dances, western social dances, mixers and couples.

261 Scuba Diving (1) Introduction to and development of diving skills as well as the theory, safety skills, and practical application skills to open water SCUBA diving.

PHYSICS (773)

101-102 How Things Work (3,3) For students with majors outside science. Examines familiar objects of everyday experience and leads to an understanding of the physical principles that makes them work. No prerequisite.

135-136 Introduction to Physics for Physical Science and Mathematics Majors (4,4) A one year course in calculus based physics. Satisfies prerequisites for 200 level and beyond. Alternative to honors physics 137-138 for physics majors. Coreq: Mathematics 141-142. 3 hours lecture, 2 hours lab.

137-138 Honors Fundamentals of Physics for Physics Majors (5,5) For physics and engineering physics majors and qualified students from other majors. Coreq: Mathematics 141-142.

161 Elements of Physics for Architects and Interior Design Students (3) Chosen topics in physics for architecture and interior design students. Course emphasizes material development by logic and lecture demonstrations. Prereq: Intermediate Algebra and one year of geometry.

221-222 Elements of Physics (4,4) Basic physical principles and applications required in premed, pre-dental, pre-pharmacy and pre-veterinary programs. 221 Mechanic, heat, wave motion, and optics, 222 Electromagnetism, modern physics. Must be taken in sequence. 3 hours lecture, 3 hours lab. Prereq: Mathematics 130 or Calculus.

231 Fundamentals of Physics: Electricity and Magnetism (3) For engineers and Arts and Sciences majors in mathematics and the physical sciences. Required of all engineering students. Prereq: Basic Engineering 121-131Coreq: Mathematics 142. 2 hours lecture, 3 hours lab/recitation.


240 Fundamentals of Physics: Modern Physics (3) Special relativity, fundamental concepts of modern physics and their applications to atomic, nuclear, particle and condensed matter physics. Prereq 136 or 138 or consent of instructor.

311-312 Mechanics (3.3) 311—Kinematics and dynamics of single particle systems, rotating referencing systems. 312—Many body systems, rigid bodies, Lagrangian and Hamiltonian mechanics. Strong emphasis on programming and numerical methods. Must be taken in sequence. Prereq: For 311: 136 or 138 or 231 Computer Science 102. Coreq: For 312: Math 241.
321 Thermal Physics (3) Concepts of temperature and heat; laws of thermodynamics; elementary statistical mechanics; applications to physical and chemical problems. Prereq: 240 or 232.

341 Introduction to Nuclear Physics (3) Introductory theoretical nuclear physics with emphasis on applied aspects. Primarily for Nuclear Engineering majors. Prereq: 240 or 232.

342 Structure of Matter (3) Physics of molecules and condensed matter. Prereq: 240 or 232.

361-362 Electronics Laboratory (3,3) Electronic devices and instrumentation techniques in the physics laboratory. 361-Basic analog and digital electronics, including elementary building blocks of relevance to data acquisition amplifiers; digital-to-analog and analog-to-digital conversion, use of standard laboratory instruments, and applications of microcomputers. 362-Advanced instrumentation techniques applied to the study of electronic circuits as dynamic physical systems, feedback and stability, noise, discrete sampling, Fourier analysis and synthesis, nonlinear circuit dynamics. Prereq: 136 or 138, or 232. 6 hours lab per week.

401 A Survey of Physics (3) A survey of physics from earliest times to the present, emphasizing the unifying philosophical and mathematical principles. Classical theories of mechanics; Newtonian gravitation, electromagnetism, and quantum theory. Various forms of quantum mechanics, quantum electro-dynamics, and recent theories of particles, fields, and their interactions. Emphasis on the formulation of the effects of physics on modern society and the practice of physics from a value-oriented perspective. Written reports on important original papers. Two relevant problems combining different fields of classical physics, and a final oral and written report on some independent study. Prereq: Senior standing in Physics or consent of instructor.


421 Modern Optics (4) Transmission of light in uniform, isotropic media, reflection and transmission at interfaces; mathematics of wave motion and interference effects. Rudiments of Fourier optics and holography. Prereq: 431, or 136 or 138 or 232 and consent of instructor . 3 hours lecture, 3 hours lab.

431-432 Electricity and Magnetism (3,3) Electrostatics, magnetostatics, coupled electric and magnetic fields, Maxwell’s equations, electromagnetic waves and radiation. Prereq: 138 or 136 or 232.

441-442 Contemporary Physics (3,3) An introduction to the major fields of contemporary physics ranging from Cosmology to High Energy. In addition to the discussion of the fundamental physical laws of each field, the following relationships between various fields will be covered. Consent of instructor. 3 hours lecture and one 2-hour lab. Prereq: 240 or equivalent. Mathematics 311-312, 321.

453-454 Team Research Project (3,3) Student teams will carry out major experimental or computational projects. The team in consultation with the instructor will choose the topic and develop a plan for the project. Each team will present their oral presentations in an independent manner, carry out the project, and produce a final written report. Must be taken in sequence. Prereq: 461, 462.

461-462 Modern Physics Laboratory (3,3) 461-Introductory quantum physics laboratory, and to the theory and practice of measurement and data analysis. Selected experiments in nuclear, atomic, molecular and solid state physics, and modern optics. Prereq: 361 and either 240 or 411. 462-Advanced experiments and experimental techniques and to experimental team work. Thorough quantum mechanical interpretation of the results and preparation of scientific reports. Prereq: 461. 6 hours lab per week.

490 Senior Seminar (1-3) Topics of current interest. May be repeated with consent of department. Maximum 6 hours.

491 Foreign Study (3-15)

492 Off-Campus Study (3-15)

493 Research and Independent Study (1-3) Research and study in field of particular interest with faculty guidance. Consent of department is required. Maximum 6 hours.

494 Advanced Independent Study (3) Advanced and non-repeatable study under the supervision of a faculty member. Maximum 3 hours per term.

430 Plant Ecology and Microbial Ecosystems (3) Introduction to plant ecology, including succession and community organization, and the effects of human activities. Prereq: 210 and either 353 or 412 or 413. 3 hours lecture and one 2-hour lab.

495 Internship in Plant and Soil Science (3-6) Supervised experience with a departmentally-approved employer. Student is responsible for making arrangements. Requirements include maintaining a daily log, summaries of work experience, and a final project. May be repeated with a maximum of 6 hours credit. Prereq: Junior standing. S/N/C, E.

496 Problems in Plant and Soil Science (1-3) Special research or library problems in plant and soil science. May be repeated. Maximum 6 hours.
POLITICAL SCIENCE (801)

101 United States Government and Politics (3) Introduction to fundamental institutions and processes of American National Politics including the Constitution, voting, the Presidency, the Congress and the courts.

102 Introduction to Political Science (3) Introduction to politics and political systems.

107 Honors: United States Government and Politics (3) An analysis and exploration of the American political system for students with superior ability. Admission by permission of department for students with at least a B average; entering freshmen accepted on basis of strong placement scores and high school record.

300 Introduction to Political Philosophy (3) An introduction to the concepts, enduring questions and significant thinkers associated with political philosophy with specific attention to the ethical implications of human nature, politics, the state, civic obligation and rights, freedom, justice and democracy.

311 Contemporary Issues in American Public Policy (3) Selected public policy issues confronting the nation, including the background, nature, and effects of major policies, and options for the future. Writing-emphasis course.

312 Popular Culture and American Politics (3) Popular culture related to American politics and government focusing on television, film, internet, music, drama, art and sports. Writing-emphasis course. (Same as American Studies 312 and Cinema Studies 312.)

315 Tennessee Government and Politics (3) Major elements in Tennessee government and politics.

320 State Government and Politics (3) Setting, institutions, and processes of government in the fifty states: generalizations and comparisons, with emphasis on the balance of power, federalism and intergovernmental relations.


360 Law in American Society (3) Law as a process through which social problems are addressed in the United States. Examples from case law, legislation, and administrative regulation. Writing emphasis course. (Same as Legal Studies 360.)

361 Politics in Western Democracies (3) Political culture patterns, and institutions of Western democratic systems. Writing-emphasis course.

365 Introduction to International Relations (3) Resource availability, international economics, international security and peace (imperialism, war, diplomacy, the balance of power, international law and international organization.) Writing-emphasis course.

366 United States Foreign Policy Process (3) Processes whereby United States foreign policies are made and implemented, focusing on interaction within federal bureaucracy and roles of the President, Congress, the press, and public opinion.

374 American Political Thought (3) Major themes and ideas in American political thought related to the development of American political institutions, values, and practices. Writing-emphasis course.

387-388 Junior Honors Seminar (3,3) Required of honors majors; admission with consent of department.

401 Political Analysis (3) Nature, character, and functions of research design, data collection, and statistical techniques used in the study of politics.

410 Special Topics in Political Science (3) May be repeated with consent of department. Maximum 6 hours.


420 Political Attitudes and Behavior (3) Systematic examination of political attitudes, public opinion and political behavior. (Same as American Studies 420.)

421 Political Parties and Interest Groups (3) Analysis of political parties, interest groups, campaigns and elections.

430 United States Constitutional Law: Sources of Power and Restraint (3) Judicial review, constitutional powers of the President and Congress, federalism, sources of regulatory authority, and constitutional protection of political and economic rights. (Same as Legal Studies 430.)

431 United States Constitutional Law: Civil Rights and Liberties (3) Current issues in civil rights and liberties, including amendment freedoms, equal protection, privacy and the rights of the accused. (Same as Legal Studies 431.)

435 Criminal Law and Procedure (3) An overview of substantive and procedural law in the criminal justice field, with emphasis on constitutional questions and public policy issues.

440 Public Management and Human Resources (3) How to mobilize and manage technical and human resources in pursuit of public sector organization goals.

441 Public Budgeting (3) The process, participants, and politics of government budgeting, with emphasis on federal budgeting, including revenue, expenditures, deficit, national debt and budget reform measures and their effectiveness.

442 Administrative Law (3) Legal dimensions of administrative power and procedures, and constitutional controls over administrators. (Same as Legal Studies 442.)

452 Black African Politics (3) Recent evolution and current political environment of Africa. Writing emphasis course. (Same as African and African-American Studies 452.)

454 Government and Politics of China and Japan (3) Political setting, structure and political processes in China and Japan. Writing-emphasis course.

456 Latin American and Caribbean Politics (3) Introduction to the political development of Latin America with an emphasis on contemporary politics. Writing emphasis course. (Same as Latin American Studies 456.)

459 Government and Politics of Russia and Eastern Europe (3) System transformation, political processes and governmental structure in Russia and Eastern European countries. Writing-emphasis course.

461 Policy Making in Democracies (3) Comparative approach to theory and process of making public policies.

463 Contemporary Middle East Politics (3) Focusing on the role of film, television, fiction, music, politics, and policies, and options for the future. Writing-emphasis course.

467 Modern Political Thought (3) Major western political thinkers from Machiavelli to Marx.

470 International Law (3) Nature and development of international law and compliance with it. Particular attention to function of international law in the context of international conflict. (Same as Legal Studies 470.)

471 International Political Economy (3) Economic relations between countries; theoretical and case studies of efforts to construct multilateral international institutions. Topics include economic growth, international trade and investment, development and global equity. Writing emphasis course.

472 Normative Issues in International Relations (3) An examination of such normative issues among states as human rights, environmental degradation and distributive justice. Writing emphasis course.

475 Ancient and Medieval Political Thought (3) Major western political thinkers from Socrates to Marsilio of Padua. (Same as Medieval Studies 475.)

476 Modern Political Thought (3) Major western political thinkers from Machiavelli to Marx.

487-488 Senior Honors Thesis and Seminar (3,3) Required of honors majors; admission with consent of department.

491 Foreign Study (1-15) Prerequisite: Consent of instructor. May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15) Prerequisite: Consent of Department. May be repeated. Maximum 15 hours.

493 Independent Study (1-15) Prerequisite: Consent of instructor. May be repeated. Maximum 15 hours.

494 Internship (1-6) Prerequisite: Consent of department. May be repeated. Maximum of 6 hours. May not be counted toward requirements for the Political Science major. S/NC only.

PORTUGUESE (811)

111-112 Elementary Portuguese (3,3) Introduction to Portuguese. Must be taken in sequence. Language Laboratory required. F, Sp

199 Portuguese Language and World Business (2) The course will examine the importance of foreign trade at the local, state, and national levels. An interdisciplinary team of faculty from the Colleges of Business and Arts and Sciences will provide an overview of the value of language study and international awareness in the world business. Restricted to students majoring in the Language and World Business major concentration. See the Director for further information. F

211-212 Intermediate Portuguese (3,3) Stresses reading, writing, listening and speaking of Portuguese to prepare for upper division courses in the language. Must be taken in sequence. Language Laboratory required. F, Sp

301-302 Literature, Culture and Civilization of the Portuguese-Speaking World (3,3) A course for students who have completed the intermediate sequence of Portuguese and wish to enhance their knowledge of language and culture through the medium of literature. Taught in Portuguese. Prerequisite: 212, 300 or the equivalent.

309 Intermediate Conversation and Composition (3) Designed to improve proficiency in oral and written communication in Portuguese. Prerequisite: 212, 300 or equivalent.

315-316 Aspects of Luso-Brazilian Literature (3,3) Luso-Brazilian literature through its history and the history of literature. Prerequisite: At least one course at the 300 level or the equivalent. (Same as Latin American Studies 315-316.)

400 Portuguese for Speakers of Another Romance Language (3) Accelerated class for beginning students of Portuguese with a strong background in another Romance language. Introduction to grammar, reading and culture of Portugal and Brazil. Prerequisite: 3 hours at 300 level in another Romance language or equivalent.

409 Advanced Conversation & Composition (3) Informal and structured conversation on contemporary topics (business, politics, economics, religion, an culture) and formal writing practices at an advanced level. Prerequisite: 309 or the equivalent.

431-432 Topics in the Literature & Language of the Portuguese-speaking World (3,3) Outstanding works of literature and culture from the countries where Portuguese is spoken. Topics may vary. May be repeated. Prerequisite: 412, 300 or the equivalent. Maximum 12 hours. Prerequisite: At least one course at the 300 level or the equivalent. (Same as Latin American Studies 431-432.)

490 Internship (1-15) Career-related experiences in the United States or abroad with permission of the Language and World Business Director. For Language and World Business majors only. S/NC only.

491 Foreign Study (1-15)

493 Independent Study (1-15)

PSYCHOLOGY (830)

110 General Psychology (3) Introduction to primary approaches to the study of human behavior and experience. E

117 Honors General Psychology (3) Open to University Honors Students and to students with ACT's of 29 or higher (or SAT equivalent). Prerequisite: Consent of instructor.

210 Biological Basis of Behavior (3) Survey of theories and research concerning the role of genetic factors, nervous and endocrine systems, and other biological influences on behavior. Prerequisite: 110. F, Sp

220 Behavior and Experience: Humanistic Psychology (3) Behavioral and psychological analysis of individuals and their development in natural environments. Prerequisite: 110. E
300 Child Psychology (3) The normal child from conception through infancy, childhood, and adolescence. Physical, cognitive, social, and emotional development. Prereq: 110. E

310 Learning and Thinking (3) Survey of theory and findings of research concerning both humans and non-humans. Prereq: 110. F, Sp

320 Motivation (3) Survey of theories and related research; discussion of applications. Prereq: 110. F, Sp


347 Honors Seminar (1) Classic works in psychology; professional and ethical issues in psychology; presentations of faculty scholarship and honors students' projects. Meets weekly. May be repeated (maximum 6 hours). Prereq: Consent of instructor.

360 Social Psychology (3) Theories, methods, and findings of research concerning individual behavior in a social context. Prereq: 110. E

367 Psychology Honors Project (3) Independent studies course which leads to the Honors thesis. Students must have plans of study approved by their mentor prior to enrollment. S/NC only. May be repeated (maximum 15 hours). Prereq: Consent of instructor.

370 Ethology and Sociobiology (3) (Same as Ecology and Evolutionary Biology 370). Sp

382 Contemporary Topics in Psychology (3) Current issues and problems in psychology, architectural psychology, impact of technology, artificial intelligence, or stereotypes. Different topic each semester. Prereq: 110 and upper division standing or consent of instructor. Maximum of 6 hours may be applied toward major. May be repeated.

385 Statistics in Psychology (3) Descriptive statistics; logic of hypothesis-testing and statistical inference. Basic parametric and nonparametric tests. Not open to students with credit in Math 115 or Statistics 201. E

395 Methods of Research in Psychology (3) Fundamentals in the design, conduct, and interpretation of research, including systematic observation, experiments, quasi-experiments, and program evaluations. Focus on both laboratory and natural settings. Prereq: 110 and 385 or Math 115 or Statistics 201; and Junior standing (80 semester hours). F, Sp

399 Supervised Research and Field Work (1-3) Field experience in community-based research and service settings. Prereq: Consent of instructor. Note: Any combination of 6 hours of 399, 489, 491, 492, 493 may be used in this major. An additional 6 hours may be used as elective. May be repeated. E

400 Cognitive Psychology: Language and Symbolic Processes (3) Psychology of knowing, explaining, and understanding. Directed and associative thinking, memory, language, and concept formation. Literature, use, and development of language. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor. F

409 Group Facilitation (3) Study of theory and technique through supervised experience in small groups. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor. May be repeated. Maximum 6 hours.

410 Sensory Processes and Perception (3) Psychological judgment and sensory thresholds; signal detection theory. Prereq: 110. E

415 Psychology of Religion (3) History of the psychology of religion with an examination of various philosophical and empirical orientations. Exploration of the psychological functions of religious activities for individuals and society. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor. (Same as Religious Studies 415.)

420 History and Systems of Psychology (3) History of psychology, historical, philosophical, and methodological developments. Prereq: 110 and Junior standing (80 semester hours) or consent of instructor or Graduate standing. F, Sp

424 Psychology and the Law (3) Psychological aspects of legal systems. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor or Graduate standing. E

430 Health Psychology (3) Psychological factors related to health and illness, including stress, personality, and environment. Applications of psychological treatments to physical illness. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor or Graduate standing. E

434 Psychology of Gender (3) Biological, psychological, and social factors in gender. Importance of gender roles and stereotypes for behavior and experience. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor or Graduate standing. E

445 Measurement and Testing (3) Theory of test construction and psychological measurement. Statistical methods in measurement. Survey of existing tests. Prereq: 110. Psych 385 or Math 115 or Statistics 201; and Junior standing (60 semester hours) or consent of instructor.


450 Comparative Animal Behavior (3) (Same as Zoology and Entomology 450). F

459 Comparative Animal Behavior Laboratory (3) Coreq: 450. (Same as Ecology and Evolutionary Biology 459). F

461 Physiological Psychology (3) Nervous system and physiological correlates of behavior. Biological basis of emotion, learning, memory and stress. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor. One of the following three sequences: Biology 101 and 102, Biology 130 and 140, Anthropology 109 and 209. F, Sp

467 Psychology Honors Thesis (3) Independent study for writing and oral defense of Honors thesis. S/NC only. Prereq: consent of instructor.

470 Theories of Personality (3) Major theories of human personality and their development. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor. F, Sp

475 Adolescent Development (3) Theoretical perspectives and empirical research findings pertinent to adolescent development. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor. Sp

480 Theories of Learning (3) Classical and current approaches to learning and development. Prereq: 110. Junior standing (60 semester hours) or consent of instructor.

482 Topics in Psychology (3) Intensive analysis of special topics, such as African-American Psychology or evaluation of programs in the community. Prereq: 110 and Junior standing (60 semester hours) or consent of instructor. No more than 6 hours of Psych 382 and Psych 482 may count towards the major. An additional 6 hours of Psych 382 and 482 may count as electives. May be repeated.

489 Supervised Research (1-9) Prereq: Junior standing (60 semester hours) and consent of instructor. Note: Any combination of 6 hours of 489, 491, 492, 493 may be used in this major. An additional 6 hours may be used as electives. May be repeated. E

491 Foreign Study (1-15) Prereq: Junior standing (60 semester hours) and consent of instructor. Note: Any combination of 6 hours of 399, 489, 491, 492, or 493 may be used in this major. An additional 6 hours may be used as electives. May be repeated.

492 Off-Campus Study (1-15) Prereq: Junior standing (60 semester hours) and consent of instructor. Maximum 12 hours of 489, 491, 492, or 493 may be applied toward major. Note: Any combination of 6 hours of 399, 489, 491, 492, or 493 may be used in this major. An additional 6 hours may be used as electives. May be repeated.

493 Independent Study (1-15) Prereq: Junior standing (60 semester hours) and consent of instructor. Note: Any combination of 6 hours of 399, 489, 491, 492, or 493 may be used in this major. An additional 6 hours may be used as electives. May be repeated. Sp

496 Senior Seminar: Great Ideas in Psychology (3) Key ideas that have shaped conceptions of humankind. Exploration of historical development, scientific evolution, and larger social context. Prereq: Senior standing (90 semester hours). Writing-emphasis course. F, Sp

PUBLIC HEALTH (839)

300 Introduction to Public Health (3) Aspects of public health including discussion of contemporary and controversial health issues. F, Sp

305 Disease Epidemiology, Prevention and Control (3) Foundational principles applied to infectious, acute, and chronic diseases. Emphasis on the applications of public health prevention and control initiatives throughout the disease cycle. Prereq: EEB 230 and 231.

310 Environmental Management and Control (3) Contemporary principles of control of disease-producing agents in our environment. Emphasizes concepts for effective application of control principles to voca- tional endeavors and the health care professions. Includes: Drinking water quality (chemical, physical and biological), waste management (liquid, solid and hazardous), vector control (sea, rodents, recreational use), sanitation and safety to include pool management, shelter hygiene (homes, child care, schools, hospitals, etc.), occupational health and safety. F, Sp

400 Consumer Health (3) (Same as Health 400.)

410 Worksite Health Promotion (3) Foundations of health promotion programs delivered in the worksite that revolve around issues relative to employees and management. Emphasis on theory, program design, implementation, and evaluation from the perspective of health promotion specialist. Prereq: HSP 300. Sp

493 Directed Independent Study (1-3) Individual study of selected issues. Prereq: Consent of instructor. May be repeated. Maximum 6 hours. E

PUBLIC RELATIONS (841)

270 Public Relations Principles (3) Theories and principles of public relations. Overview of public rela- tions in management of business, government, institution, and community organizations. Brief case studies and public relations projects.

320 Public Relations Communications (3) Mechanics of effective writing for various media to achieve organizational goals, communicating with media, managing communica- tion and persuasion theories. Focus on implementation of research-based, planned and managed tech- niques in a lab setting. Prereq: 270 or ADV 250, and Junior standing (200), or consent of instructor. Sp

370 Public Relations Cases (3) Oral and written analy- sis of current and classic case studies in public relations. Ethics, professional organizations, publications, research and forms of public relations. Methods of communica- tion and persuasion. Prereq: 270.

412 Opinion Writing (3) (Same as Journalism 412.)

416 Issues in Public Relations (3) Topics vary. May be repeated. Maximum credit 6 hours. Prereq: Consent of instructor.

470 Public Relations Campaigns (3) Research, plan- ning and communication and evaluation of major public relations campaigns. Oral and written presentation of a public relations project from inception to completion. Extensive out-of-class work. Prereq: 320 and 370 or consent of instructor.

491 Foreign Study (1-15) Advance approval of hours and topics by advisor required for registration. May be repeated for maximum of 15 hours credit.

492 Field Experience (1-2) Approved internships and other supervised practice in public relations. May be repeated for a maximum of 4 credit hours. Prereq: 320, senior standing, and consent of instructor. Satisfactory/No Credit grading only.

493 Independent Study (3) May be repeated for maxi- mum of 6 hours. Prereq: Consent of instructor.
RECREATION AND TOURISM MANAGEMENT (854)

201 Recreation and Tourism Foundations and Leadership (4) Introduction to the field of leisure, recreation, and tourism focusing on understanding concepts, philosophies, and professional practices in the leisure service industry. Theories and practices of recreation leadership. F, Sp

310 Development and Evaluation of Recreation and Tourism Programs (2-3) Cognate. Principles and practices in the design and evaluation of various facilities. Elements of risk management and operating selected profit centers in a variety of settings. Special attention is given to market performance and economic impact. Prereq: RTM 110, Junior standing or consent of instructor. A-F, SP

400 Internship in Recreation and Tourism Management (12) Full time practice in approved recreation, sport or tourism management agency. Emphasis on supervision and administrative procedures. Prereq: RTM 290, all 300 level RTM courses, Senior Standing, GPA required for admission to major. A-F, SP

493 Directed Independent Study (1-3) Tutorial and special area. Prereq: Consent of instructor. May be repeated. Maximum 6 hours. S/NC or letter grade.

RELIGIOUS STUDIES (863)

101 World Religions in History (3) Introduction to religion in culture and society, including examination of religious traditions from China, India, and the Mediterranean region. Writing-emphasis course.

102 The Comparison of World Religions (3) Introduction to religion in culture and society, focusing on cross-cultural interpretation and analysis of major problems and themes within religious traditions. Writing-emphasis course.

232 Varieties of Religious Community (3) How different forms of religious communities (cults, tribes, sects, monastic orders, denominations, familial) have sought to reject, reinforce, transform, ignore, or dominate their culture and society. (Same as Sociology 232.)

300 Ways of Understanding Religion (3) Sources and methods used in the study of religion and religions; academic and popular approaches to the study of religion. Writing-emphasis course.

301 Religious Myth, Symbol, and Ritual (3) Distinctive modes of religious expression and analysis of ethical approaches appropriate to their particular social and cultural functions in religious traditions.

302 Anthropology of Religion (3) Religions of selected non-literate peoples. Role of religion in their social and cultural systems. (Same as Anthropology 302.)

305 Modern Religious Thought (3) Major themes, issues, and thinkers of nineteenth and/or twentieth century religion. Variable content. May be repeated. Maximum 6 hours.

309-310 Elementary Classical Hebrew (3,3) Basic elements of Hebrew phonology, script, morphology and syntax; introduction to basic elements of text, form, and literary criticism.

311 Ancient Hebraic Religious Traditions (3) Development of ancient Israelite and early Jewish traditions with emphasis on those concerning the Exodus, Davidic kingship, and Zion in historical, prophetic and apocalyptic material. Writing-emphasis course. (Same as Judaic Studies 311.)

312 Religious Aspects of Biblical and Classical Literature (3) Ways in which contemporary modes of literary analysis enhance appreciation of biblical and classical material. Ways in which the western literary tradition has appropriated and revivified the biblical and classical heritage. Writing-emphasis course. (Same as Judaic Studies 312.)
313 Religious Aspects of Modern Literature (3) Issues raised for religious inquiry in contemporary literature. Relation of religious and moral considerations to problems of literary analysis; relation between religious language and forms of human expression (symbol, metaphor, myth, image) identified in study of literature. Writing-emphasis course.

315 Reformation Europe, 1500-1650 (3) (Same as History 315.)

319 Sociology of Religion (3) (Same as Sociology 319.)

320 Women and Religion (3) Concepts of gender in religious traditions, religious, social and psychological dimensions of gender-related symbols (e.g., the Goddess, God the Father) that shape women’s and men’s experiences; contemporary feminist discussions of ways in which religions have liberated and oppressed women. (Same as Women’s Studies 320 and Judaic Studies 320.)

321 New Testament Origins (3) Influence of pre-Christian Judaism and Greek culture and philosophy on early Christianity. Motivations and guiding concepts which led to the formation of the New Testament. Victory of the Christian Church over the forces of persecution and the Constantinian settlement (311 A.D.). Writing-emphasis course. (Same as History 321.)

322 Christian Thought (3) Principal forms of Christian thought and institutions through the interpretation of representative thinkers and movements from Augustine of Hippo to Immanuel Kant. Writing-emphasis course. (Same as History 322.)

326 Images of Jesus (3) Major portrayals of Jesus Christ from the first century to the twentieth within the context of the cultural milieu which gave birth to each. Extensive use of slides, video material, recordings, and literature.

329-330 Intermediate Classical Hebrew (3,3) Readings in narrative material from the Hebrew Bible. Prereq: 329 or consent of instructor.

332 Classical Islam (3) Content limited to events prior to 1773 CE, focussing on the Qur’an, the Prophetic Tradition, Islamic law, Sunnism, Shi’ism, and Sufism. Writing-emphasis course. (Same as Asian Studies 332.)

333 Islam in the Modern World (3) Beginning with the Wahhabi revolution (ca 1773 CE), this course examines movements of revival and reform in modern Islam, as well as worldwide missionary activity and the growth of the Islamic community in the US. Prereq: Religious Studies 332 or consent of instructor. (Same as Asian Studies 333.)

342 Religious Ethics (3) Selected ethical theories and moral teachings of the world’s religions with emphasis on their action-guides for individuals and institutions, their application to persons and social problems.

344 Professional Responsibility (3) (Same as Philosophy 344.)

345 Medical Ethics (3) (Same as Philosophy 345.)

351 Introduction to Religion in the United States (3) A representative profile of religion in the United States, organized around selected focal themes or problems. Writing-emphasis course.

352 African-American Religion in the United States (3) Historical and critical examination of formation and development of African-American religious thought and institutions in America. (Same as African-American Studies 352.) Writing-emphasis course.

353 Topics in African-American Religion (3) Selected figures, themes, movements, or problems in the African-American religious tradition. Variable content. May be repeated. Maximum 4 hours. (Same as African-American Studies 353.)

355 Religion and Culture in the United States (3) Selected figures, movements, and problems in American religious life, thought, and culture from pre-colonial period to present. Prereq: 351 or consent of instructor. May be repeated. Maximum 6 hours. Writing-emphasis course. (Same as American and African Studies 355.)

370 Philosophy of Religion (3) (Same as Philosophy 370.)

373 African Religions (3) Religions of the indigenous peoples of Africa, including how myth, rites, and symbols and certain cultural and political movements in Africa have been and been influenced by religious sensibilities. Writing-emphasis course. (Same as Anthropology 373 and African-American Studies 373.)

374 Philosophy and Religion in India (3) Survey of the development of the major non-Buddhist themes of philosophy and religion in India. (Same as Philosophy 374.) Writing-emphasis course.

376 Buddhist Philosophy and Religion (3) Survey of the origins of Buddhism in India and further development of Buddhist philosophy and religion in India, China, Korea, Japan, Tibet, and Southeast Asia. May be repeated. Writing-emphasis course. (Same as Philosophy 376.)

379 Religion and Philosophy in China (3) Traditional thought and religion of China in its cultural setting as basis for understanding modern China. (Same as Philosophy 379.) Writing-emphasis course.

381 Introduction to Judaism (3) History, traditions, philosophy and religion of the Jewish people grounded in their Bible, but includes diaspora, emancipation and haskalah. Writing emphasis course. (Same as Judaic Studies 381.)

383 Religion in Japan (3) Traditional religious heritage and contemporary expressions of religion in Japan with attention to religious perspectives on nature, self-mastery and spontaneity, individual and community and secular to sacred. Writing-emphasis course.

384 Zen Buddhism (3) Historical, philosophical, and meditational aspects of Zen. Special emphasis on mo-tifs of emptiness, no-mind, and enlightenment and on practices of meditation and the use of the koan. Recommended Prereq: One or more of the following: 376, 379, 383.

385 Contemporary Jewish Thinkers (3) Renewal trends in Nineteenth and Twentieth-Century Judaism. Writing emphasis. May be repeated. Maximum 6 credit hours. (Same as Judaic Studies 385.)

386 Voices of the Holocaust (3) Historical underpinning of Nazi genocides such as that of the Jewish people, Gypsies, and homosexuals. The economic, religious, social, and philosophical trends supporting massive genocide. (Same as Judaic Studies 386.)

389 Literature of the English Bible (3) (Same as English 389.)

405 Modern Jewish Thought (3) History, culture, and geography of the now Israeli portion of the Levant from 1948 to the present. The modern-day Israel of 1948 and the political complexities of the Middle East. Israeli culture and literature. Writing emphasis course. (Same as Judaic Studies 405.)

411 Modern Religious Philosophies (3) Religious implications of major Western thinkers and movements from Nicholasa of Cusa to the nineteenth century German Idealists. (Same as Philosophy 411.)

412 Classical Indian Systems of Philosophy: The Moksha Tradition (3) Selected writings and philosophic problems of the traditions of Samkhya, Yoga, Vedanta, Buddhism, or Jainism. Prereq: Religious Studies 374 or consent of instructor. (Same as Philosophy 412.)

415 Psychology of Religion (3) (Same as Psychology 415.)

425 Seminar in Western Religions (3) Selected figures, themes, movements, and problems. Prereq: Consent of instructor. Variable content. May be repeated. Maximum 6 hours.

430 Seminar in American Religion (3) Selected figures, themes, movements, and problems. Prereq: Consent of instructor. Variable content. May be repeated. Maximum 6 hours.

440 Seminar in Comparative Religion (3) Selected figures, themes, movements, and problems. Prereq: Consent of instructor. Variable content. May be repeated. Maximum 6 hours.

474 Modern and Contemporary South Asian Religion (3) Religion in India during the Islamic and European colonial periods and in independent India. May include such topics as the development of vernacular forms of Hinduism; Hindu interactions with other religions; the Indian Freedom Movement and Gandhi; Women and religion; religion, secularity, and politics in independent India; and the religious and caste in the new India. Writing-emphasis course. Prereq: Religious Studies 374 or Philosophy 374.

490 Readings and Research in Religious Studies (3) Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

499 Foreign Study (1-15)

499 Off-Campus Study (1-15)

499 Independent Study (1-15)

499 Seminar in Religious Studies (3) For advanced students in Religious Studies; required for majors. Selected topics, e.g., nature and function of myth in religion, problem of evil, transcendence, theories of religion, hermeneutics, integrating various disciplines involved in study of religion. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

RETAIL AND CONSUMER SCIENCES (865)

119 Introduction to the Service Industry (3) (Same as HRA 119)

210 Retail Operations Management (3) Development and overview of retailing, related businesses and industries, and the activities involved in the delivery of goods and services to the consumer. Coreq: Prereq: RCS 119.

310 Retail Buying (4) Analysis of the merchandise buying function within different retail organizations and retail organizations and structures. Application of principles associated with retail buying. Computer simulations. 3 hours and 1 discussion/lab. Prereq: HRD 210 or equivalent. ACCT 202, RCS 210.

311 Developing the Service Workforce (3) (Same as HRA 311)

323 Diversity in the Service Marketplace (3) (Same as HRA 323)

341 Family and Consumer Behavior (3) Understanding of behavior of individual and family, demographics, family life cycle, family dynamics and roles, cultural and ethnic influences, and individual and family decision making.

350 Consumers in the Market (3) Consumerism/consumer movement, consumer problems in today’s marketplace, legal and regulatory issues related to consumer interests, changes in American and Global marketplace, consumer economic issues-food, health care, product safety, banking, credit, housing, insurance and investment. Prereq: Econ 201.

376 Strategies for Growth (3) (Same as HRA 376)

390 Professional Development (2) (Same as HRA 390)

410 Strategic Retail Planning (3) Retail Management from a strategic planning perspective: development and implementation of retail strategy from financial, operational, and customer orientation. Prereq: RCS 390.

411 Entrepreneurship and Small Business Management (3) Concepts of entrepreneurship within single ownership, small business, branch offices, franchises, and chains: risk taking, small business planning, management and marketing, management of a small business; current issues and problems. Prereq: MKT 301, ACCT 202.

412 Direct Retail Methods (3) Issues concerning the use of direct selling methods to sell goods and services. The course emphasizes analysis of consumers and product/service types for integrated direct retail methods. The direct retailing methods in this course include direct mail, catalogs, telemarketing, infomercials, and electronic commerce (internet) Prerequisite RCS 376.

415 Retail Promotion (3) In-store promotional activities; development of retail promotion strategies; evaluation of retail promotions; supplementary focus on advertising and other methods to communicate in-store promotions. Prereq: RCS 376.

421 International Retail Environments (3) The study and
analysis of retailing in an international and global setting. Retail practices, processes and issues within international environments—cultural, economic, social, political, legal and business. Prereq: MKT 301.

422 Professional Experience in Retail and Consumer Sciences (6) Supervised educational experiences in selected retail and consumer sciences service operations. Prereq: Progression into the program and RCS 310, 390.

425 Legal Issues in Service Management (3) (Same as HRA 425.)

450 Economics of Consumer Choice (3) Micro and macro economic approaches to consumer choice across the life span; demographics; economic status of consumers; demand analysis; market structure and its impact on consumers; economics of information, implications on private and public sectors. Prereq: ECON 201.

476 Service Marketing Research (3) How to design, conduct and utilize service marketing research to improve consumer service. Prereq: STAT 201, HRD 210, and RCS 376.

482 Professional Experience in Retailing II (3) Supervised professional experience in selected retail operations that build upon first professional experience. Prereq: RCS 410, 422, HE 410. Coreq: RCS 485.


493 Directed Study (1-3) Individual problems for junior and senior students who wish to pursue special interests in retail and consumer sciences. Prereq: Junior or Senior standing and consent of the instructor.

495 Special Topics (3) Topics in retail and consumer sciences. May be repeated. Maximum 9 hours. Prereq: Junior or Senior Standing and consent of the instructor.

497-498 Honors: Retail and Consumer Sciences (3) Individual problems for Junior and Senior students showing special ability and interest in retail and consumer sciences. Prereq: Recommendation of Department Head.

RURAL SOCIOLOGY (880)

380 Rural Sociology (3) Topics include the analysis of U.S. land tenure systems, agricultural regions, rural minorities, and consumer organizations, rural institutions, community decision making, local government, rural policy issues, rural industrialization, food policy, and cross-cultural analysis. Prereq: Sophomore standing. F (Same as Sociology 380.)

480 Technological and Community Change (3) Analysis of communication processes whereby new technology spreads within a farm population and analysis of social institutions related to change in rural communities. Prereq: 380 or consent of instructor. (Same as Sociology 480.)

RUSSIAN (886)

101-102 Elementary Russian (4,4) Must be taken in sequence.

199 Russian Language and World Business (2) This course will examine the importance of foreign trade at the local, state, regional, and national levels. An interdisciplinary team of faculty from the colleges of Business and Arts and Sciences will provide an overview of the value of language study and its role in mediating intercultural awareness in the world business. Restricted to students in the Language and World Business program. See the Director for further information. F

201-202 Intermediate Russian (4,4) Must be taken in sequence.

221 Rebels, Dreamers and Fools: The Outcast in 19th Century Russian Literature (3) Texts in English translation. No foreign language credit. Writing- emphasis course.

222 Heaven or Hell: Utopias and Dystopias in 20th Century Russian Literature (3) Texts in English translation. No foreign language credit. Writing-emphasis course.


311-312 Russian Composition and Conversation (3,3) Practice in writing and speaking; grammar review, and vocabulary building. Prereq: Completion of 202.

325 Russian Film (3) A study of Russian cinema from the earliest days to the present. Writing-emphasis course. (Same as Cinema Studies 325.)

371 Martyrs, Mobs, and Madmen in Russian Culture: 1988-1861 (3) Explores various aspects of Russian music, art, and literature, emphasizing violent cultural clashes that produced extreme artistic reactions. Texts in English translation. Writing-emphasis course.

372 Eros, Death and Resurrection in Modern Russian Culture (3) Examines the obsessions which underlay the intellectual and cultural ferment of 20th Century Russian music, art, and literature. Texts in English translation. Writing-emphasis course.

401-402 Advanced Grammar, Conversation, and Composition (3,3) Prereq: 312 or equivalent.

424 Nabokov’s Novels and Stories (3) An intensive course covering several novels and stories, the memoir, and some scientific writings of the prolific Russian-American author. Particular attention given to the author’s philosophical views and the contact between his science and his art. In English; readings in Russian for majors. Writing emphasis course.

430 Selected Topics in Russian Literature (3) When content varies, may be repeated for credit. Writing-emphasis course. Maximum 9 hours.

451-452 Senior Seminar (3,3) For majors in Russian; minors admitted at the discretion of the instructor. Intensive study of language, literary style, and literary criticism based on selected major novels.

490 Internship (1-15) Career-related experiences in the United States or abroad with permission of the Language & World Business Director. For Language and World Business majors only. Satisfactory/No Credit only.

491 Foreign Study (1-15)

493 Independent Study (1-15)

SAFETY (890)

400 Directed Independent Study (1-3) Individual identification and study of safety and education problem research to be pursued. Specific research must be made a topic before registration. May be repeated. Maximum 12 hours. Prereq: Consent of instructor.

443 Sports and Recreational Safety (3) Accident prevention and injury control in sports activities; philosophy of sports safety; human environmental factors and interrelationship in sports injury and control; risk-taking and decision solution strategies; and contributions of sports medicine to safety. 3 hours and 2 labs. Sp

452 Safety Principles and Practices (3) An introduction to the general principles, practices, and procedures in occupational and community safety. A survey of historical and present safety issues, problems, and practices addressing safety of individuals and groups in work-site, school, community, transportation, and industrial settings. Junior/senior standing or consent of instructor. F, S, Sp

460 Fire Risk Management (3) Provides the knowledge and skills needed to develop, implement, and manage a comprehensive fire safety program. Incorporates basic fire risk management concepts, interpretation of codes, and an exposure to basic fire analysis techniques. Prereq: Senior standing or permission of instructor.

SOCIAL SCIENCE EDUCATION (899)

496 Teaching Science Grades 7-12 (3) Methods, materials, recent trends in science and environmental education programs, courses, and curriculum. Prereq: Admission to Teacher Education Program. F

SOCIAL WORK (905)

200 Introduction to Social Work (3) Emergence of the social work profession; professional mission; knowledge, skills, and values; practice settings; client groups; helping relationships; career patterns; practice methods. Designed to assist students to consider their ability for careers in social work.

250 Social Welfare (3) Development, structure and function of the social welfare institution. Analysis of social welfare programs and impact of the institution on society.


312 Social Work Practice I (3) Knowledge, values, and skills for entry level generalist practice in a variety of settings. The social work problem solving process, different client systems, ethnic-sensitive assumptions, and the worker’s role for person-environment configuration. Concurrent skills laboratory. Prereq: Initial progression. Prereq or Coreq: 314.


314 Human Behavior and the Social Environment (3) Interrelationships of biological, social, cultural, environmental and psychological factors in human behavior. Person-environment over the life span with special attention to diversity, impact of racism, sexism, and other sociocultural factors. Integration of knowledge into a social work practice perspective. Prereq: Initial progression.


412 Social Work Practice III (3) Generalist practice with emphasis on groups and communities, including treatment theories, techniques, and issues. Prereq: Full progression. Coreq: 414 and 480.


460 Integrative Seminar (2) Social work content for entry-level professional practice and current issues influencing the profession. Includes development of a portfolio reflecting BSW competencies. Prereq: Full progression. Coreq: 480.


491 Foreign Study (1-15) Prereq: Consent of instructor.

492 Off-Campus Study (1-15) Prereq: Consent of instructor.

493 Independent Study (1-15) Prereq: Consent of instructor.
SOCILOGY (915)

110 Social Problems and Social Change (3) Increasingly acute and intense problems such as alcoholism, violence, crime, inequality, lifestyle preferences, and environmental abuse within the context of social change. Assessment of control strategies.

120 General Sociology (3) Major concepts and theoretical approaches of sociology with emphasis on culture, socialization, social organization, and social stratification.

232 Varieties of Religious Community (3) (Same as Religious Studies 232.)

291 Sport in American Society (3) (Same as Cultural Studies in Education 291.)

310 American Society (3) Institutional organization of contemporary American society with particular attention to major social institutions. Writing-emphasis course.

311 Family (3) Theoretical frameworks and methodological approaches; their application in the sociological study of past and present family forms.

320 Interpersonal Communication Processes (3) (Same as Speech Communication 320.)

321 Sociological Theory (3) Survey of contemporary issues and problems in sociological theory with an emphasis on contrasting explanations of the control of the state and historical and contemporary nature of the delinquency problems. (Same as Urban Studies 363.)

332 Varieties of Religious Community (3) (Same as Religious Studies 332.)


343 Race and Ethnicity (3) Social sources of racial and ethnic discrimination, and political consequences. Emphasis on race and ethnicity in the United States. (Same as African and African-American Studies 340 and American Studies 342.) Writing-emphasis course.

344 Power and Society (3) Sociological analysis of the formation and application of nation state policies. Examination of who gets what, why, and how. Emphasis on contrasting explanations of the control of the state and the relative autonomy of the state.

345 Collective Behavior and Social Movements (3) Collecting phenomena leading to social change. Response to disaster, popular crazes, and social protests and development, organization, and function of social movements. Emphasis on American cases. (Same as American Studies 345.)

340 Criminology (3) Systemic inquiry into alternative definitions of crime, statistical distribution of different types of crime causation, and responses to crime, primarily by the police.


352 Deviance and Social Control (3) Deviants, their lifestyles, social organization, and social control.

360 Environment and Resources (3) Relationship between scarcity of natural resources and changes in societal beliefs and social structure. Topics include social and physical limits to growth and collective action problems.

363 The City (3) The revolutionary impact of cities and city life as seen from an ecological perspective. The organization of life in cities into communities, neighborhoods, and other territories. Urban planning and problems. (Same as Urban Studies 363.)

370 Social Psychology (3) Social psychological analysis of social behavior emphasizing its acquisition, its enactment, and its dynamic nature.

375 Gender in Society (3) Exploration of gender in society utilizing various sociological perspectives with special focus on the relationships between social structures, social roles, and gender identities. (Same as Women’s Studies 375.)

380 Rural Sociology (3) (Same as Rural Sociology 380.)

400 Special Topics (3) Variable topics. Scope of subject matter determined by students and instructor with consent of department. Prereq: Determined by department. May be repeated. Maximum 6 hours.

405 Sociology of Sport (3) Social meaning, organization, and process of sport. Prereq: 291 or consent of instructor. (Same as Cultural Studies in Education 405.)

4194 Sociology of Health Care (3) Organization of health care facilities, staff-patient relationships, demographic characteristics, and prevalence of disease.

415 Sociology of Aging (3) How roles and statuses change with age in relation to the major social institutions; the impact that the rapidly increasing number of older people have on society, the effect of society on older people.

422 Comparative Poverty and Development (3) A critical examination of patterns of poverty and inequality in developing areas of the world, along with a review of major sociological theories which attempt to explain differences in patterns of development. Writing-emphasis course. (Same as African and African-American Studies 442.)

446 The Modern World System (3) Critical examination of the capitalist world-system as a social system, its coherence, boundaries, regions, member groups, cleavages, and patterns of conflict. Analysis of who gets what, why, and how in the global political economy. Writing-emphasis course.

451 Criminal Justice (3) A critical assessment of the criminal justice apparatus and its components. Brief examination of how most of the emphasis on the criminal courts and institutions and programs such as the prison, probation, and parole. Analysis of their operation and impacts. Prior completion of 350 is recommended. (Same as Legal Studies 451.)

455 Society and Law (3) How laws and legal processes are affected by social change, the social impact of legal sanctions, relations between law and social justice. Writing-emphasis course. (Same as Legal Studies 455.)

459 White-Collar Crime (3) The distinctive nature and dynamics of white-collar crime, victims and costs of white-collar crime, organizations as white-collar offenders, causal theories, and the dynamics of responses to white-collar crime by private and public parties.

462 Population (3) Demographic factors and social structure; trends in fertility, mortality, population growth, migration, distribution, and composition; population policy.

64 Urban Ecology (3) The relation of humans to their urban environment, their conservation and the use of appropriate technology. (Same as Urban Studies 464.)

465 Social Values and the Environment (3) Human dimensions of ecosystem management and public policy. An applied course for those interested in values and valuation within specific biophysical and social settings. Prereq: 110 or 120 or consent of instructor.

471 Sociolinguistics (3) (Same as English 471 and Linguistics 471.)

491 Foreign Study (1-15) Prereq: Advance departmental approval of number of hours and topics. May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15) Prereq: Advance departmental approval of number of hours and topics. May be repeated. Maximum 15 hours.

493 Independent Study (1-15) Prereq: Advance departmental approval of number of hours and topics. May be repeated. Maximum 15 hours.

SPANISH (924)

111-112 Elementary Spanish (3,3) Language labora-
tory required. Must be taken in sequence. Not available to students eligible for Spanish 150. E

150 Intermediate Spanish Transition (3) This course is designed to prepare students for enrollment in Spanish 211. Prereq: Two years of high school Spanish a placement score below the level required for admission to Spanish 211. This class will not count toward the College of Arts and Sciences intermediate-level foreign language requirement. Since 150 is a review of elementary Span-

istian students, who receive credit in this course may not also receive credit for any other 100 level Spanish course and therefore also forfeit the six hours of elementary language credit awarded through place-

mentation examination. For elective credit only. F, S

199 Spanish Language and World Business (2) This course will examine the importance of foreign trade at the local, state, and national levels. An interdisciplinary team of faculty from the Colleges of Business and Arts and Sciences will provide an overview of the value of language study and international cultural awareness in world business. Rastering in the program in Language and World Business. See the Director for further information. F

211-212 Intermediate Spanish (3,3) Prereq: 150 or 112 or Departmental Placement Exam. Must be taken in sequence. Students who place in 200 level courses from high school will receive six hours of elementary Spanish credit.

217-218 Honors: Intermediate Spanish (3,3) Honors course for students of superior ability in Spanish. Incom-
inging freshmen are admitted on the basis of a diagnostic test, high school average and performance on the ACT. Classes normally held to a maximum of 15 students. Students may enroll in 118 for enrichment only. Emphasis upon speaking ability and with an introduction to reading literary selections. Students who earn an A or B in 217 receive credit for 300. Prereq: 111-112 or equiva-

lent. F, Sp

300 Transition: Composition and Grammar through Reading (3) Provides preparation in writing skills and exercise in key elements of grammar through the develop-

ment of reading comprehension, vocabulary acquisition, and compositions on assigned topics. Available to non-native or non-bilingual students of Spanish only. Prereq: Spanish 212 or equivalent or appropriate score on Spanish Placement Exam.

305 Conversation and Aural Comprehension (3) Develops speaking and listening comprehension skills through a variety of in-class and extra-class activities. Not available for credit for students whose level of proficiency in Spanish is superior as defined by the ACTFL Proficiency Guidelines. Prereq: Spanish 212 or 218 or permission of department.

322 Upper-level Grammar and Composition (3) Study of the challenging issues in Spanish grammar and with practical application in composition assignments. Any review of basics covered in previous courses is to introduce finer points. Not available for credit for stu-

dents who place in 300 level courses from Spanish 211. As defined by the ACTFL Proficiency Guidelines. Prereq: Spanish 218 or 300 or permission of department. Writing-emphasis course.

330 Textual Analysis (3) Introduction to the art of reading and interpreting literary texts and the writing of critical essays, with attention to language structures, literary terminology, theory and concepts such as ro-

mance, tragedy, comedy, irony, narrative voice, symbol, metaphor, etc. with application to works such as short stories, one-act plays, essays, and letters. Prereq: Spanish 323. Writing emphasis course.

331 Introduction to Hispanic Culture (3) Introduction to the fundamental historical, social, and cultural developments that led to the creation, geographical distri-

bution and distinctive character of Hispanic cultures, with a focus on the possibilities that distinguish Hispanic culture from other cultures, as well as to ethnic and linguistic components of the Hispanic world in the present day. Prereq: Spanish 323. Writing emphasis course. (Same as Latin American Studies 331.)

332 Survey of Spanish Literature: 1700-Present (3) Main writers, trends, stylistic periods and artistic move-

ments in Spain since 1700 set against a broad back-

ground of historical development. Emphasis on Neo-classicism, the Romantics, the realists of the 19th century, the Generation of ’98, the avant-garde of the 1920’s and 1930’s, social real-

ism, women writers, and developments. Prereq: Spanish 323 and 330. Writing emphasis course.
333 Survey of Spanish-American Literature: 1700- Present (3) Main writers, trends, stylistic periods and artistic movements in Spanish America since 1700 set against a background of cultural, social-political, and historical developments. Emphasis on Neo-classicism, the Romantics, modernismo, the avant-garde of the 1920's, and the contemporary. Taught in the Latin American boom, women writers, and contemporary developments. Prereq: Spanish 323 and 330. Writing emphasis course. (Same as Latin American Studies 334.)

345-46 Language and Culture of the Hispanic Business World (3, 3) Commercial vocabulary, business letters, import-export, marketing. Hispanic social management, and the global significance of economic & political developments in Spanish-speaking countries. Required of all Spanish majors with a concentration in Language and World Business. Prereq: Spanish 323 or permission of department if a student's level of proficiency in Spanish is both superior and native as per the ACTFL Proficiency Guidelines.

401 Cultural Plurality and Institutional Changes in Latin America (3) Value systems, behavioral patterns, political parties, role of the military, the church, educational institutions and national identity. Prereq: Spanish 6 hours of Latin American Studies courses or consent of instructor. Writing emphasis course. (Same as Latin American Studies 401.)

402 Latin American Studies Seminar (3) Selected topics in Latin American Studies. May be repeated. Maximum 6 hours. Prereq: 6 hours of 300 or 400 level Latin American Studies courses or consent of the instructor. Writing emphasis course. (Same as Latin American Studies 402.)

421 Phonetics (Prereq) Prereq: 323; or permission of instructor.

422 Advanced Grammar and Translation (3) Structure of the grammatical system of Spanish. In-depth analysis of selected syntactic phenomena with particular illustration/application and exercise in Spanish-English and English-Spanish translation. Emphasis on finer points of grammatical structures. Not available to native or bilingual students of Spanish without permission of department. Prereq: 323. Writing emphasis course.

423 Advanced Composition and Conversation (3) Develops writing and speaking skills to the advanced level, covering a wide range of topics and situations and including a variety of in-class and extra-class activities. Not available to students who have taken and completed Spanish 323 with permission of Spanish and consent of instructor. Maximum 6 hours of Spanish proficiency in Spanish is superior as defined by the ACTFL Proficiency Guidelines. Prereq: 323 or permission of department. Writing emphasis course.

425 Introduction to Descriptive Linguistics (3) (Same as French 425, German 425, Russian 425 and Linguistics 425.)

426 Methods of Historical Linguistics (3) (Same as Russian 426, French 426, German 426 and Linguistics 426.)

429 Romance Linguistics (3) (Same as French 429 and Linguistics 429.)

430 Topics in Hispanic Linguistics (3) Introduction to the study of language throughout different areas of linguistics such as phonology, morphology, syntax, semantics, sociolinguistics, dialectology and second language acquisition. Prereq: 323, 330, 331 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

433 Images of Woman in Hispanic Literature (3) Examines major Hispanic texts (and/or women authors) in the light of the relation of female individuality to a particular society or societies. Emphasis on the patriarchal tradition, woman as cultural and as aesthetic value (“the feminine symbolic”), and feminist theoretical issues. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. Writing emphasis course.

434 Hispanic Culture through Film (3) Analysis of selected films on subjects concerning life, culture, and artistic traditions in the Hispanic world; exploration of important cultural phenomena. Analysis of films and a comparison of them with treatments of related subjects in other types of artistic production. Prereq: Spanish 332 and completion of major or minor requirements in 332, 333, and 334. Taught in Spanish. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course. (Same as Latin American Studies 333.)

450 Internship (1-15) Career-related experiences in the field of special education, including a variety of in-class and extra-class activities. Credits not applicable toward degree requirements. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

451 Special Topics (3) Focus on some aspect of Hispanic literature, culture, linguistics, or foreign language pedagogy. Topics vary. May be repeated with consent of department. Maximum 6 hours.

452 Advanced Composition and Conversation (3) Taught in English. Emphasis on the evolution of Spanish language pedagogy. Topics vary. May be repeated with permission of department. Writing emphasis course. (Same as Latin American Studies 452.)

453-54 Advanced Composition and Conversation (3) Taught in English. Emphasis on the evolution of Spanish language pedagogy. Topics vary. May be repeated with permission of department. Writing emphasis course. (Same as Latin American Studies 453.)

456 Spanish American Film Literature (3) Study of written films from the Americas, and their representation in the cinema. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

465 Latin American Film and Culture (3) Explores Latin American and Latino/a films and videos from 1900s to present as works of art and in light of political, cultural, and social contexts. Taught in English. Not available for Spanish major or Spanish graduate credit. Graduate credit available for Latin American Studies and Cinema Studies. 1 hour lecture, 2 hours screening, and 1 hour discussion. Writing emphasis course. (Same as Latin American Studies 465 and Cinema studies 465.)

467 Disenchanted Texts in Hispanic Literature (3) Texts representing trends and periods of renewal in Spanish and Latin American countries. Selected topics on trends and periods in Spanish America: 323, 330, 331 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

468 Trends in Hispanic Thought (3) Intellectual/philosophical currents represented in literary works, selected thinkers, or movements from historical periods of Spain and Latin American countries. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

470 Intellectual Encounters in Latin American Studies (3) Topics in Latin American Studies. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

471 Spoken and Written Communication in Latin American Studies (3) Oral communication in Latin American countries. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

474 Race, Ethnicity, and Nation in Hispanic Literature (3) Close reading and analysis of literary texts that deal with issues of race and ethnicity in the Hispanic world. Emphasis will include life and consequences of nationalization. Among possible course topics: mestizaje, conceptual distinctions between race and ethnicity in Latin America; indigenismo; Afrocentrism; issues of migration, assimilation and emigration in Latin America; Chicanos, and Moors in Spain. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

475 Medieval and Renaissance Spanish Literature (3) Spanish literature from the 8th-16th centuries. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

476 Literary and Artistic Movements in the Hispanic World (3) Examination of relationships (themetic, cultural, socio-political, aesthetic, philosophical, etc.) between specific trends in literature and other artistic media, in the light of the historical contexts in which those relationships emerged. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

489 Topics in Hispanic Civilization (3) Analysis of major trends, issues and/or movements in the civilization of Spain and Latin America through the political, literary, philosophical and cultural perspectives dealing with topics from the Middle Ages to the present day may be explored. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

490 Internship (1-15) Career-related experiences in the field of special education, including a variety of in-class and extra-class activities. Credits not applicable toward degree requirements. Prereq: Spanish 323, 330 and completion of major or minor requirements in 332, 333, and 334. May be repeated. Maximum 6 hours with permission of department. Writing emphasis course.

493 Independent Study (1-15)
Courses of Instruction

230 Listening (3) Study of the principles and techniques of listening. Focuses on theoretical and practical listening skills.

240 Business and Professional Communication (3) Basic principles of communication within organizations. Topics and activities may include organizational/communication theory, group problem solving, case studies, interviewing, and formal presentations.

250 Advanced Public Speaking (3) Theory and prac-
tice of informative and persuasive speaking. Prereq: 210 or 240.

260 Communication and Society (3) Study of communica-
tion strategies and public opinion, with emphasis on communication in movies, TV, films, news, demonstrations, drama, and public address.

270 Argumentation and Debate (3) Reasoned deci-
sion-making with emphasis on analysis, evidence, rea-
soning, constructing and refuting arguments.

280 Introduction to Oral Interpretation (3) Art of reading aloud: development of interpretive techniques and their application to selected passages of prose, poetry, and drama. Writing-emphasis course.

300 Nonverbal Communication (3) Exploration of nonverbal communication from human communication perspective: origins and research, usage and meaning of nonverbal behavior, research strategies, and theoretical approaches.

310 Persuasion (3) Methods which contribute to effective and ineffective persuasion. Topics include credibility, message construction, and receiver variables.

320 Interpersonal Communication Processes (3) Social dimensions of interpersonal communication and relationships. Prereq: Consent of instructor. (Same as Sociology 320.)

330 Group Communication (3) Small group decision-making, role theory, group processes, leadership, roles, and norms as they affect thinking in groups.


350 Communication Theory (3) Survey of social sci-
ence approach to theorizing about communication. Prereq: 100.

390 History of Rhetorical Theory (3) Western rhetori-
cal theory from Plato to the present. Prereq: 100.

397 Honors Seminar (1) Required of students enrolled in the honors program; admission with consent of department.

400 Topics in Speech Communication (3) Variable content course affording opportunity to offer subject matter not available in current course offerings. Topics of subject matter, and prerequisites to be determined by department. May be repeated. Maximum 6 hours. Major credit limited to 3 hours.

420 Communication and Conflict (3) Communication as a significant factor in the development, management, and resolution of conflict at the interpersonal, small group, organizational, or societal levels.

425 Interpersonal Health Communication (3) Inter-
personal communication in health care settings. Topics include provider-client interactions, social support groups, stigma and disease, and contemporary models explaining the use of health-related information.

430 Family Communication (3) Dynamics of interac-
tions within family systems, marriage, and parent-child relationships. Study of verbal and nonverbal communi-
cation patterns of problems. Prereq: Child and Family Studies 220 or Speech Communication 320 or consent of instructor. (Same as Child and Family Studies 430.)

440 Organizational Communication (3) Organiza-
tional setting and those variables of the communication process that affect the quality of human interaction both within and outside the organization.

445 Internship (1-3) Supervised career-related experi-
ences using Speech Communication theories and tech-
niques in a variety of real-world settings, including schools, business organizations, culminating in a written and oral report. Re-
 served for Junior/Senior level majors with at least a 3.0 GPA, or by special permission of Internship Director. S/ NC grading only. May be repeated; maximum 6 hours.

450 Propaganda (3) Study of political, commercial, and social propaganda in the United States, World War I to present. Writing emphasis course.

466 Rhetoric of the Women’s Rights Movement to 1930/1950 Focus on the interaction of public address in the campaign for women’s rights in the United States from the 1830s to the 1920s. (Same as Women’s Studies 466.) Writing-emphasis course.

469 Freedom of Speech (3) Historical and philosophi-
cal perspectives of speech. Rights and duties of the speaker in free speech controversies in the U.S. Writing empha-
sis course. (Same as American Studies 469 and Legal Studies 469.)

476 Rhetoric of the Contemporary Feminist Move-
ment (3) Historical and critical study of the campaign for women’s rights in the United States from the 1940s to the present. (Same as Women’s Studies 476.) Writing-emphasis course.

491 Foreign Study (1-15) See description of major concentration. Prereq: Junior/Senior standing with at least a 3.0 GPA; consent of supervising faculty member and Department prior to registration (see Department for proposal deadlines). May be repeated to a maximum of 15 hours.

492 Off-Campus Study (1-15) See description of major concentration. Prereq: Junior/Senior standing with at least a 3.0 GPA; consent of supervising faculty member and Department prior to registration (see Department for proposal deadlines). May be repeated to a maximum of 15 hours.

493 Independent Study (1-15) See description of ma-
jor concentration. Selected readings/research in an area of the discipline may be determined by the student in consultation with supervising faculty member and, ordinarily, in an area of study not covered by departmental curriculum. Application forms available in Department office. Prereq: Junior/Senior standing with at least a 3.0 GPA; consent of supervising faculty member and Department prior to registration (see Department for proposal deadlines). May be repeated to a maximum of 15 hours.

497-498 Senior Honors Thesis (3,3) Required of stu-
dents enrolled in the honors program; admission with the consent of the department.

499 Proseminar in Speech Communication (1-3) Major theoretical perspectives in speech communica-
tion, their interrelationships and applications; consider-
ation of the significance and ethical implications of speech communication in modern society. The course will cover two or more areas of the discipline. Prereq: Senior standing and completion of 100 and at least 12 hours of major requirements in speech communication. Writing-emphasis course.

SPORT MANAGEMENT (957)

100 Orientation to Sport Management (1) Overview of the sport industry and Sport Management major. Taken the first semester as pre-major. F, Sp

250 Foundations of Sport Management (3) An intro-
duction to the scope of the sport enterprise including why business is involved in sport and an overall evalu-
ation of sport as a profession. Prereq: Sport Management 100 or Recreation/Leisure Studies 110. F, Sp

290 Practicum I (3) Supervised part-time field experi-
ence at an approved site for the purpose of clarifying career goals. Requires a minimum of 120 clock hours. S/ NC only. Prereq: Sport Management 100 and progression into the Sport Management major. Minimum 2.5 GPA, and Sport Management 290, or consent of instructor.

293 Practicum II (3) Supervised part-time experience at an approved site offering sport management oppor-
tunities. Requires a minimum of 120 clock hours. S/NC only. Prereq: progression into the Sport Management major, minimum 2.5 GPA, and Sport Management 290, or consent of instructor. F, Sp

390 Practicum III (3) Supervised part-time experience at an approved site offering sport management oppor-
tunities. Requires a minimum of 120 clock hours. S/NC only. Prereq: progression into the Sport Management major, minimum 2.5 GPA, and Sport Management 290, or consent of instructor. F, Sp

396 Practicum IV (3) Supervised part-time experience at an approved site offering sport management oppor-
tunities. Requires a minimum of 120 clock hours. S/NC only. Prereq: progression into the Sport Management major, minimum 2.5 GPA, and Sport Management 290, or consent of instructor. F, Sp

397 Practicum V (3) Supervised part-time experience at an approved site offering sport management oppor-
tunities. Requires a minimum of 120 clock hours. S/NC only. Prereq: progression into the Sport Management major, minimum 2.5 GPA, and Sport Management 290, or consent of instructor. F, Sp

398 Practicum VI (3) Supervised part-time experience at an approved site offering sport management oppor-
tunities. Requires a minimum of 120 clock hours. S/NC only. Prereq: progression into the Sport Management major, minimum 2.5 GPA, and Sport Management 290, or consent of instructor. F, Sp

399 Practicum VII (3) Supervised part-time experience at an approved site offering sport management oppor-
tunities. Requires a minimum of 120 clock hours. S/NC only. Prereq: progression into the Sport Management major, minimum 2.5 GPA, and Sport Management 290, or consent of instructor. F, Sp

440 Sport Management Internship (6, 12) 490 Sport Management Internship (6-12) Supervised work experi-
ence at an approved site offering sport management oppor-
tunities. Emphasis on managerial tasks and administrative procedures. Requires a mini-
um of 120 clock hours. S/NC only. Prereq: progression into the major, minimum 2.5 GPA, completion of all 300 level Sport Management major course require-
ments, and senior standing. Enrollment for two semes-
ters (6 hours each) or one semester (12 hours). Total 12 hours required. E

493 Directed Independent Studies (1-3) Independent study in a specialized area of sport management. May be repeated. Maximum of 9 hours. Prereq: Progression to Sport Management Major. E

STATISTICS (962)

201 Introduction to Statistics (3) Data collection; descriptive statistics. Concepts of probability and prob-
ability distributions. Binomial and normal distributions. Estimation of means; confidence intervals; hypothesis testing of mean and proportion. Simple linear regression and correlation. Contingency tables. Process improve-
ment and statistical process control. Use of statistical computer software. Appropriate for a first course in general audience. Prereq: Mathematics 125 or 141. E

251 Probability and Statistics for Scientists and Engineers (3) Data collection; descriptive statistics. Concepts of probability and probability distributions. Discrete and continuous probability and the estimation of means, confidence intervals, hypothesis tests for single mean and proportion. Simple regression and correla-
tion. Process improvement and statistical process con-
trol. Two-level experiments. Use of statistical computing software. Prereq: Math 142. F, Sp
200 Basic Theatre Production (3) Introduction to techniques for the production of costumes, scenery, and lighting for the theatre. Emphasis on hands-on skills in lab. May be repeated. Maximum 6 hours.

202-221 Acting (3,3) 220-Basic Acting techniques. Further exploration and development of acting techniques through exercises and beginning scene work. Prereq: 220. Writing-emphasis courses. Prereq to 221: 220.

245 Basic Stage Costuming (3) Costume design and construction; basic theory and technique. Production participation required.

250 Introduction to Scenery Technology (3) Techniques of scenery and stage properties construction. Production participation required.

260 Fundamentals of Lighting and Sound Production (3) Survey of practical information on electrical and electronic equipment, physics, psychology, and instrument engineering as it relates to stage lighting and sound production. Emphasis on hands-on skills in labs. Writing-emphasis course.

300 Play Analysis (3) Study of methods and tools used in script analysis for the purpose of play production. Prereq: Theatre 100 or consent of Instructor.


323 Stage Movement (3) Introduction to movement. Development of awareness of the organic use of the body in performance. Prereq: 220 or permission of instructor.

326 Advanced Voice and Speech (3) Breath-centered voice production; exploration and control of shaping sound; IPA; text work; Gearing toward acting for the stage.

340 Introduction to Costume Design (3) Development of research and rendering skills. Prereq: 245 or consent of instructor.

345 Costume Construction (3) Techniques in the construction of costumes for the theatre. Prereq: Theatre 200 or consent of Instructor.

350 Production Planning (3) Principles and methods of planning to meet the physical needs of a production from inception to closing. Prereq: Theatre 200 or consent of Instructor.

355 Introduction to Scenic Design (3) Introduction to art and craft of scenic design.


401 Principles of Theatrical Design (3) Fundamental principles of design; visual and structural relationships. Projects will be assigned to develop understanding and perception.

409 Stage Make-Up (3) Study and problems in makeup design and application with emphasis on character analysis. Prereq: 100.

410 Special Studies in History, Literature and Criticism (3) Content varies. Concentrated study in a given period or area of Theatre History, Literature or Criticism. May be repeated.

411 Theatre History I (3) Antiquity to 1700. Major historical periods and diverse cultural traditions in world theatre history. Prereq: Theatre 300 or consent of Instructor.

412 Theatre History II (3) 1700 to contemporary theatre. Major historical periods and diverse cultural traditions in world theatre history. Prereq: Theatre 300 or consent of instructor.

420 Special Studies in Acting (3) Content varies. Exercises in selected concentrated areas such as styles, techniques, approaches, e.g., Shakespeare, movement, humor. Prereq: 320 and consent of instructor. May be repeated. Maximum 9 hours.

421 Theatre Projects in International Theatre (3-5) Study and performance of foreign works. Content varies. Language study usu. Throughtout. Prereq: Theatre 320 and permission of instructor(s). May be repeated for a total of nine (9) hours.

425 Selected Musical Theatre Techniques (2) Study and practice of musical theatre material including both dance and vocal work. Prereq: 324 or consent of instructor. May be repeated. Maximum 4 hours.


446 Costume Patternmaking (3) Draping patterns for period costumes. Includes corsery and the study of historic patterns 1500-1900.

450 Advanced Scenery Technology I (3) Study and practice of theatre woodworking; production participation will be required. Prereq: 250. Graduate credit available to theatre M.F.A. students only.

451 Advanced Scenery Technology II (3) Study and practice of metalworking and plastics for theatrical productions; production participation will be required. Prereq: 250. Graduate credit to theatre M.F.A. students only.

452 Advanced Scenery Technology III (3) Study and practice of stage rigging for theatrical productions; production participation will be required. Prereq: 250. Graduate credit available to theatre M.F.A. students only.

454 Scenery Painting (2) Introduction to materials, techniques, and principles of the craft. Emphasis on gaining skill and understanding through studio experience. Prereq: Consent of instructor.

456 Rendering (3) Techniques in monochrome and full color illustration of space and form. Some acquaintance with basic mechanical perspective and freehand sketching is assumed.

462 Advanced Lighting Design (3) Advanced problems in lighting design and theory including areas such as lighting musical theatre, opera, and dance. Prereq: 362 or consent of instructor.

464 Computer Assisted Design for Theatre (3) Advanced techniques in computer assisted design for theatre. Work with CAD, Computer Drawing, Graphics, and/or 3D modeling software for preparation of theatrical designs. Specific content varies with semester. Admission by consent of instructor only. May be repeated. Maximum 9 hours.

470 Playwriting (3) Advanced instruction in the writing of plays. Prereq: Consent of instructor.

481 Applied Theatre (1-2) Laboratory in applied theatre techniques for developmental productions. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

491 Foreign Study (1-15) May be repeated. Maximum 9 hours.

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

THEORY AND PRACTICE IN TEACHER EDUCATION (978)

203 Field Study in Education (1-3) Problems of persons in active service in the field. Includes methods of teaching, curriculum materials, school-community relationships and school organizations. May be repeated. Maximum 6 hours. E

352 Field Experiences in Teaching: Secondary I (1) Field experiences in tasks related to teaching and teacher roles. Prereq: 352 and admission to Teacher Education Program. Satisfactory/No Credit only. Sp, F

353 Field Experience in Teaching: Secondary II (1) Field experiences in tasks related to teaching and teacher roles. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

492 Directed Independent Study (1-3) Tutorial and specialized area. Prereq: consent of instructor. May be repeated. Maximum 6 hours. Satisfactory/No Credit grading or letter grade.

493 Independent Study (1-3) Topics to be assigned. May be repeated. Maximum 12 hours. E

494 Supervised Readings (1-3) Topics to be assigned. May be repeated. Maximum 12 hours. E
UNIVERSITY HONORS (983)

117-127 Honors Freshman Seminar (1,1) Sequence required of and limited to all freshman honors students. 117 concentrates on computer skills, contemporary issues, and research techniques. 127 concentrates on critical thinking, contemporary issues, and international study. Satisfactory/No Credit grading only.

337 Honors: Concentration in the Humanities (3) Small group study of selected topics, issues or problems with a concentration in the humanistic disciplines. Open to all students with a GPA of 3.25 or greater. Topics vary. May be repeated.

338-348 University Scholars Seminar (1,1) Selected topics; enrollment limited to students in The University Honors Program, or with permission of the Director of University Honors. May be repeated. Maximum 6 hours. Letter grade only.

347 Honors: Concentration in the Social Sciences (3) Small group study of selected topics, issues or problems with a concentration in the social sciences. Open to all students with a GPA of 3.25 or greater. Topics vary. May be repeated.

357 Honors: Concentration in the Natural and Applied Sciences (3) Small group study of selected topics, issues or problems with a concentration in the natural and applied sciences. Open to all students with a GPA of 3.25 or greater. Topics vary. May be repeated.

458 Senior Honors Seminar (1) Development and presentation of senior project. Open to and required of all graduating students in The University Honors Program. Should be taken one semester prior to the semester of graduation. Satisfactory/No Credit grading only.

491 Honors: Foreign Study (1-15) Open to any undergraduate honors student. Proposals must be approved in advance. See the Director of University Honors for further information.

492 Honors: Off-Campus Study (1-15) Open to any undergraduate honors student. Proposals must be approved in advance. See the Director of University Honors for further information.

493 Honors: Independent Study (1-15) Open to any undergraduate honors student. Must be used by all University Honors Scholars preparing their senior projects. Proposals must be approved in advance. See the Director of University Honors for further information. Letter grade only.

UNIVERSITY STUDIES (984)

101 Lives and Times (3) Study of biography, autobiography, and memoirs, including factors that shape individual lives. Writing emphasis. Intended for entering students.

210-220 Special Topics in University Studies (1-9, 1-9) Interdisciplinary approaches to selected topics for lower division students. Small group discussion of varying topics that transcend the boundaries of a single discipline. Writing intensive and team taught. May be repeated including maximum 12 hours. Permission of instructor required. Variable credit.

227 Honors: Topics in University Studies (3) Interdisciplinary approach to a significant scholarly or social issue for lower division students. Small group discussion of varying topics that transcend the boundaries of a single discipline. Writing intensive and team taught. May be repeated including maximum 12 hours. Permission of instructor required.

310-320 Special Topics in University Studies (3,3) Interdisciplinary approaches to issues transcending the boundaries of a single discipline. Topics may be initiated by faculty or students through arrangements with the University Studies Program. Taught by faculty from throughout the University (often team-taught). Discussion based and writing intensive. May be repeated. Maximum: 9 hours.

311 AIDS and Society (3) Speakers from across the state speak about scientific, social, medical, emotional and financial aspects of this urgent epidemic. Students are required to participate in some AIDS related community activity and to describe that activity in writing.

317 Honors: Special Topics in University Studies (3) Honors course utilizing an interdisciplinary approach to a significant scholarly or social issue. Topics change every semester. Students write and present for current offering. Discussion based and writing intensive. May be repeated. Maximum 9 hours. Permission of instructor required.

321 Aging and Society (3) Multidisciplinary examination of the process of aging and of the medical and community resources for coping with its stresses and challenges.

322 Technology, Society, and the Common Good (3) Explores philosophical and religious systems with a commitment to stewardship of the planet and those with an antagonistic or neutral perception of the natural world. Systems are presented in conjunction with cultural and species extinctions caused by or related to their beliefs and values.

410-420 Advanced Topics in University Studies (3,3) Interdisciplinary research approaches to major issues transcending the boundaries of a single discipline. Topics may be initiated by faculty or students through arrangements with the University Studies Program. Taught by faculty from throughout the University (often team-taught), Discussion based and writing intensive. May be repeated. Maximum: 9 hours.

411 Art and Organism (3) Interdisciplinary investigations of the relationship between art and biology. Readings and discussions focus on the idea that, while art is one of the most wholly human cultural endeavors, it is undeniably linked to, if not emergent from, our basic biology.

412 Normandy Scholars Seminar: War and Remembrance (9) Enrollment is limited to honors students selected for the Normandy Scholars Program. Students take course work and travel as a learning community during their time in the program. The course has three components: (a) Values and Politics: 20th Century French Literature, Culture, and Language, and (c) World War II. The course is team taught by members of various departments, and prepares students for the curricular four weeks of study in France during the Summer Term. Coordinator permission required. Writing emphasis course.

417 Honors: Advanced Topics in University Studies (3) Honors course utilizing an indepth interdisciplinary approach to a significant scholarly or social issue. Topics change every semester. Consult timetable for current offering. Discussion based and writing intensive. May be repeated. Maximum: 9 hours. Permission of instructor.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

URBAN AND REGIONAL PLANNING (782)

401 The City in the United States (3) Development and character of United States cities. Contemporary issues and selected case studies. (Same as Urban Studies 401.)

402 Survey of Planning (3) History of city development and of planning with special attention to the United States experience in urban and other levels of planning. State of the art comprehensive plan implementation devices. Planning issues in society. Not for credit for M.S.P. degree. (Same as Urban Studies 402.)

446 Housing (3) Nature and demand for housing in U.S. and abroad, U.S. experience. Private market processes and public influences. Problems of change in housing supply, impact of new technology, and governmental programs to improve supply and quality of housing.

URBAN STUDIES (985)

200 Human-Environment Systems (3) (Same as Interior Design 200.)

250 Introduction to Urban Studies (3) Introductory survey of urban studies. Includes a lecture series with urban scholars discussing urban issues as seen by their disciplines.

321 Urban Politics and Process (3) (Same as Political Science 321.)

322 Behavioral Geography (3) (Same as Geography 322.)

350 Practicum in Urban Studies (3) Introductory seminars, written assignments and hands-on experience in an organization which is working for urban change.

363 The City (3) (Same as Sociology 363.)

401 The City in the United States (3) (Same as Planning 401.)

402 Survey of Planning (3) (Same as Planning 402.)

411 Urban Geography (3) (Same as Geography 411.)

450 Directed Field Work (3) Student research, faculty-directed research. May be combined with 350 for UNCG grading, faculty appointment required. Open to Undergraduate Majors only. Prereq: Approval of department. S/N/C grading.

454 Cities and Urban American History (3) (Same as History 454.)

460 Senior Seminar (3) A capstone seminar taught by an interdisciplinary team of urban studies faculty in a problem solving context. Prereq: 250, 350, and senior standing. Writing emphasis course.

464 Urban Ecology (3) (Same as Sociology 464.)

481 Real Estate Finance and Investment Analysis (3) (Same as Finance 481.)

482 Urban Development and Finance (3) (Same as Finance 482.)

493 Independent Study (3-6) May be repeated. Maximum 6 hours.

WILDLIFE AND FISHERIES SCIENCE (993)

303 Communications in Wildlife and Fisheries (1) Principles, selection, and use of effective communication techniques and technology in field research, restoration, and management practices. Case studies and application of basic skills of group communication and collaborative problem solving and planning will be emphasized. Overnight field trips required. Coreq: 303, 330, 340, 350, 440, 442. Sp


323 Human Dimensions of Wildlife and Fisheries (1) Examination of the linkages between people, institutions, and society at large to natural resource management practices. Case studies and application of basic skills of group communication and collaborative problem solving and planning will be emphasized. Overnight field trips required. Coreq: 303, 305, 330, 340, 350, 440, 442. Sp


341 Law Enforcement and Public Relations (3) Fundamentals and general principles of local, state and federal laws and regulations governing natural resources and their management. Principles and practices of interacting with the public. Prereq: English 102 and Speech 210 or 240 or consent of instructor. F


355 Wildlife Damage Management (3) Principles and methods for wildlife damage management including biological, regulatory, practical, and social considerations. Weekend field trips (2) required. Prereq: FWF 317 or consent of instructor. 2 hours and 1 lab or field. Sp

440 Wildlife Techniques (3) Methods in wildlife damage control, forest, farmland, wetland habitat management, identification of wildlife field sign, wildlife capturing techniques and management plan preparation. Weekend field trips (2) required. Prereq: FWF 317 or consent of instructor. 1 hour and 1 lab or field. F
442 Fisheries Techniques (3) Active and passive sampling techniques for fish and aquatic organisms; population estimation methods; fish handling and transport; food habits analysis; marking and tagging techniques; age determination and incremental growth analysis; stream assessment; equipment and instrumentation usage and maintenance; safety in sampling methods. Weekend field trip may be required. Prereq: FWF 317 or consent of instructor. 1 hour and 1 lab or field. F

443 Fisheries Science (3) Quantification and management of freshwater fisheries including population estimation, age and growth, biological assessment, and stocking. Prereq: FWF 317 or consent of instructor. 2 hours and 1 lab. Sp

444 Ecology and Management of Wild Mammals (3) Biological and ecological characteristics of game mammals and endangered mammals. Current principles and practices of wild mammal management. Prereq: FWF 317 or consent of instructor. 2 hours and 1 lab. One weekend field trip required. Sp

445 Ecology and Management of Wild Birds (3) Biological and ecological characteristics of game birds, endangered birds, and bird pests. Current principles and practices of wild bird management. Prereq: FWF 317 or consent of instructor. 2 hours and 1 lab. One weekend field trip required. Sp

490 Ethics in Wildlife and Fisheries Management (1) Ethical bases for decision-making and application of methodologies in the practice of wildlife and fisheries management. A series of seminars presented by ethicists, wildlife and fisheries scientists and managers, and foresters will be used to acquaint students with a diverse perspective of ethical behavior in the practices of wildlife and fisheries management. Lectures, panel discussions, and case studies. Team taught. Prereq: Senior standing and major in natural resources. Satisfactory/No Credit grading only. S

493 Independent Study in Wildlife and Fisheries Science (1-15) Special research or individual problem in wildlife and fisheries science. Letter grade or Satisfactory/No Credit. E

496 Internship in Wildlife and Fisheries Science (1-6) Supervised experience at departmental-approved employment location arranged by the student. Internship learning objectives must be pre-approved by the advisor/instructor and the field supervisor. Daily log, supervisor evaluations, and final report required. One credit per two weeks of full-time supervised field experience maximum. Up to 3 credits may be used for science elective. Prereq: Junior standing, consent of instructor. May be repeated. Maximum 6 hours.

WOMEN’S STUDIES (994)

210 Images of Women in Literature: Biography and Autobiography (3) Introduction to women’s journals, diaries, biographies and autobiographies. Writing-emphasis course.

215 Images of Women in Literature: Fiction, Poetry, Drama (3) Introduction to the study of women through the roles and stereotypes portrayed in a variety of literary genres (fiction, poetry, and drama), including works from diverse historical periods and cultures. Writing-emphasis course.

220 Women in Society (3) Role played by women in various societies during different historical periods, factors which have limited women’s participation in society, social scientists’ assumptions about women.

230 Marriage and Family: Roles and Relationships (3) (Same as Child and Family Studies 220.)

310 Emergence of the Modern American Woman (3) Role of women in the development of American civilization and values. Major topics include women’s legal and political status, the emergence and development of feminism, women and the creative arts, and women’s roles in industrial and post-industrial American society. Writing-emphasis course.

320 Women and Religion (3) (Same as Religious Studies 320 and Judaic Studies 320.)

330 Women in Music (3) (Same as Music History 330.) Writing-emphasis course.

332 Women in American Literature (3) (Same as English 332.)

340 Women, Politics, and the Law (3) An examination of recent changes in the laws affecting women and a study of the role of women in contemporary American politics. (Same as Legal Studies 340.)

360 Women in Cross-Cultural Perspective (3) A study of the changing role of women in various contemporary cultures: industrial democracies, developing nations, communist countries. A team-taught course with guest lectures and slide presentations.

375 Gender in Society (3) (Same as Sociology 375.)

382 Philosophy of Feminism (3) (Same as Philosophy 382.) Writing-emphasis course.

383 Women in the Greek and Roman World (3) (Same as Classics 383.) Writing-emphasis course.

400 Topics in Women’s Studies (3) Content varies. May be repeated.

410 Sex Role Development: Implications for Education and Counseling (3) (Same as Educational and Counseling Psychology 410.)

422 Women Writers in Britain (3) (Same as English 422.)

425 Women’s Health (3) (Same as Health 425.)

432 Women in European History (3) (Same as History 432.) Writing-emphasis course.

433 French and Francophone Women Writers (3) (Same as French 433.)

434 Psychology of Gender (3) (Same as Psychology 434.) Writing-emphasis course.

453 Women in American History (3) (Same as History 453.) Writing-emphasis course.

466 Rhetoric of the Woman’s Rights Movement to 1930 (3) Historical and critical study of public address in the campaign for women’s rights in the United States from the 1930s through the 1920s. (Same as Speech Communication 466.) Writing-emphasis course.

469 Sexuality and Cinema (3) Explores issues surrounding sexuality, gender and cinema from points of view of feminist film criticism. (Same as Cinema Studies 469.)

476 Rhetoric of the Contemporary Feminist Movement (3) Historical and critical study of rhetoric in the campaign for women’s rights in the United States from the 1940s to present. (Same as Speech Communication 476) Writing emphasis course.

483 African-American Women in American Society (3) (Same as African and African-American Studies 483.)

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15) Registration by consent of chair of Women’s Studies.
Honors and Awards

HONORARY AND PROFESSIONAL SOCIETIES

A number of honorary and professional societies have chapters at The University of Tennessee, Knoxville. Membership in these organizations is generally based on the initiate’s good character, professed interest in the chosen field, leadership characteristics, and high scholastic record.

Those honorary societies, both national and local, with chapters at UT Knoxville are:

- **Alpha Chi Sigma**, for chemical engineering and chemistry students. Student must have a grade point average of 2.5 in chemistry and/or chemical engineering combined and 2.5 in all academic work and must have been enrolled in this school for at least one semester. Members are elected by others in the local chapter.
- **Alpha Kappa Psi**, Professional business fraternity for entering freshmen and transfer students in their first year in institutions of higher education, to promote intelligent living among students in their first year in institutions of higher education, to promote intelligent living and a continued high standard of learning, and to assist men and women in recognizing and developing meaningful goals for their roles in society.
- **Alpha Mu Chapter, Eta Sigma Gamma**. Students with a major or minor in health and safety are eligible for membership. All undergraduate candidates for membership must have a 2.5 cumulative average, and each graduate candidate must have graduated with a 2.7 cumulative average or must have a 3.4 graduate scholastic average.
- **Alpha Pi Mu**, for industrial engineering students. Prospective members are chosen from the upper one-third of the senior class and upper one-fifth of the junior class. A minimum 2.5 average is required.
- **Delta Zeta**, agricultural fraternity for juniors and seniors. Prospective members must be among the upper two-fifths of their respective classes and must show leadership ability.
- **Beta Alpha Psi**, for accounting students. Any undergraduate or graduate accounting major registered in advanced accounting subjects and having a minimum B-minus average in all subjects, is eligible for active membership.
- **Beta Gamma Sigma**, national business honorary society for undergraduate students with a major in a College of Business Administration curriculum. Additional criteria pertain to number of business administration credit hours taken and number of transfer hours/previous academic performance for transfer students. MBA students must be in the top 20 percent of graduating class, and DBA students must complete all degree requirements with a minimum GPA of 3.50.
- **Chi Epsilon**, for civil engineering students. Junior and senior civil engineering majors ranking in the highest one-third of their respective class are eligible for membership.
- **Delta Nu Alpha**, for transportation students. Prospective members must have completed the basic transportation courses and have a minimum 2.3 average.
- **Delta Pi Epsilon**, for business education graduate students. Prospective members must have a minimum 3.4 average for nine hours of graduate work in business education. Candidates are required to show evidence of their scholarship before initiation by presenting a talk, research abstract, or written paper to the group.
- **Delta Sigma Pi**, professional business fraternity for students enrolled in the College of Business Administration. A minimum of 15 semester hours of University credit with a scholastic average of at least 2.75 is required for initiation.
- **Delta Theta Phi**, for law students.
- **Eta Kappa Nu**, for electrical engineering students. Members may be selected from juniors ranking in the upper one-fourth, or seniors ranking in the upper one-third of their respective electrical engineering class.
- **Eta Sigma Gamma**, Open to undergraduate and graduate majors in Health Science/Health Education with a minimum GPA for undergraduates of 2.5 and graduates of 3.0. The purpose is to further the professional competence and dedication of individual members in and for health science/health education discipline and the promotion of the discipline.
- **Eta Sigma Phi**, honor society for students in classical languages. Membership is open to students who have attained at least a 3.0 average in Latin or Greek courses.
- **Gamma Beta Phi**, scholastic honor, educational-service organization open to students in all fields of study. Prospective members, usually inducted in the fall and spring, must have completed 15 hours of study, must rank in the upper 20 percent of their respective college, and must maintain at least 3.2 overall average.
- **Gamma Sigma Delta**, agricultural honorary society for graduating seniors, graduate students, faculty, and agricultural alumni. Seniors selected must be in the upper one-fourth of their graduating class in the College of Agricultural Sciences and Natural Resources and must have attained at least a 3.5 average in at least 16 hours toward the advanced degree. They must have shown promise or superior ability in carrying on advanced study and/or research directly concerned with agriculture and related fields and of making worthy contributions to their respective fields.
- **Golden Key National Honor Society**. Students of junior status with a cumulative GPA of 3.5. The purpose is to recognize outstanding undergraduate scholarship in all colleges of UT.
- **Iota Lambda Sigma**, for industrial education students. No one may be initiated until he has acquired a minimum of 9 hours of industrial education courses with at least a 3.0.
Kappa Delta Pi, honor society for professionals and students in education. A minimum 3.5 grade point average is required. The society recognizes outstanding contributions to the field of education. Membership is by invitation.

Phi Beta Kappa, the oldest national academic honorary society, for Arts and Sciences juniors and seniors who are candidates for either the Bachelor of Arts or the Bachelor of Science degree. Grade point average varies with number of hours completed; minimum is 3.50. At least 60 credit hours must have been earned at UT Knoxville. Students must have completed the second college year course (or equivalent) in a foreign language. Election takes place in October and April. For detailed statement of requirements, inquire in Arts and Sciences Student Academic Counsel Room 218 Ayres Hall.

Phi Delta Kappa, honorary professional fraternity in education connected with approved colleges and universities of graduate rank maintaining schools, colleges, or departments of education pursuing excellence in service, teaching, and research.

Phi Delta Phi, for law students.

Phi Eta Sigma, for freshmen who have a minimum grade point average of 3.5 the first year while carrying a full academic load. All candidates must rank in upper 20 percent of their respective class.

**Honor Society of Phi Kappa Phi**

Phi Kappa Phi is an interdisciplinary honor society, tracing its origins to 1897. The society promotes the pursuit of excellence in all fields of higher education. The University of Tennessee, founded in 1899, was one of the three original chapters of the organization, which now includes more than 280 chapters across the country. The society’s primary objective has been from the beginning the recognition and encouragement of superior scholarship in all fields of study. Phi Kappa Phi has invested more than $3 million in fellowships and awards since 1970. The University of Tennessee is awarded annually to a new inductee of the organization. The society’s primary objective has been from the beginning the recognition and encouragement of superior scholarship in all fields of study. Phi Kappa Phi has invested more than $3 million in fellowships and awards since 1970. The University of Tennessee is awarded annually to a new inductee of the organization. The society initiated outstanding senior, and graduate students each fall and spring semesters. UTK alumni are initiated each fall, and selected faculty are initiated each spring.

The John and Dorothy McDow Scholarship is awarded annually by the TKNK. The TKNK is one of the major organizations that support the society with an overall GPA of 3.0 and a Psychology major. The purpose is to provide a forum for the discussion of current trends in Psychology, to further academic excellence in the field of Psychology, and to act as a meeting place for Psychology students.

Sigma Delta Theta, a national honor and professional association in education. Open to juniors and seniors with a minimum of 3.2 GPA and graduate students with a minimum 3.5 GPA. Membership is by invitation.

Psi Chi. National psychology honor society for students for a major/minor in psychology, with an overall GPA of 3.0 and a Psychology GPA of 3.2. The purpose is to provide a forum for the discussion of current trends in Psychology, to further academic excellence in the field of Psychology, and to act as a meeting place for Psychology students.

Sigma Delta Pi, for Spanish students. Prospective members must have a minimum 2.75 average in all University work and a minimum 3.2 average in Spanish and must have completed a junior year in Spanish literature or be registered in the last term of such a course.

Sigma Gamma Epsilon, honor society for students in earth sciences. Membership is by invitation, based on scholarship and interest.

Sigma Pi Sigma, physics honors society for upperclass and graduate students, faculty members, and qualified alumni.

Sigma Tau Delta International English Honor Society, is open to undergraduate English majors who have completed two courses in English beyond freshman writing, have at least B average in English, and a GPA that puts them in the top thirty-five percent of all current English majors.

Sigma Theta Tau, national nursing honor society for those students who have demonstrated outstanding scholastic achievement, professional leadership potential, and an unmarked achievement in the field of nursing. Undergraduate students having completed at least two semesters of the upper-division curriculum with a 3.0 average are eligible for membership, as are graduate students who have completed one-half the master’s program with a 3.25 average.

Pi Sigma Phi, national honor society for students in music education. Setting the standard for the discussion of current trends in Psychology, to further academic excellence in the field of Psychology, and to act as a meeting place for Psychology students.

Sigma Kappa, professional music fraternity for women interested in music. A 2.5 overall average is required.

Sigma Delta Pi, for Spanish students. Prospective members must have a minimum 2.75 average in all University work and a minimum 3.2 average in Spanish and must have completed a junior year in Spanish literature or be registered in the last term of such a course.

Sigma Pi Sigma, physics honors society for upperclass and graduate students, faculty members, and qualified alumni.

Sigma Tau Delta International English Honor Society, is open to undergraduate English majors who have completed two courses in English beyond freshman writing, have at least B average in English, and a GPA that puts them in the top thirty-five percent of all current English majors.

Sigma Theta Tau, national nursing honor society for those students who have demonstrated outstanding scholastic achievement, professional leadership potential, and an unmarked achievement in the field of nursing. Undergraduate students having completed at least two semesters of the upper-division curriculum with a 3.0 average are eligible for membership, as are graduate students who have completed one-half the master’s program with a 3.25 average.

Society of Professional Journalists, professional journalism society. Active membership shall be limited to journalism and broadcasting majors having at least a 2.3 overall grade average and having completed at least 30 hours.

Tau Beta Pi, national honor society for engineering students. The top one-eighth of the senior engineering class and the top one-fifth of the senior engineering class, scholastically ranked, may be elected. Elections are held in the semesters. The organization conducts programs and projects of benefit to students and the University.

Xi Sigma Pi, forestry honor society for upperclass and graduate students, faculty members, and personnel who have attained a national reputation in forestry. Students must have completed 66 hours of credit, including 9 hours in professional forestry courses. When practical, initiates are selected during the junior year to provide the greatest degree of benefits of active membership.
Zeta Lambda Chapter, Alpha Kappa Psi Professional Business Fraternity. All undergr...day majoring or planning to major in business who have a minimum GPA of 2.75 are welcome to pledge Alpha Kappa Psi.

VICTOR M. DAVIS AWARDS

Granted each year to juniors who demonstrate exceptional campus leadership.

COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES

The American Society of Agricultural Engineers. Each year an outstanding biosystems engineering student is selected for the ASAE Student Honor Award. Based on scholarship, activities, and community contributions, the award consists of a key and certificate.

The American Society for Agronomy. A Certificate of Merit is awarded to an outstanding senior in the Department of Plant and Soil Sciences who has a superior academic record and displays evidence of high potential in this field.

The American Society of Animal Science. Scholarships are awarded to students in Animal Science who are of good moral character and rank scholastically in the top 10 percent of their class.

The American Society for Horticulture Science. A Certificate of Merit is awarded to an outstanding senior in either the Department of Ornamental Horticulture and Landscape Design or in the Department of Plant and Soil Sciences who has been judged by the college to have a superior academic record in this field.

The Block and Bridle Club. Students in Animal Science who are successful in their academic program, have made unusual contributions to the club’s program, and have demonstrated leadership in their chosen field are recognized for their efforts. Junior and Senior recipients may be entered in National Competition resulting in other awards.

Dee W. Coley Memorial Stockman’s Award. Presented by the Coley family in memory of Mr. Dee Coley, master stockman and community leader. Award is made to an active senior Block and Bridle member with interest in the affairs and activities of the Department of Animal Science and a member of the Meats and/or Livestock Evaluation and Judging Teams.

Forestry Faculty Award. Awarded to the rising senior with the highest GPA in the Department of Forestry, Wildlife and Fisheries, regardless of major.

Forestry Spring Block Award. Awarded to the outstanding student participating in the Forestry Spring Block based on leadership, professionalism, congeniality, and superior performance. Recipient nominated by students and approved by the faculty.

M. Jacob Animal Husbandry Award. Originally sponsored by the J.B. Madden family to honor Dr. M. Jacobs who was both head of the Department of Animal Science and later Dean of the College of Agricultural Sciences and Natural Resources, this award is presented to a senior in Animal Science based on scholarship and overall animal production ability.

Kentucky-Tennessee Society of American Foresters Scholarship. Awarded annually to a senior forestry student who has excelled in academic achievement, as well as student and professional activities.

Arch E. McLanahan Scholarship. Awarded to a maximum of 6 outstanding incoming freshmen, and renewable for the four-year baccalaureate program. This award was established by Mr. McLanahan, a Davidson County dairy farmer and breeder of Jersey cattle, to contribute toward the training and development of Tennesseans who have a commitment to agriculture.

Tennessee Farm Bureau Leadership Scholarship. Established by the Tennessee Farm Bureau to cultivate future leaders for Tennessee agriculture. Awarded to students whose parents are full-time Tennessee farmers.

Tennessee Farmers Cooperative Scholarship. Provided to two students who have been raised on a farm and must be the child of parents who are members of a local county supply cooperative.

Tennessee Rehabilitation Corporation Scholarships. Awarded to college majors who have need and who are citizens of Tennessee from a rural area and who have an agricultural background.

Student-Faculty Council Awards. Each year the College of Agricultural Sciences and Natural Resources Student-Faculty Council presents plaques to four seniors, three juniors, two sophomores and one freshman student in the college judged to be outstanding. Selection is based on scholarship, character, and demonstrated leadership ability. Plaques are also presented to the two students in each class with the highest scholarship averages.

Wall Street Journal Student Achievement Award. Presented each year to the outstanding senior majoring in Agricultural Economics and Business. Award criteria include academic excellence, demonstrated leadership ability, and professional promise.

Howard and Ruby Wilkerson Scholarship. Awarded to sophomores, juniors and seniors who are Tennessee residents who demonstrate financial need and academic achievement.

The College of Agricultural Sciences and Natural Resources offers an additional 100 scholarships established by various donors in honor of Dr. M. Jacobs who was both head of the Department of Animal Science and later Dean of the College of Agricultural Sciences and Natural Resources. These scholarships are awarded based on the average graduation rate and an explanation of the solution as well). Selection is made by the School with input from the firm. The first award was for the 1998-99 academic year, and the award amount will grow as the endowment is finalized.

Hubert Bebb Scholarship. Established in 1986 by Community Tectonics, Inc., this scholarship is in honor of Hubert Bebb, the firm’s founder. For entering third year students, submission includes submittal of a transcript, a written statement regarding career goals and the motivation for selecting architecture, a portfolio of the student’s best work during second year, (including a written problem statement and an explanation of the solution as well). Selection is made by the School.

Nell Mann Brown Scholarship in Architecture. Open to all students in good standing in the School of Architecture. This is an endowed scholarship in honor of Nell Mann Brown.

Bullock, Smith and Partners Scholarship for International Travel. This endowment, created in 1997, will enable a student to participate in one of the School of Architecture’s International Programs. Selection will be based on an outstanding academic record: generally the student must be in the top 20% of his or her class. The award will be made to a rising fourth-year student.

The Cope Associates Leadership Prize. Lanny Cope, a 1974 graduate of the School of Architecture, has created this award to support excellence. The prize will be awarded to a student in the fifth year who has demonstrated superb leadership ability as evidenced by problem solving, strategic planning, management ability, a quality of thinking that shows initiative, and other accomplishments.

CSI Technical Prize. This monetary prize is awarded at the annual hooding ceremony to the graduating senior with exemplary achievement in the technical courses offered in the school. The award is provided by the Knoxville Chapter of the Construction Specifications Institute.

The Jack A. Davis Scholarship. This scholarship was established in 1997 by Thomas E. Davis, Director of Student Advising, in memory of his father, Dr. Jack A. Davis. This award is for African American students with a preference for an incoming first-year student.
Dertthick, Henley and Wilkerson Architects. Established in 1995, this endowment provides funds for a selected student from either the undergraduate or graduate program. The first priority is a minority student who is a resident from Tennessee. Faculty Award. This award, implemented in 1996, is given to the outstanding senior design project at the annual hooding ceremony. This award is selected by the faculty. This project will be displayed with the Letters of Excellence winners and the Bronze Medal winner.

Mark Freeman Association. Open to third, fourth, fifth year students who have a financial need. Established in 1996 by Mark Freeman (Class of 1981). Option of paid internship.

General Shale Scholarship. For students with fourth-year undergraduate or second year graduate standing, one to five awards are made for a total of $10,000. Awards are made by the scholarship committee. A long time benefactor of the School, General Shale Products Corporation of Johnson City is one of the nation’s leading manufacturers of high-quality face brick. This scholarship program was established by Dwight and Linda Gregory in memory of their son Ben Allan Gregory. Ben was a second-year architecture student at the time of a tragic accident that took his life in November of 1997. This scholarship was first awarded in Fall 1998 to a student that has been requested by the family. The award shall be given to a third, fourth or fifth year architecture student who has demonstrated a successful academic performance. Financial need shall be a factor.

Jami S. High Memorial Scholarship. Open to sophomores, juniors, or seniors. Based on academic merit, career potential, and financial need. Interior design majors only. Hnedak Bobo Group, Inc., Graduate Fellowship. Established in 1994 by the Memphis architectural firm of Hnedak Bobo Group Inc., this graduate fellowship is intended to encourage and assist individuals in the profession of architecture. Greg Hnedak is an alumnus of UT School of Architecture. Up to three awards will be made each year, and are renewable. Each award is worth $2,500. In addition, the firm intends to offer an opportunity for summer internships to the recipient.

King and Johnson Architects, Inc. Scholarship. Open to all undergraduate students entering third, fourth and fifth year, with a true financial need. This scholarship was established in 1991 by David King and Fred Johnson, both faculty members of the School and successful practitioners in the Knoxville area. Recipients will also have an opportunity for part-time employment during the academic year, or during the summer after the scholarship is received.

Letters of Excellence. These awards are presented to the outstanding thesis as nominated and selected by the fifth year faculty. These projects go into a special exhibit during the summer following graduation.

The Lewis Group Architects, Inc., P.C. This award is open to students completing their first year in the program who have a financial need. Award is open to students with a 3.0 or greater GPA. Students selected should not have another scholarship.

MX-Design Minority Scholarship. Established in 1987 by Reginald Ruff, a graduate of the program and a practicing architect in Chattanooga. Students must have completed their first semester in school.

Ed Meiers Memorial Scholarship. Established by the Tennessee Foundation of Architecture to honor Ed Meiers, a Nashville architect. Graduate or undergraduate students are eligible who have a financial need and strong academic standing.

Pella Traveling Scholarship. Based on design performance during the second semester of the third year, this award recognizes the importance of travel in the education of an architect. This is a premiated award. The recipient must apply the award towards approved travel expenses associated with the student’s architectural education. This award was established in 1984 by Tate Window and Door Company, the local distributor for Pella Windows.

Pilot Corporation Fellowship. Awarded to a graduate student with professional promise. This fellowship includes tuition, fees, and a required paid internship. The project will be displayed in Pilot Corporation’s Division at Pilot Corporation in Knoxville. Selection is made by the Graduate Committee with input from Pilot Corporation.

Alma and Hal Reagan Scholarships. For undergraduates and graduates entering their last year of study, with a distinguished record of service to UT and an outstanding academic record. This scholarship was endowed in 1988 in honor of Alma and Hal Reagan, who were friends of the school from the Pigeon Forge area. At least one award each year shall be made to a student of academic and design excellence with additional scholarships being awarded to help minority students and women in architecture.

Malcolm Rice Architecture Award. For a third year student showing exceptional achievement in their studies during that year. Established in 1980 in honor of Malcolm Rice a retired architect who worked with I.M. Pei on the National Gallery of Art in Washington, DC. Mr. Rice also served as the University Architect.

Ruby Ruckman Scholarship. Established in 1980 by the Knoxville Chapter of the National Association of Women in Construction, this award is open to the third, fourth or fifth year students residing in East Tennessee. The School of Architecture makes this award in alternate academic years commencing with even numbers. The award helps needy and deserving upper-class students.

Darrell Russell Scholarship. This endowment provides funds for an incoming first-year Architecture or Interior Design student with significant financial need. Darrell Russell (B.Arch. 1982) established this endowment in 1998 based on a desire to help students in the same way he had been helped with a scholarship in his freshman year.

Dottie Sanders Interior Design Scholarship. Student awarded this scholarship shall have demonstrated academic performance and financial need in the broadest sense. Open to all years. Interior Design majors only.

School of Architecture Engagement Award. A number of scholarships based on need for undergraduate or graduate students in good academic standing. This scholarship has been endowed by funds received over the past 30 years from numerous donors.

Robert Seas Scholarship. Established in 1994 by the Chattanooga AIA chapter in memory of Robert Seas, a highly respected Chattanooga architect. This substantial award is for students from Chattanooga/Hamilton County or East Tennessee who demonstrate academic excellence and financial need. The Robert Seas Scholarship is open to students at any level.

Susie Benson Slyman Scholarship. Established by the Knoxville Chapter of the National Associate of Women in Construction, this award honors a former director of the chapter. Preference shall be given to women, and students should be in their third, fourth, or fifth year of the undergraduate program. They should demonstrate academic excellence, professional promise and financial need. The School of Architecture makes this award in academic years commencing with an odd number.

Tau Sigma Delta Bronze Medal. The Bronze Medal is awarded to the outstanding senior design project each year. The Architectural Honor Society, Tau Sigma Delta, organizes the selection of this award. Meritorious thesis projects are nominated by the faculty and by fifth year students. These nominees are judged by a panel of jurors from the architectural profession. The project will be displayed with the letters of excellence in the summer following graduation.

West Virginia Society of Architects. For a West Virginia resident who has completed six or more semesters at the undergraduate level or is enrolled in a graduate program. Eligible students should contact the West Virginia Society of Architects prior to application.

Shelby Williams Fund for Excellence. Preference given to those attending high school in greater Morristown area. Consideration may be given to superior out-of-state students. Open to all years. Interior design majors only.

Zukerman Family Scholarship. For fourth or fifth year students displaying outstanding academic achievement. Established in 1990 by Haim Zukerman, a successful graduate of the School of Architecture in Atlanta.

COLLEGE OF ARTS AND SCIENCES

John M. Allen Mathematics Prize. Medal, to outstanding freshman mathematics student. Prize is determined by competitive examination.

College of Arts and Sciences Scholarships. This is a general award for students in the College of Arts and Sciences who have demonstrated academic promise and financial need.

Bain-Swigett Poetry Prize. For excellence in writing conventional forms of English poetry.

John H. Barrett Prize. Presented to the outstanding senior mathematics student.

Dr. Mary Ann Bass Memorial Scholarship Award. Dr. William Bass set up this award in his wife’s memory, to help Cherokee Native Americans attending UT, Knoxville. Dr. Mary Ann Bass served as an officer in the Women’s Medical Specialty Corps and was a dietician at Ft. Knox, Kentucky and Walter Reed Army Hospital in Washington, DC from 1971 to 1992. She taught in the College of Human Ecology and the Department of Anthropology at UT, Knoxville, and worked for many years as a consultant to the Cherokee Tribal Council.
Henry and Jane Bertelkamp Scholarship. Henry Bertelkamp, a 1953 graduate of the University of Tennessee and President of Bertelkamp Automation, Inc. of Knoxville, Tennessee, and his wife, Jane, are long-time residents of Knoxville and supporters of the University of Tennessee. Students eligible to receive this award must be enrolled in the College of Arts and Sciences, have a financial need and demonstrated successful academic performance.

Calvin A. Buehler Chemistry Scholarship. Awarded to an outstanding undergraduate chemistry major who plans to pursue chemistry as a career.

Eleanor A. Burke Award. For excellence in expository writing. Founded in honor of the daughter of a former head of the English department.

Captain Robert A. Burke Award. For excellence in English prose fiction. Founded in honor of the son of a former head of the English department.

Terry Burnette Memorial Award is given to a graduate student art artist based on need and portfolio submission.

James T. Chappell Award. This award was set up for Arts and Science students with preference given to those from western North Carolina. Financial need can be taken into account in the selection procedure.

Phyllis P. Caxton Award. Set up in honor of Mr. Philander C. Claxton, for whom the College of Education's building on UTK campus is named. Candidates must be graduating from the College of Arts and Sciences and planning to enroll in UTK's graduate education program for the required internship and be planning to teach in a Tennessee public school after receiving certification. The award is presented at the Arts and Science's Board of Visitors spring meeting.

Randall Cline Award. For writing an outstanding master's degree theses in mathematics.

James A. Cooley Mathematics Scholarship. Given to a mathematics major. Based on scholastic achievements and financial need. Special consideration for students interested in mathematics education.

Italian Roanoke Neal Culver Scholarship. Awarded to Undergraduate Theatre Major.

William Desmond Scholarship in Performance Arts. Awarded to undergraduate/graduate students in performing arts.

Dorothy H. Dille Scholarship Awards are given to art majors in the following categories: outstanding undergraduate art history paper; outstanding undergraduate art history major for an outstanding portfolio.

T. H. and Jeanette Gillespie Scholarship is an award given to an undergraduate art major for an outstanding portfolio.

Ann Hight Gore Scholarship. Awarded to the English major who is judged the most outstanding student in the two honors courses, English 398 and 399.

Edgar G. Guenther Scholarship. For any student who resides in the City of Kingsport, Tennessee and who is enrolled in the study of municipal government, management, planning or other related subjects.

Edward H. Hamilton Scholarship. Awarded to deserving initial licenses students in Music Education.

James and Natalie Haslam Scholarship. James A. Haslam II and his wife, Natalie, set up the Haslam Scholarships at The University of Tennessee, Knoxville to attract outstanding students to the University. A total of twelve scholarships are to be funded each year with eight being in the College of Arts and Sciences and four in the College of Business Administration. There are to be two Haslam Scholars in each of the four classes (freshman, sophomore, junior and senior) in the College of Arts and Sciences. Students selected must be currently enrolled or have been admitted to UT, Knoxville, have a minimum high school grade point average of 3.5 with a minimum ACT score of 27, have a demonstrated financial need and demonstrated leadership ability. A minimum UTK grade point average of 3.0 is required, with a minimum of 12 hours carried each semester with satisfactory progress being made toward an undergraduate degree.

Maud Calloway Hays Scholarship. Varies each year. History major with special interest in U.S. history.

History Department Scholarship. Given to a history major with financial need.

John C. Hodges Merit Scholarships. Awarded annually to the top ten declared English majors. An additional scholarship is awarded to the top minority declared English major. Scholarships pay full tuition. Applications available spring semester.

D. Frank Holtman Award. Presented to a graduating senior for outstanding academic achievement in Microbiology.

Italian Studies Award. Established by Italian division of Department of Romance Languages. Cash award to outstanding student in upper-division courses in Italian.

Charles E. Jett II Memorial Scholarship. Awarded to students who have been accepted in the College Scholar Program at the University of Tennessee, Knoxville and are in their junior or senior year. The award was set up by Lt. Col. Charles E. Jett in memory of his son, Charles E. Jett, II, a for University of Tennessee, Knoxville student. Applications are made to Dr. Jack Reese, former Director of Mr. Jett and current director of the College Scholar Program. The award is made each spring semester.

Florence Sanders Jones College Scholar Award. Established by Donald H. Jones and Florence Sanders Jones, long-time friends of the College of Arts and Sciences and the University of Tennessee. A member of the College's Board of Visitors since 1979, this scholarship is awarded to students who have been accepted into the College Scholars Program and have demonstrated a broad financial need. The award is made during the Spring semester each year to a deserving junior or senior in the program. Applications are made to the current director of the program, Dr. Jack Reese.

The Charles W. Keenan General Chemistry Award. An annual award presented to the outstanding student enrolled in first year chemistry classes.

Knickerbocker Poetry Prize. For excellence in writing English poetry. Founded by the late Stephen L. Moler in honor of a former head of the English Department.

Senior Latin Foundation Prize. Established by friends of the classics. Cash award, to member of senior Latin class showing greatest proficiency in the course.

Lucille and Herbert Lee Mathematics Scholarships. Given to mathematics majors for academic excellence.

John R. and Sarah N. Long Scholarship. The Long Scholarship was established by John R. Long II and Susan Long Marks in memory of their parents who both received Liberal Arts degrees from UTK. Students who have demonstrated superior academic performance by maintaining at least a 3.0 grade point average, who are involved in extracurricular activities and community services, and are pursuing Arts and Science degrees are eligible for this award.

J.P. and Gladys Maples Scholarship. J.P. and Gladys Maples set up the Maples Scholarship Endowment Fund to honor their children, Kaye Maples Cooper, Joyce Maples Moore, Dianne Maples Forry and James Ronald Maples, all of whom are graduates of the University of Tennessee and are married to UT graduates. The scholarship will rotate between the Colleges of Arts and Sciences (1995 through 1999), Education (1999 through 2001), and Business (2001-2003) with the cycle continuing every eight years. Recipients will need to show evidence of motivation by working for part of their school expenses, be enrolled at the University of Tennessee, Knoxville as juniors or seniors and have a minimum of 2.5 with demonstrated financial need.

James Marable Award. The Marable Award was set up in memory of Dr. James H. Marable who received his Ph.D. in physics from UT, Knoxville in 1967. He and his wife, Barbara Davidson Marable, founded the Knoxville Symphony Youth Orchestra and he was conductor of the Johnson City Symphony for ten years, as well as assistant conductor of the Oak Ridge Symphony for many years. The Marable Scholarship is open to UT students who have demonstrated successful academic performance and are enrolled in the department of Music, Physics or Computer Science.

Charles T. McClung Awards. Cash prizes to junior and senior Speech Communication majors for excellence in compositions pertinent to the speech discipline.

Louise Carr McClure Scholarship. Established for undergraduate students in the Humanities with preference to Philosophy majors.

Mrs. J. Harvey Mathis Tennessee DAR American History Scholarship. Given to a woman student selected by the Department of History.

A.D. Melaven-Rhenium Scholarships. For students in the Bachelor of Science in Chemistry curriculum. Established from funds obtained by the sale of rhenium metal and rhenium compounds prepared by procedures devised by Professor A.D. Melaven. Cash awards given each term to outstanding students.
J. Owen Moss Scholarship. The fund was set up for Arts and Science students who have demonstrated successful academic performance, a financial need, a high moral character and willingness to secure a college education through part-time and full-time employment.

Native American Studies Scholarship. This award was set up by Mr. and Mrs. Dale J. Roberto for students majoring in Anthropology with an emphasis in Native American studies and/or graduate students of Native American origin who are currently enrolled in the College of Arts and Sciences or who have been admitted to the University of Tennessee. The recipient shall have demonstrated successful academic performance.

Alvin Nielsen College Scholar Scholarship Award. The Alvin Nielsen College Scholars Scholarship Award was established in 1977 on the occasion of Dr. Nielsen's retirement as Dean of the College of Liberal Arts. Dr. Nielsen was very proud of the College Scholars Program which was first implemented during the tenure as Dean. This program was designed to meet the needs of superior, highly motivated, and creative students. The scholarship is available to students in the College Scholar major who are rising juniors or seniors. Applications are submitted each Spring Semester and are announced at the annual Spring dinner. Judged by faculty members who work with the program, selection is made on the basis of the curriculum and grade point average, the student's educational objectives, and recommendations by the Scholar's faculty advisor and another faculty member.

Opening Night Club Scholarships. Awarded to undergraduate and upperclassmen and graduate students. Must be a Theatre Major. Demonstrated financial need.

Paula and Joseph Peeden Scholarship Award. The Paula and Joseph Peeden Scholarship Award was established by the Drs. Peeden to provide scholarship assistance for deserving students in the College of Arts and Sciences at the University of Tennessee, Knoxville. Dr. Joseph Peeden is a pediatrician in private practice in Knoxville and maintains active study and research in genetics at the University of Tennessee Medical Center, while Dr. Paula Peeden is an OB/GYN in Knoxville. Both received undergraduate degrees from UT, Knoxville and received their MD degrees from UT, Memphis College of Medicine. Students who have demonstrated successful academic performance and who have a financial need are considered for this award, while extracurricular activities and community service are also taken into consideration. A $1,000 award is made each year to a deserving student who plans to enter the field of medicine.

Larry Ratner Scholarship. Set up by the Board of Visitors, staff, and faculty of the College of Arts and Sciences to honor Dr. Ratner on the occasion of his retirement from the Deanship in 1996. The scholarship is given to students who are currently enrolled or have been admitted to the University of Tennessee, Knoxville and are enrolled in an Arts and Sciences program who have demonstrated successful academic performance, and most importantly have demonstrated financial need.

Nina Ratner Memorial Scholarship. The Nina Ratner Memorial Scholarship was set up by Dr. Larry Ratner, Dean of the College of Arts and Sciences, in memory of his late wife. Mrs. Ratner was a patron of the arts in the East Tennessee area. Students who are in the College of Arts and Sciences, majoring in the arts or humanities, and who show academic promise and financial need are eligible to apply for the award.

Lynden H. Robertson Award in Analytical Chemistry. Endowment established by family and friends of the late Professor Robertson. Given to a student with highest scholastic average in sophomore analytical chemistry courses.

Bernadette Schmidt History Scholarships. Two scholarships for academic excellence and one based on financial need. History majors only.

Cooper D. Schmitt Scholarships. Given to mathematics majors for academic excellence.

Mary Louise Selig Scholarship. Given to an undergraduate art major for an outstanding portfolio.

Caesar and Edith Stair Music Education Fund. Awarded to junior or senior initial teacher licensure students in Music Education.

Ruth Stephens Award in International Relations and International Law. Established by the late Mr. and Mrs. Oscar Handly, Knoxville. Given to the student showing greatest knowledge of international relations or international law.

Ruth Stephens History Scholarship. Given to history major for academic excellence.

Tau Sigma Delta Bronze Medal. The Bronze Medal is awarded to the outstanding senior design project each year. The Architectural Honor Society, Tau Sigma Delta, organizes the selection of this award. Meritorious thesis projects are nominated by the faculty and by fifth year students. These nominees are judged by a panel of jurors from the architectural profession. The project will be displayed with the Letters of Excellence winners in the summer following graduation.

Carl A. Vines Jr. Scholarship. Awarded to a Jr./Sr. Theatre major with demonstrated successful academic performance and leadership. Given to a student majoring in Theatre.

Margaret A. Woodruff Creative Writing Award. This award was initiated by Coach Robert Woodruff, former University of Tennessee Athletics Director, in memory of his late wife, Margaret Woodruff, for those undergraduate Arts and Sciences students who have a minimum of a 2.5 grade point average and demonstrate outstanding writing ability through an announced competition. Competitions are usually held each Spring semester.

AMOCO Scholarships in Logistics and Transportation. Must be a Logistics and Transportation major; junior standing with at least a 3.0 GPA.

Andersen Consulting CBA Scholarship. Awarded to undergraduate business students with a minimum GPA of 3.0. Demonstrated academic achievement and leadership skills.

Arthur Andersen and Co. Alumni Scholarship. Awarded to Accounting students.

Grace and Brodie Baynes Scholarship in Accounting. Awarded to a junior or senior majoring in Accounting.

Bible-Niemann Student Development Award. Student award.

Carey and Joan Brown Scholarship. Preference is to students from Davidson, Knox or Hamilton Counties in Tennessee.

Rhea and Ada Burns Scholarship. Awarded to an entering freshman who graduated in the upper twenty-five percent of their class.

Carolina Freight Carriers Scholarship. Students majoring in Transportation.

David Chambers Memorial Scholarship. Awarded to a student majoring in Statistics.

College of Business Administration General Scholar. Monies awarded to students when available.

College of Business Minority Scholarship. Monies awarded to minority students when available.

Coopers and Lybrad—New Venture Analysis in Accounting. Named for the company of year award.

CPA Auxiliary Accounting Scholarship. Awards for Accounting students.

Howell C. Curtis Memorial Scholarship. Awarded to a senior majoring in Finance.

Bernard I. Dahlberg Memorial Scholarship. Junior or senior majoring in Accounting.

Delta Nu Alpha Scholarship in Transportation. Students majoring in Logistics and Transportation.

Robert R. Dince Memorial Scholarship in Finance. Awarded to students in Finance.

David D. Dortch Scholarship. Junior or senior majoring in Logistics and Transportation.

Dow Chemical Scholarship. Awards for Logistics and Transportation students.

David C. Duckett Scholarship in Marketing. Must be a junior or senior majoring in Marketing with a GPA minimum of 2.75.

Dupont Minority Scholarship in Accounting. Minority students in Accounting.

Eastman Minority Scholarship in Accounting. Awards for minority students.

David Ferrell Memorial Scholarship. Awarded to a rising junior or senior who wishes to major in marketing.

Liston Fox Memorial Undergraduate Scholarship. Awarded annually to a rising sophomore who is being admitted to a major in the College of Business Administration.

Jack G. Frazier Scholarship. Awarded to undergraduate business students with preference given to Rhea County/East Tennessee students with successful academic performance and/or financial need.

Frito-Lay Minority Scholarship. Awards for minority students.

James A. and Natalie L. Haslam Scholarship. Awarded to business students with emphasis on academic achievement and leadership.

James A. Healy TEDP Scholarship. Established by participants in the Tennessee Executive Development Program.
Mr. and Mrs. Jeff L. Hemphill Scholarship. Awarded to a student who has demonstrated outstanding academic achievement. Participation in extracurricular activities. Financial need may also be considered.

H. J. S. Thompson Scholarship. Preference given to students from counties served by Home Federal Bank (Knox, Anderson, Blount and Sevier) and entering freshmen with ACT scores between 23-28 (or SAT of 1050-1260).

J.B. Hillard and W.L. Lyons Scholarship. Junior or senior majoring in Management.

John Fred Holly, Jr. A memorial scholarship endowed by parents. Awarded annually to a rising junior or senior.

John F. Humphrey Metal Fabricators, Inc. Awarded to a student from Knox County or East Tennessee majoring in Logistics.

Insurance Scholarship. Students from Tennessee in the Finance Department.

George Robert Johnson Scholarship in Business. Preference given to students who have demonstrated financial need and who reside in the following counties: Bledsoe, Bradley, Grundy, Hamblin, Hancock, Marion, McMinn, Meigs, Monroe, Polk, Rhea, and Sequatchie in Tennessee and or Catossa, Dade, Murray or Walker counties, Georgia.

Edward E. Judy Scholarship. Seniors in Accounting.

Mack E. Kiger Scholarship in Accounting. Awarded to a Junior or Senior accounting major with outstanding scholastic achievement, leadership, and communication abilities. Financial need may also be considered.

Ben and Margaret Kimbrough Scholarship. Preference will be given to those students who demonstrate outstanding academic achievement.

E. Ward King Scholarship. Recipient must be majoring in Logistics.

Knoxville Community Housing Resource Board Minority Scholarship. Established through grant from HUD for minority students in Finance.

Guy L. Lachin Memorial Award. Award given to Accounting students.

Thomas S. Lewis, Jr. Scholarship. Award given to Accounting students.

Mike Littlejohn Minority Scholarship. Open to one or more African-American students in College of Business.

The James F. Lyle, CLU Insurance Scholarship. Awarded to undergraduate or graduate student with preference given to finance students with an interest in insurance.

A. David and Beverly Martin Scholarship. Juniors or seniors majoring in Accounting.

James E. Martinson Memorial Scholarship. Students majoring in Marketing. Must be a junior or senior majoring in Marketing with a GPA minimum of 2.75.

G.W. McLellin Scholarship. College of Business students with outstanding GPA.

Lloyd S. McCulloch Scholarship. Awarded annually to a business student.

Mr. and Mrs. James Miller Scholarship. Awards made to Marketing students.

Anne Y. and Herman L. Modlin Scholarship. Awarded to a freshman.

Fulton Beverly Moore, III Memorial Real Estate Scholarship. A memorial scholarship fund endowed by the parents.

Pearl and Edward Moore Scholarship. Scholarship for Economics majors.

Roger M. Moore, Sr. Scholarship. Students with outstanding academic success with interest in Finance Department.

Tom and Linda Morris Scholarship. Monies awarded to business students when available.

Check and Ena Neel Scholarship. Preference to undergraduates who are first generation college students.

Thomas P. Nelson Memorial Scholarship. Awarded to a full-time undergraduate student.

Pan Energy Corp. Students must have high ACT/SAT score and high school G.P.A. Awarded to a rising junior or senior majoring in Management.

Phillip Lucas Scholarship. Preference given to students majoring in Logistics.

J.T. Shuffey Scholarship. Awarded to students who have demonstrated financial need and who graduate from any public high school in the state of Tennessee.

King Rogers, Jr. Scholarship. Awarded to high school graduate in Dyer County area.

Rosemary Snyder Rousch Scholarship. Junior or senior from Tennessee with 3.0 GPA. Awarded to undergraduates studying Finance.

Refresments, Inc., Undergraduate Scholarship. Preference will be given to students from sevem major areas (includes Jackson, Selmer, Savannah, Lexington, Humbolt, Milan, Paris, Huntington and the areas in between).

King Rogers, Jr. Scholarship. Awarded to high school graduate in Dyer County area.

Alma and Hal Reagan Scholarship. Awarded to CBK undergraduate students majoring in Business.

Refreshments, Inc., Undergraduate Scholarship. Preference will be given to students with outstanding scholastic achievement who have graduated from any public high school in the state of Tennessee.

Robert Fullerton Scholarship. Awarded to a Junior or Senior student majoring in Logistics and Transportation who intends to pursue a career in transportation or rigging. Must have a 3.0 GPA and demonstrate leadership potential/character through extracurricular activities.

Emile Seliax Scholarship. Recipient must maintain a 2.50 average.

Michael Shaffer Memorial Scholarship. Awarded to undergraduate, full-time CBA students with outstanding academic achievement. Financial need may also be considered.

Shelby Accounting Scholarship. Awarded to undergraduate students majoring in accounting in their junior or senior years who plan to pursue a career in accounting. Successful academic performance with emphasis in oral and written communication skills. Financial need may also be considered.

Warren Slagle Scholarship. Monies awarded to Accounting students when available.

Clarice and Orville Smith Memorial Scholarship. Scholarship for students who have demonstrated successful academic performance.

The Thomas S. Smith Finance Scholarship. Awarded to undergraduate or graduate Finance students. Successful academic performance with preference given to those interested in real estate or urban development.


William B. Stokely, Jr. Scholarship. Primary consideration is given to students from Cocke, Monroe or Loudon counties.

Joe Sullivan, III Scholarship. Awarded to students majoring in Finance.

Suntrust Bank Scholarship in Finance. Awarded to undergraduates in Finance.

Tennessee Undergraduate Scholarship in Business. Awarded to undergraduate business majors who are Tennessee public high school graduates with outstanding scholastic achievement. Financial need may also be considered.

Daniel H. Testerman Memorial Scholarship. Awarded to a junior or senior majoring in Finance, who has an interest in Real Estate.

Charles Thigpen Scholarship in Statistics. Monies awarded to Statistics students when available.

Stephen R. Trotter Memorial Scholarship. Full-time students in Accounting.

Dean Frank B. Ward Memorial Scholarship. Awarded annually to an SGMA member.

Ira A. Watson Retailing Scholarship. Recipient must a junior majoring in Marketing.

William Way, Jr. Memorial Scholarship. Scholarship for students with financial need who are Transportation majors.

John and Wanda Wisecarver Scholarship. Business with outstanding academic achievement.

Ronald Wolfe Scholarship Fund. Monies awarded to Economics students when available.

Singleton Wolfe Scholarship. Awarded to an undergraduate Accounting major who shall be a member in good standing of the Alpha Lambda Chapter or Beta Alpha Psi.

COLLEGE OF COMMUNICATIONS

Advertising Scholarship Fund. Given to one or more juniors or seniors in the Department of Advertising based on academic achievement and professional promise.

Alpha Epsilon Rho Scholarship. For a junior, senior or graduate student in broadcast with a minimum of 3.0 GPA in recognition of outstanding professional promise.

Alpha Epsilon Rho Scholarship. Awarded annually to an SGMA member.

Karl and Madria Bickel Scholarships. Freshman, upperclass and doctoral scholarships. Open to all students showing academic performance (3.5 or better), professional promise, and need.

Zack Binkley Memorial Scholarship. Given to an undergraduate or graduate student in news-editorial journalism with a minimum 3.0 GPA in recognition of outstanding professional promise.

Lowell Blanchard Scholarship. Given to a full-time rising junior or senior Broadcasting student with a minimum 3.0 GPA. Recipient will have distinguished her/himself in curricular or extracurricular Broadcasting activities.
The Bohan Scholarships. Given to advertising students based on academic performance and financial need.

Amanda M. Bonham Journalism Award. Given to an outstanding entering freshman, majoring in journalism, and graduate of a Tennessee high school.

Frederick T. Bonham Journalism Award. Given to an outstanding entering freshman, majoring in journalism, and graduate of a Tennessee high school.

Tutt and Elizabeth Bradford Scholarship in Advertising. Awarded to juniors or seniors majoring in advertising.

Tutt and Elizabeth Bradford Scholarship in Journalism. Awarded to juniors or seniors majoring in journalism.

Broadcasting Scholarship. Given to graduate or undergraduate students in the Department of Broadcasting who have demonstrated outstanding academic achievement and professional promise.

Janet Fay Breazeale Scholarship. Given to an undergraduate student in the School of Journalism with a minimum 3.0 GPA.

Nat P. Caldwell Journalism Scholarship. Given to a junior or senior in the School of Journalism who has demonstrated high standards of professional conduct and concern for the public welfare.

Josephine Chambers Scholarship. Given to an outstanding undergraduate in the Department of Advertising.

Myron G. Chambers Scholarships. To one or more outstanding undergraduates in the Department of Advertising.

Coca-Cola Minority Scholarship. Awarded to minority students in Communications with a minimum of 3.0 GPA and taking into consideration financial need.

Charles B. Davis Scholarship. Given to an outstanding rising senior in the Department of Advertising.

Frank Gorrell/Majam Bedding Scholarship. Given to a full-time graduate or undergraduate student who demonstrates a strong work ethic and persistence both in and outside of the classroom.

Alex Haley/Playboy Interview Scholarship in Magazine Journalism. Given to an outstanding student in the School of Journalism who has an interest in a career in public relations.

John P. Hart Scholarship in Broadcasting. Given to an undergraduate student in the Department of Broadcasting who has demonstrated outstanding academic achievement.

Michael Steven Head Memorial Scholarship. Given to a non-traditional undergraduate student from a small high school in Tennessee or Kentucky based on financial need.

Donald G. Hileman Scholarship. Given to an outstanding senior or junior in the College of Communications who displays outstanding professional promise.

Darrel W. Holt Scholarship. Given to graduate or undergraduate students in the Department of Broadcasting who have demonstrated outstanding academic achievement and professional promise.

Richard Joel Scholarship. Given to students in Advertising.

Sally Holder Johnson Memorial Scholarship. Given to students who had begun study at the University of Tennessee or another institution and have chosen to enter the University of Tennessee after a period of time to pursue studies in the College of Communications and choose to pursue a graduate degree.

Holt/Howard Broadcasting Scholarship. Given to a full-time master's degree student in the broadcasting program with a minimum 3.0 GPA based on academic performance, professional promise and financial need.

Journalism Faculty Scholarship. Given to an outstanding junior or senior in the School of Journalism.

Nellie D. Kenyon Journalism Scholarship. Given to a female Tennessee resident in the School of Journalism who has an interest in a career in newspaper work.

Bernard King Communications Scholarship. Awarded to an outstanding African-American undergraduate or graduate Communications student with a minimum 3.0 GPA and taking into consideration need.

Knoxville Advertising Federation. Awarded to an undergraduate student in advertising.

The Kentuckian Journalism Scholarship. Given to one or more students in the School of Journalism who have shown exceptional professional promise and are committed to newspaper journalism.

John M. Lain Public Relations Award. Given to an outstanding junior or senior in the School of Journalism who shows the greatest promise in public relations.

Kenny Leiter Scholarship. Given to an outstanding student in the School of Journalism who has an interest in news and public affairs journalism.

Hubert H. and Mary Helen Longmire Journalism Award. Given to a junior or senior news/editorial student to help defray job search of internship costs.

Edward J. Meeman International Communications Fellowships. Given to two outstanding graduate students from other countries.

Memphis Gridiron Show Scholarship. Given to a student from the Memphis area who is a news-editorial major from the sponsors of the annual annual gridiron show.

Chester A. Molley Memorial Scholarship. Given to an outstanding member of the staff of student publications.

David F. Mould Scholarship in Journalism. Awarded to an in-state undergraduate news-editorial major with a minimum 3.0 GPA and financial need. Preference is given to current or former Daily Beacon staff members.

Lindsey Nelson Scholarship. Given to an outstanding junior or senior in the Department of Broadcasting with an interest in sports broadcasting.

Outstanding Advertising Student Award. Given to an outstanding senior or graduate in the Department of Advertising.

The Francis “Red” O'Donnell Scholarship. Given to an entering freshman who has graduated from an accredited Tennessee High School and who is committed to a career in print journalism.

Ernie Pyle Award. Given to the outstanding senior in the new-editorial sequence in the School of Journalism.

Sammie Lynn Puett Award. Given to outstanding students in the public relations sequence in the School of Journalism.

W.F. “Rex” Raney Scholarship. Given to an outstanding Broadcasting student pursuing a news/public affairs curriculum.

Reeder-Siler Graduate Fellowship. Given to graduate students in Communications with a minimum of 3.0 GPA and taking into consideration financial aid.

Tom Siler Scholarship. Given to an outstanding junior or senior in the School of Journalism who has an interest in a career in news-editorial journalism.

Society of Professional Journalists Scholarships. Given by East Tennessee professional chapter of SPJ to a junior majoring in news-editorial journalism or broadcasting new/public affairs. Funds are raised by the chapter’s annual Front Page Follies.

The Knoxville News-Sentinel Advertising Scholarship. Given to one or more students in Department of Advertising who have shown exceptional professional promise.

Avron Spiro Jr. Advertising Scholarship. Given to an outstanding student in the Department of Advertising.

The Charles P. Tombras Sr. Scholarship. Given to a student majoring in advertising who demonstrates strong professional promise and who has an interest in the creative function of advertising.

Willis C. Tucker Scholarship Award. Given by Society of Professional Journalists. Silver bowl or key to graduating senior with highest academic average.

 Georgiana Fry Vines Scholarship. Given to a student with a minimum 3.0 G.P.A., who has demonstrated professional promise and who has an interest in the creative function in advertising.

Horace V. Wells Jr. Scholarship. Given to an outstanding student in the School of Journalism based on professional promise.

Leslie Merecedes Wilkes Scholarship. Given to a senior or junior desiring to improve teaching abilities who teaches in the College of Communications based on academic excellence, self-motivation, strong will, ambition, charisma and commitment to community service.

James Wolfkiel Scholarship. Given to a junior or senior journalism major interested in a career in newspaper graphic arts.

Richard Worden Scholarship. Given to an outstanding Journalism student.

COLLEGE OF EDUCATION

J. Clayton Arnold Teacher Training Scholarship. Preference given to fifth-year teacher interns from southern states who are seeking initial teacher licensure.

Max B. and Lalla B. Arnstein Scholarship. Awarded to meritorious and deserving teachers desiring to improve teaching abilities who teach at one of the College’s Professional Development Schools.

David T. and Jane O. Bailey Scholarship. Preference given to fifth-year teacher interns seeking initial teacher licensure who are graduates of Knox County, Tennessee high schools.

Kitty and William Beasley Teacher-Intern Fellowship. Awarded to fifth-year teacher interns seeking initial teacher licensure who are from Williamson County.
Edna M. and K.M. Benson Memorial Scholarship. Awarded to teachers from Rhea County High School.

Jamie Irene Bradley Memorial Scholarship in Elementary Education. Preference given to fifth-year teacher interns seeking initial teacher licensure in Elementary Education who graduated from a Tennessee high school.

Ethan Beecher and Lois Roark Bridges Scholarship in Elementary Education. Awarded to fifth-year teacher interns seeking initial teacher licensure in Elementary Education who are from Hawkins County.

Dr. Betty Broman Textbook Scholarship. Awarded to fifth-year teacher interns seeking initial teacher licensure in Elementary Education.

Paul C. Burns Memorial Scholarship. Awarded to fifth-year teacher interns seeking initial teacher licensure in Elementary Education.

College of Education Alumni Scholarship Fund. Preference given to fifth-year teacher interns seeking initial teacher licensure.

Billie Cannon DeMont Graduate Scholarship. Awarded to a deserving full-time masters or doctoral level student in Educational Leadership.

Ralph F. Quarles Scholarship. Preference given to fifth-year teacher interns seeking initial teacher licensure.

The Billie Grace Goodrich Scholarship Fund. Awarded to a fifth-year teacher intern seeking initial teacher licensure who is from Gibson County.

Dr. Lillian L. Gore Scholarship Endowment in Elementary Education. Awarded to fifth-year teacher interns seeking initial teacher licensure in Elementary Education.

Emma G. Graff Scholarship. Awarded to a deserving doctoral student in Educational Leadership.

Orin B. Graff Scholarship. Awarded to a deserving full-time doctoral student in Educational Leadership.

Helen Giffin Headlee Memorial Scholarship. Preference given to fifth-year teacher interns seeking initial teacher licensure who are from Loudon County.

Richard J. Hincke Scholarship. Preference given to fifth-year teacher interns seeking initial teacher licensure.

A.W. Hobt Memorial Scholarship Fund. Awarded to teaching associates in the Physical Education Activity Program.

Harry and Mary Hudson Scholarship. Awarded to a deserving student in the Human Services Program.

Gippie Jones Scholarship Endowment Fund. Preference given to an initial teacher licensure freshman from Cumberland County.

Helen Carter Murray Scholarship. Awarded to student enrolled in the master's degree program in school counseling.

Charles M. Peccolo Scholarship. Preference given to fifth-year teacher interns seeking initial teacher licensure.

Ralph F. Quarles Scholarship. Awarded to deserving graduate students in Educational Leadership.


Andrew Charles Robinson Memorial Scholarship. Preference given to fifth-year teacher interns seeking initial teacher licensure in either Elementary Education or Special Education.

Scott County Intern Scholarship Fund. William B. Stokely, Jr. Scholarship Endowment Fund. Preference given to fifth-year teacher interns seeking initial teacher licensure who are from Cocke, Monroe, or Loudon Counties.

R.P. White Scholarship Fund. Preference given to fifth-year teacher interns seeking initial teacher licensure who are from Tennessee.

Charles Whiteside Memorial Scholarship Fund. Preference given to fifth-year teacher interns seeking initial teacher licensure.

Dr. A. Paul Wishart, Sr. Science Scholarship. Preference given to fifth-year teacher interns seeking initial teacher licensure in science.

Dr. Richard W. Yoakley Fellowship. Awarded to graduate students in the school psychology program who are residents of Knox County.

COLLEGE OF ENGINEERING

Allen and Hoshall Engineering Scholarship. Awarded to students from a Tennessee high school enrolled or admitted in civil, mechanical or electrical engineering on the basis of academic performance and leadership.

American Chemical Society. East Tennessee Section of American Chemical Society offers an award each year to an outstanding senior in chemical engineering.

American Institute of Aeronautics and Astronautics. Award of one-year membership given to a branch member whose performance has been outstanding.

American Institute of Chemical Engineers Professional Achievement Award. Given to a chemical engineering senior who has contributed most to the student chapter. Name engraved on permanent plaque. Also certificate.

American Institute of Chemical Engineers Awards. Given to chemical engineering junior who attained highest scholastic average in first two years. Certificate and handbook.

American Society of Civil Engineers Donald Mattern Award. Given to civil engineering student for outstanding contribution to the department.

American Society of Mechanical Engineers Award. Certificate and permanent plaque presented each year to a member of the student section for outstanding contribution to the department and the University.

Joel F. Bailey Award. Awarded by Tennessee Tau Eta Chapter of Pi Tau Sigma to the student in mechanical and aerospace engineering graduating with the highest scholastic record.

Joel F. Bailey Scholarship. Given to a freshman in mechanical engineering.

Boeing Company Scholarship. Awarded annually to an outstanding junior in either aerospace, electrical or mechanical engineering.

Herschel and Louise Brand Scholarship. Given to a co-op student who is at least a junior with successful academic performance.

Fred D. Brown, Jr. Minority Scholarship. Preferably awarded to African American sophomore-senior leaders.

J. Callaway Scholarship. Given to civil engineering students.

Chopra Family Scholarship. Awarded to engineering students on the basis of academic performance.

Alan Rice Cox Scholarship. Awarded to an upperclassman with financial need, above average academic standing and high moral character.

Hugo Colditz Memorial Scholarship. A four-year award for TN resident who is a leader with high academic standing.

Robert and Evelyn Condra Scholarship. Given to a student with financial need and successful academic performance.

Albert H. Cooper Memorial Scholarship Award. Annual award by the Alpha Chi Sigma Educational Foundation to an outstanding chemical engineering senior. Certificate and cash award.

Grace O. Davis Scholarship. Given to an electrical engineering sophomore-senior with emphasis in electronics from selected Tennessee counties.

Charles H. Dean Scholarship. Scholarship established to honor Charles H. “Chill” Dean. Given to a student from east Tennessee with financial need, successful academic performance, leadership and community service.

Nathan W. Dougherty Scholarship. Established to honor Dr. Nathan W. Dougherty, former dean of the College of Engineering. Awarded to an upperclassman.

Dow Outstanding Junior Award. Annual award by the Dow Chemical Company to an outstanding junior in chemical engineering. Cash scholarship and name inscribed on permanent plaque.

Eastland Family Scholarship. Preference given to Overton County residents attending Livingston Academy, then to Overton County residents, Putnam County residents and then Tennessee residents with outstanding potential.

Kenneth M. Elliott Chemical Engineering Scholarship. Awarded annually to a chemical engineering student who demonstrates both academic ability and leadership.

ETA Kappa Nu Scholarship. Awarded to electrical engineering, second semester sophomore taking or having completed circuits course.

Charles Edward Ferris Scholarship. Given to an upperclassman with good academic standing and demonstrated leadership skills.

Finner Family Scholarship. An annual scholarship awarded to one or more engineering students in memory of Mr. Glenn Finner, former engineering instructor, and his family.

Walter Welch Gentry Scholarship. Given to engineering student with financial need.

Henry C. Goodrich Scholarship. Supports engineering co-op students.

William and Pat Grecco Scholarship. Supports civil engineering students who are members of Chi Eta Pi.

Henry A. Haensler Engineering Scholarship. Awarded annually to one or more engineering students in memory of Mr. Haensler.

Urban and Susan Hilger Scholarship. Given to electrical engineering student who is at least a sophomore.

Hughes Hall Memorial Scholarship. Awarded to a co-op student with good academic standing.

John D. Harper Scholarship. Preference given to an electrical engineering student from Blount County, TN.

S.T. Harris Scholarship. Given to electrical engineering student with strong commitment to success.
Eunice Hinkle Biomedical Engineering Scholarship. Scholarship honors Eunice Hinkle who spent 25 years working with faculty and students in engineering science and mechanics as department secretary and staff supervisor. Awarded to a junior or senior with outstanding academic record and a biomedical focus.

Ina B. Howard Engineering Scholarship. Awarded to a civil engineering major from Giles County. James L. Howard. Preference given to Giles County, Tennessee resident. Michael James Memorial Scholarship. Scholarship started in memory of Michael James, former student in the College of Engineering. Annual award to a successful junior or senior in mechanical engineering. Name added to permanent plaque.

Homer F. Johnson Chemical Engineering Scholarship. Awarded annually to an outstanding incoming chemical engineering freshman. Covers in-state fees for freshman year.

W. Crawford Jordan, Jr. Scholarship. This scholarship was begun in honor of Mr. Jordan who earned a B.S. degree in electrical engineering at UT. Jordan was a native of Memphis. Recipient must be a resident of Shelby County.

Dwight and Gloria Kessel Scholarship. Awarded to a sophomore or junior in industrial engineering with preference given to materials handling and/or warehousing.

Kimberly Clark Chemical Engineering Scholarship. Annual award by Kimberly Clark Company to outstanding chemical engineering junior or senior.

Robert and Allienne Lay Scholarship. Awarded to an electrical engineering student who is a resident of East Tennessee.

W.O. Leffell Scholarship. Awarded to an electrical engineering undergraduate or graduate student.

Colonel Samuel H. Lockett Engineering Scholarship. Awarded annually to one or more engineering students in memory of Colonel Lockett, Professor of Engineering and Mechanics at the University of Tennessee and designer of the base and pedestal on which the Statue of Liberty rests.

Martin Company Scholarship. Awarded to a freshman or rising sophomore on basis of academic achievement.

Materials Science and Engineering Outstanding Senior Award. Given to student with best combination of academic achievement and potential for leadership in the field. Name on permanent departmental plaque.

Edgar Wyman McCall Scholarship. Awarded to a junior or senior in electrical engineering on the basis of academic achievement and financial need.

Billy J. and Sylvia F. Moore Scholarship. Preference given to a senior co-op electrical engineering student.

Herman Morris Scholarship. Preference given to sophomore or junior mechanical or aerospace engineering students who achieve academic success and are community leaders.

Len and Nancy Neubert Scholarship. College-wide award.

Randall K. Nutt Scholarship. Scholarship established by the family of Randall Nutt in his memory. Randall was killed in a motorcycle accident on Cumberland Ave. while a student at UT. The award is given with preference to electrical engineering students from Farragut High School, Knoxville, Oakwood High School or Hohenwald High School.

Pasqua Scholarship. Given to outstanding students majoring in nuclear engineering.

Joseph Penland Scholarship. Given to a junior or senior who has demonstrated promise by research, internship or co-op.

Outstanding Benedict Scholarships. Awarded to outstanding students based on academic achievement and financial need.

Powell Alumni Engineering Scholarship. Given to a Powell High School graduate based on academic performance and financial need.

Racheff Scholarship. Given to materials science students based on academic achievement.

Leonard and Betty Shealy Scholarship. Awarded to an electrical engineering student.

E.D. Shipley Scholarship. Given on the basis of financial need and academics.


Charles Francis Shultz Scholarship. Awarded to an upperclassman who is a resident of Tennessee or Kentucky based on financial need and good academic performance.

Burton B. Simcox Chemical Engineering Scholarship. Awarded annually to an outstanding incoming chemical engineering freshman. Covers in-state fees for freshman year.

Spickard Family Scholarship. Awarded to a full time student with financial need and good academic performance.

E. Eugene Stansbury Scholarship. Given to a student in materials science and engineering based on contribution to the science of metalurgy and/or potential for such contribution.

T. A. Beta Pi Outstanding Senior Award. Given by the Tennessee Alpha Chapter. Recognition of a senior in engineering who displays outstanding service and scholarship.

C. W. Lonas/TN Road Builders Scholarship. Civil engineering students get priority for award and is based on academics and financial need.

J. Mac Tucker Outstanding Senior Award. Recognition by the Student Section of the American Society of Mechanical Engineers of the outstanding senior in the Department of Mechanical and Aerospace Engineering. Award is based on leadership, scholarship and service. Name on plaque, cash award.

University of Tennessee Book and Supply Store Award. An electronic calculator awarded each term chosen by departmental committees in rotation. Given to an upperclassman on the basis of need and demonstrated academic performance.

Anthony L. Vest Scholarship. Awarded to students from Dobyns-Bennett High School, Kingsport, Tennessee, or other Kingsport high schools.

Frederick B. Vreeland Scholarship. Awarded to industrial engineering students on the basis of character and academics.

Charles Weaver Engineering and Band Scholarship. Awarded to a freshman enrolled in engineering and the Pride of the Southland Marching Band. Available for four years with successful academic performance.

H.L. Weissberger Award. An annual award given by the department to an outstanding senior major in engineering science. Letter of recognition, plaque.

John H. Winstead Memorial Scholarship. Awarded to students with high academic standing and financial need.

Arthur Brownlow Wood Memorial Scholarship. Given on the basis of academic achievement and financial need.

COLLEGE OF HUMAN ECOLOGY

Ida A. Anders Scholarship. Awarded to graduate students in Retailing and Consumer Sciences and Textile Sciences.

Dorothea H. Barton Scholarship. Awarded to an outstanding junior in all majors except hotel and restaurant administration.

Margaret Cornelia “Connie” Rankin Brock Scholarship. Awarded to a freshman with preference going to a student from McMinn or Polk Counties.

Catherine Burton Chi Omega Scholarship. Awarded to junior women.

Campbell County Farm Bureau Scholarship. Awarded to a student in Human Ecology or Agriculture.

Edward C. and Catherine D. Cifers Scholarship. Awarded to students in all majors.

Commercial Interiors Entrepreneurial Scholarships. Student in any Human Ecology major must exhibit an entrepreneurial spirit as evidenced through work experience and extracurricular activities.

Nellie Crooks Award. Award to an outstanding student.

Elia J. Day Scholarship. Awarded to a rising junior or senior in Child and Family Studies.

Frank and Ruth Liggett DeFriese Scholarship. Awarded to a human ecology student annually.

General Human Ecology Scholarship Fund. Awarded to upperclassmen or graduate in the College of Human Ecology.

Goody’s Family Clothing Scholarship in Retailing. Awarded to students who are outstanding in Retail and Consumer Sciences.

June Gorski Endowment for graduate students in Public Health.

Green Family Scholarship. For needy Child and Family Studies majors.

Irene Hill Greene and Condon L. Greene Memorial Scholarship. Awarded to student from Anderson County.

Ann McGuire Grooms, M.D. Scholarship. Awarded to students entering the junior or senior year of study.

Joseph K. Hach Family Scholarship. Awarded to hotel and restaurant administration students.

Helen Sharp Hakala Scholarship. Awarded to an outstanding Human Ecology student.

Jessie W. Harris Scholarship. Awarded to junior and senior with highest scholastic records.

Ruth Huenemann Fellowship. For graduate students in Food and Nutrition.

Fred Hurst Scholarship. Awarded to students in all majors.

Buford and Beatrice Irwin Scholarship. Awarded to students from Claiborne and Riverford Counties.

Jefferson County Cooperative Scholarship in Agriculture, Shared with Agriculture.

Edith N. Jessop Scholarship. Awarded to deserving students in Recreation and Leisure Studies.

Kappa Omicron Nu. Awarded by the home economics honor society.

Knoxville A La Carte Scholarship. Awarded to students in Hotel and Restaurant Administration.

Lewisohn Scholarships. Endowed by Frederick Lewisohn. Ten, variable.

Inez Lovelace and Laveria Lovelace McKenney Scholarship. Awarded to an outstanding Human Ecology student.
Dr. James D. Marsh Memorial Scholarship Fund. Awarded to deserving junior or senior initial teacher licensure students in Technology Education.

Nancy McClary McAllister and Lewis W. McAllister Scholarship. Awarded to graduate or undergraduate students majoring in Child and Family Studies.

Jacquelyn Hobbs McInnis Family and Consumer Sciences Internship Award. Awarded to a student enrolled in the secondary school internship program.

Bernadine Meyer Professional Development Fund. Awarded to students enrolled in any major in the College of Human Ecology.

Clarence Hillman Moody Scholarship. Awarded to a student from Carroll or Henry County.

Sylvia and Bill Moore Scholarship. Awarded to a senior in child and family studies.

James D. and Monica Moran Awards. For graduate students in Human Ecology.

Nutrition Memorial and Honor Scholarship. Travel award for department majors.

Martha L. Peters Scholarship. Awarded to deserving student in Recreation and Leisure Studies.

Geraldine M. Piper Fellowship. Awarded to a graduate student in Public Health Nutrition.

Eleanor M. Pratt Human Ecology Scholarship. Awarded to students enrolled in any major in the College of Human Ecology.

D.W. Proffitt Foundation Scholarship. Awarded to retailing majors.

Harwell Proffitt Scholarship. For students in Retailing and Consumer Sciences.

Beverly Hal Reagan Scholarship. Awarded to students in Hotel and Restaurant Administration.


Johnnie Rogers Scholarship. For needy Knox County students majoring in Family Relations.

Jane Savage Scholarship. Awarded to nutrition students.

Louis Sr. and Lydia B. Sellaz Memorial Scholarship. Awarded to child and family studies major.

Shelby Williams Scholarship. Awarded to hotel and restaurant administration students; preference given to students from Lakeway (Morristown) area; may be awarded to out-of-state students.


Patricia Grubbs Sherwood Scholarship. Awarded to a student from Blount County or East Tennessee.

SKAL Club of Nashville Scholarship. Awarded to Hotel and Restaurant Administration students.

Hazel Taylor Spitz Graduate Fellowship. Awarded to doctoral students in Home Economics Education.

Sadie Katherine Stanton human Ecology Scholarship. Awarded to graduate students and graduating seniors in the College.

Connie Steel Scholarship. Awarded to an outstanding student in Human Ecology.

Tennessee Rehabilitation Corporation Scholarships. Ten awarded to college majors who have need and who are citizens of Tennessee from a rural area and who have an agricultural background.

Tony Torrice Educational Environments Graduate Fellowship and Research Award. Awarded to a student showing a strong professional promise and for research.

UTK Tourism, Food, and Lodging Scholarship. Awarded to upperclassman majoring in Hotel and Restaurant Administration.

George A. Wagener Graduate Scholarship. In Business Education for Masters or Doctorate students in Business Education.

Eleanor Waters Wilson Scholarship. Awarded to deserving students in Human Ecology.

George and Louise Zirkle Scholarship. Awarded to students in all majors in the College of Human Ecology.

COLLEGE OF NURSING

Baptist-Fields Minority Scholarship. Open to second semester junior and senior African-American nursing students who have demonstrated acceptable academic progress and financial need. Preference is given to native Tennesseans.

Theresa and Harold Dyer Fellowship. Variable amount awarded annually to native East Tennesseans or who plan to work in East Tennessee for a minimum of three years after graduation. The student must be enrolled in one of the graduate programs of the College of Nursing. A student who has demonstrated successful academic performance and/or financial need.

Dale H. Goodfellow Scholarship. Awarded annually to a senior nursing student with above average academic performance and demonstrated excellence in acute care nursing practice.

Betty Jo McAfee Greene Nursing Scholarship. Open to junior or senior nursing students who have demonstrated academic achievement and financial need.

Sylvia Hart Scholarship Endowment. For students enrolled in any major in the College of Nursing.

Knoxville Academy of Medicine Alliance Scholarship. Available to junior and senior nursing students with a minimum GPA of 2.5. Based on financial need. Priority to Knox County residents.

Knoxville Orthopedic Clinic Scholarship. Awarded to a junior nursing student with strong academic background, well developed clinical skills, and demonstrated financial need.

Susan Maples Scholarship. Awarded to a junior nursing student with proven academic achievement in first semester of junior year or a rising senior who has demonstrated abilities in the classroom and clinical area.

Susan Moelar Scholarship. Awarded each year to a senior student having a GPA of 3.0 or better in all nursing courses.

Sally E. Townsend Memorial Scholarship. Open to Junior and senior nursing students with demonstrated abilities in the classroom and clinical area and financial need.

UT Hospital Auxiliary Nursing Scholarship. Available each year to either junior or senior students. Based primarily on financial need and preference is given to in-state students.

SCHOLARSHIPS

Acacia Fraternity John L. Wooten Jr. Scholarship

Accenture Scholarship in Business Accounting Development Scholarship Accounting General Scholarship Fund

ACE Awards

Alumni Scholarships

Roy and Mildred Acuff Scholarship in Band

Roy and Mildred Acuff Scholarship Choral Program and UT Singers

Roy and Mildred Acuff Scholarship in Music

Jennie M. Adcock Memorial Scholarship

Sol Adler Memorial Scholarship

African American Achievers Scholarship

African American Achievers Incentive Grant

Agricultural Communications Scholarship

Agricultural Engineering Scholarship Fund

Agricultural and Extension Education Fund

James and Judge Thurman Alnor Memorial Scholarship

Air Force ROTC Leadership Grants

ALCOA Foundation Scholars Program in Engineering

ALCOA Foundation Scholarship in Law

ALCOA Foundation Scholarship in Business Education

ALCOA Foundation/MESP Scholarship

ALCOA Foundation Scholarship in Transportation

Alcoa Way Optimist Club Scholarship

Howard F. Aldmon Scholarship

Elsie P. Alexander Scholarship

Allen and Hoshall, Inc. Engineering Scholarship

Allen Medal Award Fund

Clyde and Grace W. Alley, Sr. Agriculture Scholarship

Allied Scholars Program Scholarship

Allied-Signal Scholarship Fund

Allied-Signal Scholarship – Mechanical and Aerospace Engineering

Allied-Signal Hopewell/MESP Engineering Scholarship

Alpha Delta Kappa Agnes Shipman Robertson Scholarship

Alpha Gamma Rho Scholarship

Alpha Gamma Rho John Dale Ross Scholarship

Joe M. Alphin Scholarship

Alumni Music Scholarship

American Association of Cost Engineers

American Express Graduate Scholarship

American Industrial Hygiene Foundation Fellowship Scholarship

American Marketing Association Knoxville Chapter Scholarship

American Nuclear Society Need Scholarship

American Society of Real Estate Counselors

American Society of Women Accountants

Knoxville Chapter

American Welding Institute Graduate Fellowship

Amoco Foundation, Inc. Scholarship

AMOCO Scholarship in Logistics and Transportation

Ida A. Anders Scholarship

Arthur Anderson Alumni Fund

Anderson Consulting Engineering Scholarship

Anderson County Agricultural Scholarship

Winfred A. Anderson MBA Fellowship

Proctor D. Agnew Graduate Scholarship

Animal Science Scholarship

The American Society of Civil Engineers Student Chapter Scholarship Endowment

Anonymous Scholarship Awards

Anonymous Accounting Scholarship

Anonymous Nursing Scholarship

Anonymous Student Award
BellSouth Tennessee Scholarship in Business
BellSouth Tennessee Scholarship in Engineering
Carl M. Bennett Scholarship Fund
Edna M. and King M. Benson Scholarship
Edna M. and K. M. Benson Scholarship
Berkline Corporation Scholarship
Berkline MBTA Graduate Fellowship
The Henry F., Jr. & Jane L. Bertelkamp Scholarship Fund
Beta Theta Pi Memorial Scholarship
Beta Phi-Eta Kappa Nu Scholarship
Better English Graduate Aid
Bible-Harris Smith Scholarship
Bicentennial Scholarship
Karl A. and Madira Bickel Scholarship
Big Orange Swimming Scholarship
Biomedical Engineering Scholarship
Zack Binkley Memorial Scholarship
J. J. Bird Memorial Scholarship in Agriculture
Dr. William Bishop Scholarship
Voula Bitzas Scholarship
Black Cultural Programming Committee Scholarship
Black Faculty/Staff Association Scholarship
The Lindsay F. Black Civil Engineering Scholarship
J. Paul Blakely Scholarship in Technical Communications
Lowell Blanchard Scholarship Fund
John Smith Block and Briddle Leadership Fund
Robert E. Bodenheimer Scholarship
Elmo and Ernest-Lou Rowland Scholarship
John D. (Bo) Bohanan Award
Boeing Company Scholarship
The Bohan Scholarships
Edward J. and Carolyn P. Boling Special Awards
Carrie Rymer Boling Scholarship Fund
Amanda M. Bonham Journalism Award
One-Year Frederick T. Bonham Scholarships
Four-Year Frederick T. Bonham Scholarships
Frederick Bonham Journalism Award
Walter Melville Bonham Graduate Fellowship
Frank and Patsy Borthick Scholarship Fund
Kenneth E. Boring Civil Engineering Co-Operative Scholarship
Bosch Braking Systems Johnson City Plant Scholarship
Martha Bowen Scholarship
Edwin Watson Bowe Scholarship Endowment
Mary T. Boynton Scholarship
Cameron Brackney Scholarship
Tutt and Elizabeth Bradford Scholarship in Journalism
Tutt and Elizabeth Bradford Scholarship in Advertising
Dr. and Mrs. Donald H. Bradley, Sr. Scholarship Endowment
Jamie Irene Bradley Memorial Scholarship
Fund in Elementary Education
Dr. Patrick S. Brady Fund
Cary L. and Eva Mae Trail Scholarship Endowment
Herschel C. And Louise Runnion Brand Scholarship
Janet Fay Breazeale Memorial Scholarship
Broadcasting Department Scholarship Fund
Margaret Cornelia “Connie” Rankin Brock Scholarship
Galen Brooker British Studies Scholarship
Dr. Betty Broman Textbook Scholarship
Sarah Alice and Tommy Bronson Excellence Scholarship
Gordon Wayne Brooke III Memorial Scholarship in Accounting
Brooks, Ledgerwood, Testerman Memorial Merit Scholarship
J. Cary Grossman Memorial Scholarship
Carey and Joan Brown Scholarship in Business
Clarence Brown Career Development Awards
Elaine and Arthur Brown Microbiology Scholarship
Fred D. Brown, Jr. Minority Scholars/Fellowship Program
Grover C. Brown Memorial Scholarship
Brown-Haywood Family Memorial Scholarship
Nell Mann Brown Scholarship in Architecture
Nell Mann Brown Scholarship in Agriculture
Brown Stone Works, Inc. Free Enterprise Scholarship
William Lester Brown Memorial Fund
Betty Berggren Bryan Scholarship
Pat and Frank Bryant Scholarship
Frank C. Bryant Memorial Scholarship
The William Bryan Memorial Scholarship
Calvin A. Buehler Chemistry Scholarship
Bullock Smith & Partners International Travel Scholarship
W. W. Burchfiel Scholarship
The Sarah Burchfiel Nursing Scholarship Endowment Fund
The Edwin G. and Patsy H. Burdette Graduate Fellowship Endowment Fund
Captain Robert A. Burke Scholarship
Eleanor R. Burke Scholarship
James Henry Burke Scholarship
Burkhardt and Company Scholarship in Accounting
Burkhalter Industries Fellowship
Burlington Masonic Lodge Scholarship Endowment Fund
Terry Burnette Graduate Scholarship
Paul C. Burns Memorial Scholarship
The Rhea and Ada Burns Scholarship
Catherine Burton Chi Omega Scholarship
August A. Busch, Jr. Memorial Wholesaler Scholarship
Faye Miller and Ruth E. Miller Bush Scholarships
Business Administration
Business and Finance Facilities and Personnel Department Scholarship
B & W Nuclear Technologies Scholarship
Don W. Byerly Field Camp Scholarship in Geologic Sciences
CBA General Scholarship Fund
CBA Support Account
CBGG Department of Economics
CIBA Geigy Employee Agriculture Scholarship
CLEO (Council of Legal Education Opportunities)
CVM Minority Undergraduate Scholarship
William Hooper Caffey Jr. Memorial Scholarship
The Nat Caldwell Journalism Endowment
The Albert Lee Callahan Scholarship
John L. Callaway Civil Engineering Fund
Lawrence H. Callaway Scholarship
John Wesley Campbell and Cecil Mattix
Campbell Scholarship Endowment in Accounting
Campbell County Farm Bureau Scholarship
Becker, Candler – ORNL Federal Credit Union Scholarship
Carolina Freight Carriers
Benjamin E. Carmichael Scholarship
George and Mary Carpenter Scholarship
Jerry Carney/ASHA Leadership Scholarship Fund
Wymer Carr Scholarship
Woodrow M. and Margaret T. Catherman Scholarship
Center for Advocacy and Dispute Resolution
Central States Meat Association Scholarship
David Chambers Memorial Scholarship
Jody Chambers Scholarship
Myron Chambers Scholarship
Dean F. A. Chamblin MBA Fellowship Award in Forest Industries Management
Champion International, NC/MESP Scholarship
E. J. Chapman Agricultural Scholarship
James T. Chappell Scholarship
James T. and Anne Davis Chappell Scholarship
Chattanooga Kennel Club Scholarship
Robert L. Cheek, Sr. Memorial Scholarship
Chemical Engineering Scholarship and Fellowships
George S. Child, Sr. and Helen M. Child Memorial Scholarship
George S. Child, Sr. and Helen M. Child Scholarship
Mr. and Mrs. D.R. Chopra Memorial Engineering Scholarship Endowment
Matthew Keith Christian Memorial Scholarship
Church Street Music Scholarship Center for International Student Loan (CIE)
Edward C. and Catherine Daugherty Cifers Scholarship
Civial and Environmental Engineering Scholarship
Clyde Clapp Agriculture Scholarship
Charles E. Clark, III Memorial Scholarship
Class of 1990 Law Scholarship
Class of 1991 Dana Collier Memorial Scholarship Endowment Fund
Evelyn and Jim Claxton Track Scholarship Fund
Frank Clement/Cordell Hull Fund
Joel B. and Anne Clements Scholarship Endowment
O. H. Clements Memorial Scholarship Endowment Fund
Cleveenger-Redmond Scholarship Fund
Jesse David Cletts Memorial Scholarship
Randall Cline Memorial Scholarship
Cobble Germanic and Slavic Languages Enrichment Fund
Cobble Germanic Slavic Scholarship
Coca-Cola Minority Engineering Scholarship
Coca-Cola Minority Scholarship
Cooker County Farm Bureau Scholarship
Hugo Colditz Scholarship
Colonel Bobby L. Cochran Army ROTC Scholarship
The Litton Cochran Band Scholarship
Cochrane-McDonald’s Scholarship
Guy Cohleach Conservation Endowment Fund
William E. Cole/Margaret Franklin Scholarship in Sociology
Dr. William E. Cole Scholarship
Professor J.W. Cole Meat Scholarship
Bill and Donna Cobble Geography Enhancement Endowment
Rody Cohen Scholarship Endowment Fund
College of Agriculture and Natural Resources Scholarship
College of Business Administration Business Alumni and Friends Economics Fellowship
College of Business Administration Business Alumni and Friends Undergraduate Scholarship
College of Business Administration Business Alumni and Friends Scholarship
College of Business Administration Business Alumni Scholarship Fund
College of Education Alumni Scholarship Fund
College of Law Advocates Award
College of Social Work Endowed Scholarship Fund
College of Veterinary Medicine General Scholarship
Dana A. Collier Memorial Scholarship
Ed Collins Memorial Scholarship
The Judge Carl E. Colloms Scholarship Endowment
Colonial Baking Company Scholarship
Commercial Interiors Entrepreneurial Scholarship in Human Ecology
Computer Science Scholarship
Congrats Scholarship Fund in Food Technology and Science
Robert M. and Evelyn Condra Engineering Scholarship
J. A. Cooley Memorial Scholarship Fund
Coopers and Lybrand Scholarship
Coopers and Lybrand Scholarship in Venture Analysis and Entrepreneurship
The Coors/Pinnacle Sales Veterans Scholarship
The Cope Associates Leadership Prize in Architecture
Cortese Arboriculture-Urban Forestry Award
The Charles Walter Costello, Ill Scholarship Endowment Fund
James C. Cotham, Ill Memorial Scholarship in Marketing
The Coughlin Women’s Athletic Scholarship Council Travel Center for International Education
Lane H. Courtenay and Soren King Memorial Scholarship Fund
Carl Cowan Scholarship Fund
Continuing Education Scholarship Fund
Raymond Rankin Cowles Memorial Scholarship
The Allan Rice Cox Memorial Scholarship
Carl T. Cox Scholarship Fund
John C. Cox, Sr. Memorial MBA Fellowship Endowment Fund
CPA Women’s Auxiliary Scholarship
Crafts and Interior Design Scholarship
John M. Cranor, Ill Scholarship
Betsey B. Creekmore and Betsey Creekmore Scholarship
Frank B. Creekmore Memorial Scholarship
Elise Crenshaw Student Aid Fund Scholarship
Francis Creswell Scholarship
The Joan Cronan Christian Leadership Award
Nellie Cross Scholarship
Robert A. And Mary Neal Culver Scholarship
Robert A. And Mary Neal Culver Award in Music
Ted and Louise Cureton Graduate Award in Psychology
Robert E. Curry Tennessee Forage & Grassland Council
Howard C. Curtis Memorial Scholarship
Stephen E. Curtis Scholarship
DII-Telephone Services/J & P Publishing Scholarship Fund
DOE/DE-F002 Mechanical Engineering Graduate Automotive Technology Education
DOE Scholarship
DOW Scholarship Fund
DOW Scholarship Fund – MLT
DOW Scholarship Fund
DOW Chemical USA, Midland/MESP Scholarship
Dabara, Inc. Scholarship Fund
B. I. Dahlberg Scholarship
Dairymen, Inc. Nashville Division Agricultural Scholarship
Stephanie Plass Dalton Memorial Scholarship
Ltc. John S. Daniel Tennessee Ranger Scholarship
Durant H. Daponte Dissertation Fund
Carroll Davenport ATO Scholarship Fund
Davidson County Alumni Chapter Endowment Scholarship
Captain Herbert L. Davis Memorial Scholarship
Charles B. Davis/Greater Knoxville Advertising Club Scholarship
The Grace and Davis Memorial Scholarship
The Jack A. Davis Scholarship in Architecture
John W. Davis Scholarship in Philosophy
Vict M. Davis/Earl Zwingle Award
Ella J. Day Scholarship
Charles H. Dean, Jr. Scholarship
Deans Fund for Excellence
John Deere Logistics and Transportation MBA Excellence Fellowship
John Deere Logistics and Transportation Undergraduate Excellence Scholarship
John Deere Dealer Management Scholarship
J. Wallace and Katie Dean Scholarship
Frank and Ruth Defriese Scholarship in Agriculture
Frank and Ruth Defriese Scholarship
Delta Nu Alpha Scholarship
Delta Upsilon-Victor Donnel, Jr., David Downes, and Jared Williams Memorial Scholarship Fund
Billie Cannon De Mont Graduate Scholarship
Jimmy & Warree Dempster Scholarship
Denso Scholarship in Engineering
Department of Advertising General Scholarship, Dethrick, Henley and Wilkerson Architects Scholarship
H. R. DeSelm Botany, Plant Ecology Scholarship
William Desmond Scholarship in the Performing Arts
George E. Devine Scholarship
Dorothy N. Dille Art Scholarship
Robert R. Dince Memorial Scholarship in Finance
Dr. Kenneth G. Dixon Scholarship
Randall and Patricia Doerter Scholarship
Grace Darden Doggett Scholarship Fund
Florence L. Don Scholarship in Piano, David D. Dortch Scholarship in Logistics and Transportation
Nathan W. Dougherty Memorial Scholarship
G. Mack and Nancy R. Dove Foundation Scholarship
Mildred E. Doyle Scholarship Fund
Drama Teacher Education Fund Scholarship
The David C. Duckett Scholarship in Business
Duke Energy Corp Scholarship
Duke Talent Identification Program
Earl and Mary W. Dunlap Memorial Agricultural Endowment Fund
Herbert G. and Lilian C. Scholarship
Emmett W. and Lucille K. Dunn Memorial Scholarship
The Mattie S. Dunn Memorial Scholarship Fund
Du Pont Fellowship
Du Pont Minority Scholarships in Chemistry
Du Pont Ph.D. Fellowship in Electrical Engineering
Du Pont Ph.D. Fellowship in Chemical Engineering
Du Pont Accounting Department Scholarship
Dura-Line/Ashwill Paresh Memorial Scholarship
ELO Touchsystems/MESP
East Tennessee Agricultural College
East Tennessee Environmental Association
East Tennessee Hemerocallis Society Scholarship
East Tennessee Gold Course
Superintendent’s Association Scholarship
East Tennessee Natural Gas/MESP Scholarship
Fred Fields Undergraduate Award in Theatre
Financial Management Association of Knoxville Graduate Fellowship in Finance
First Tennessee Bank Scholarship Fund
Robert A. Finley Memorial Scholarship
Finn Family Scholarship
Fitzgerald Scholarship
The Judy Flanagan Special Events Scholarship
Food Science and Technology Scholarship
Henry L. Ford Agricultural Scholarship Fund
Judge and Mrs. Richard R. Ford and Sue Ford Harris Scholarship
Foreign Studies Enrichment Scholarship
Forestry, Wildlife and Fisheries Scholarship
E. Bruce and Mary Evelyn Foster Scholarship in Law
Liston Marshall Fox Memorial Undergraduate Scholarship
Thomas E. and Elizabeth Fox Scholarship
Fraker Family Nursing Scholarship
William and Margaret Fraser Scholarship Fund
Jack G. Frazier Scholarship
Julius-Henrietta Freed Scholarship
Katharine and Helen Freed Memorial Scholarship Fund
Freedom Forum Scholarship Fund
Mark Freeman Associates Scholarship
Paul Freeman, Jr. Scholarship Fund
Robert E. Freeman Scholarship
Katherine M. Frierson Memorial Scholarship
Frito-Lay Minority Business Scholarship
E. Guy Frizzell Scholarship Fund
Ralph Frost Scholarship Fund
Joe Frye Endowment Fund in Transportation
Gideon Fryer Scholarship
The Homer and Tamara Fritz Scholarship
The Joseph O. Fuller Scholarship
GKAC Scholarship - Graphic Design
Harry and Carolyn Galbraith Scholarship
Gottfried Galston Music Endowment – Piano
Christine M. Garcia Scholarship in Marketing
Laurence Gardner Scholarship Fund
Claire Garland Memorial Scholarship Fund
The Garrett Family Scholarship Endowment Fund
E. E. Garrison Excellence Scholarship in Marketing
Sam and Millie Gilber Winners Circle Basket-ball Scholarship
Gen Biology Teaching Award
General Electric Scholarship
General Electric Cincinnati/MESP Minority Engineering Scholarship
General Home Economics Scholarship
General Scholarship – Licensing
General Shale Products Corporation Fellowship Fund
Walter Welch Gentry Engineering Scholarship
Geography Enrichment Fund
Geologic Science Professors’ Honor Fund
Irma Fitch Gilles Art Scholarship
Mary Lynn Glustoski Scholarship Fund
Chuck Goodstadt Scholarship Fund
Goody's Family Clothing Scholarship in Retailing
Anne Hight Gore Scholarship
The Lillian L. Gore Scholarship Endowment in Elementary Education
The Frank Gorrell/Jamison Bedding Scholarship Fund
Dr. June D. Gorski Scholarship
Tim D. Gowder and Connie Lester Loan Fund
James M. Gower MBA Fellowship
Michael and Diane Gower Scholarship
Graduate Student Incentive Fund
LeRoy P. Graf Scholarship
Emra G. Graf Scholarship
Orin B. Graf Scholarship
John Joseph Graham Scholarship
Grainger County Farm Bureau Scholarship
James T. Granberry Memorial Scholarship
Ben P. Granger Scholarship
Graphic Design Scholarship
Senator Andrew Jackson Graves Memorial Scholarship Fund
MSC/MACE Pomeroy Graves Scholarship
R. McDonald Gray Scholarship Endowment
Greater Knoxville Advertising Club Scholarship
The Greater Knoxville Chamber of Commerce
Teachers of the Future Scholarship
The Greater Kingsport Kennel Club Scholarship in Veterinary Medicine
William and Patricia Grecco Scholarship Endowment
Betty Jo McAfee Greene Nursing Scholarship Fund
B. L. and Margaret Greer Endowment Fund
Ben Allen Gregory Memorial Scholarship
Harriet C. Greve Scholarship
Harriet Greve Alpha Omicron Pi Scholarship
Isobel Grissom Scholarship
Ann McGuire Grooms Scholarship
Edgar G. Guenther Scholarship
The Joe K. Hach Family Scholarship
Henry A. Haenseler Engineering Scholarship
Len D. Hagaman, M.D. Memorial Scholarship
The Mildred Morris Haines And William Elijah Morris Scholarship
Helen Sharp Hakala Scholarship
Alex Haley/Playboy Interview Scholarship
George D. Hall Scholarship
George D. Hall General Scholarship
The Hughes Hall Memorial Scholarship Fund
The Dr. and Mrs. James Wilson Hall Scholarship
Robert W. Gilbert and Judy S. Halterman Scholarship
Hamblen County Agricultural Extension
Hamblen Farmers Cooperative Agricultural Scholarship
Hamblen County Agricultural Extension Agents Scholarship
Edward H. Hamilton Scholarship
Hancock County Farmers Cooperative Scholarship
Hanes Her Way Scholarship
Bill Harms Drum-Set Percussion Scholarship
John D. Harper Scholarship
Jessie W. Harris Scholarship
Maria Haan Harris Student Travel Scholarship
Polly Anna Harris Mathematics Scholarship Fund
S. T. Harris Scholarship
George E. and Alice H. Harrison Scholarship Endowment
Julian Harriss Scholarship Fund
John and Louise Harrison Social Work Scholarship
Magee M. and David Harrison Scholarship
C. B. Harrison, Jr. Scholarship Endowment
John P. Hart Scholarship in Broadcasting
Sylvia Hart Nursing Scholarship
Kirby Scholarship  
Kathy Kirby Music Scholarship Endowment Fund  
J. Bryant Kirkland Agricultural Education Scholarship  
Jason Kite Memorial Scholarship  
Adam J. Klein, Jr. Memorial Scholarship  
Phillip C. Klipsch Scholarship  
Knickerbocker Poetry Fund  
Joseph L. and Drucilla L. Knott Scholarship  
Knoxville AGC Scholarship  
Knoxville News Sentinel Advertising Scholarship  
Knoxville News Sentinel Journalism Scholarship  
Knoxville A La Carte Scholarship  
Knoxville Auxiliary Tennessee Bar Association Scholarship  
Knoxville Auxiliary Tennessee Bar Association Law Review Award  
Knoxville Community Housing Resource Board Minority Scholarship  
Knoxville Orthopedic Clinic Scholarship  
Knoxville Garden Club/Emily Bruner  
Knoxville Watercolor Society Scholarship  
Knoxville Women's Club Scholarship in Music  
KOC Training Scholarship  
Kodak Fellows Program in Chemical Engineering  
Kodak Minority Scholarship in Accounting  
Stanley Kogut Scholarship  
The Eleanor & George Kok, Sr. Foundation Scholarship  
The Clarence and Augusta Kolwyck Academic Achievement  
Louis & Lillian Kotler Scholarship Fund  
Clarence Kuo Memorial Fund  
Gerald LabBorde Memorial Scholarship  
Forrest W. Lacey Scholarship  
Guy L. Lachine Memorial Fund Award  
John M. Lain Business Industrial Communications Award  
Mr. and Mrs. John M. Lambert Endowment Fund  
Lamar Advertising Scholarship  
L.A.M.P. Foundation Scholarship  
Marjorie M. Langhorst Memorial Scholarship  
Aliene Lay Electrical Engineering Scholarship  
Law Affirmative Action Scholarship  
Law Class of 1993 Scholarship Endowment  
Law Class of 1995 Scholarship Endowment  
Law College Scholarship  
Law College Alumni Scholarship  
The Rodney and Dell Lawler Scholarship  
The Faye Pressnell Layne Memorial Scholarship  
L.C.D. Scholarship  
Lucille and Herbert Lee Mathematics Scholarship  
McAfee Lee, Jr. Memorial Scholarship  
The William M. Leech, Jr. Memorial Scholarship  
Russell E. Leed Scholarship Endowment Fund  
W.O. Leffell Scholarship Fund  
Kelly Leiter Scholarship Fund  
Paula Hicks Lemler Scholarship for Teacher Education Fund  
Leila Leslieational Scholarship  
Lawrence D. Levine Marketing Scholarship  
Abraham Levy Scholarship Fund  
Lewis Group Architects  
Pat Letitia Lewis Scholarship  
Thomas S. Lewis, Jr. Scholarship in Accounting  
Lewisohn Scholarship Endowment  
Lexmark/MESP Scholarship  
Lincoln County Alumni Agricultural Scholarship  
Mike LittleJohn Scholarship  
Joe P. Little Agricultural Scholarship  
Col. S.H. Lockett Engineering Scholarship  
Col. S.H. Lockett Scholarship  
J.W. (Bill) Lonas/Tennessee Road Builders Association Scholarship  
John R. & Sarah N. Long Scholarship  
Ruth and Jewell Love Voice Scholarship Fund  
Inez Lovelace & Laverla Lovelace McKenney  
Inez Lovelace/Laverla McKinney 4-H Scholarship  
J.H. Loving Family Scholarship  
W.T. "Bill" Love Scholarship  
Howard H. Lumsden Scholarship Fund  
Harold L. Luper Student Assistance Fund  
Walter L. Lusk Scholarship  
J.B. Lyle Music Education Scholarship  
The James F. Lyle, Clu Insurance Scholarship  
R N Lyon Engineering Endowment Fund  
Macon County Anonymous Agricultural Scholarship Fund  
James B. Maddren Memorial Award  
James B. Maddren Memorial Prize Stock  
James B. Maddren Scholarship Fund  
James and Barbara Marable Liberal Arts Scholarship  
Marketing Enrichment Scholarship  
Marketing, Logistics & Transportation Learning  
John Long Marks Scholarship Fund  
Dawn M. Marsh Scholarship Endowment Fund  
Dr. James D. Marsh Memorial Scholarship  
A. David and Beverly Martin Scholarship in Accounting  
A. David Martin Investment Management Scholarship Endowment Fund  
Martin Company Engineering Scholarship  
Martin Marietta, Oak Ridge/MESP Minority Engineering Scholarship  
Martin Marietta Minority Accounting Scholarship  
James E. Martinson Memorial Scholarship Fund  
Materials Joining Scholarship  
Material Science & Engineering Scholarship  
Materials Science & Engineering (MSE) Scholarship  
Pi Mu Epsilon Scholarship  
Judd Louis Kirby Mathene Scholarship  
Mrs. J. Harvey Mathes DAR Award  
Matthews-Jeter Scholarship  
Lori Mayer Re-entry Women's Graduate Fellowship  
College of Business Maytag Scholarship in Marketing  
MBA Student Award Fund  
MBA Excellence Scholarship  
Nancy McClary McAllister & Lewis McAllister Scholarship  
Edgar Wyman McCall Scholarship  
G.W. McColl, Sr. Scholarship  
Dorothy Ryan McCarthy Scholarship  
A E McClanahan Agricultural Scholarship  
Memphis Botanic Garden Foundation Agricultural Scholarship  
Memphis Gridiron Show Scholarship  
Memphis Light, Gas and Water/MESP Minority Engineering Scholarship  
J.T. Mengel Forestry Scholarship  
Tom and Brenda Mentzer Endowment in Marketing and Logistics  
Bernadine Meyer Professional Development Endowment Fund  
Bernadine Meyer Scholarship in Food Technology and Science  
Isabel and William Michalopoulos Memorial Scholarship  
Robert and Majorie Michel Scholarship  
The Microbiology Scholarship Endowment Fund  
Middle Tennessee Veterinary Medical Association Scholarship in Veterinary Medicine  
Mike Milburn Memorial Scholarship  
J. T. Miles Food Technology and Science Scholarship  
John M. and Grace G. Millen Fellowship  
Millennium Scholarships in Business  
Carl M. Miller Memorial Student Assistance Fund  
Charles Miller Award of Excellence in Civil Advocacy  
Evelyn Miller Music Scholarship  
Mr. and Mrs. James Miller Scholarship  
Harlan D. Mills Scholarship  
John W. Minchey Scholarship  
Minority Scholarship Fund in Accounting  
Minority Engineering Scholarship Incentive Grant  
SM Minority Engineering Scholarship  
Donald O. Mirts Memorial Scholarship  
Miscellaneous Student Aid Fund  
James W. Mitchell Memorial Scholarship  
T. A. Mitchell Scholarship  
MLT Learning Partnership Scholarship  
Mobil Research and Development Fund  
Anna K. and Herman L. Modlin, Jr. Scholarship  
Susan L. Moeller Memorial Scholarship
Honors and Awards

NFS Memorial and Honor Scholarship
J. H. Nicholson Memorial Scholarship Fund
Harry Nides Scholarship in Violin
Alvin H. Nielson College Scholars Scholarship Fund
Nissan/MESP Engineering Scholarship
Paul and Rita Nolan Scholarship
Randall K. Nutt Engineering Scholarship
The Oak Ridge Kennel Club Scholarship in Veterinary Medicine
Mary Ellen O’Camp Scholarship
O’Charley’s MBA Fellowship
Vernon O’Dell Memorial Scholarship
The Francis “Red” O’Donnell Scholarship Fund
Odyssey of the Mind Scholarship Fund
Jery W. Ogle Memorial Scholarship in Accounting
Oldham Scholarship
Olin Chemicals/Charleston MESP Engineering Scholarship
Olin Chemicals/KY MESP Engineering Scholarship
Olin Chemicals/LA MESP
Gene Oliver Memorial Scholarship Endowment
James R. Omer Scholarship
Rhoda O’Meara Scholarship
O’Neal Family Scholarship in Veterinary Medicine
Opening Night Club Steering Committee Scholarship
Ornamental Horticulture and Landscape Design Scholarship
W. Hugh Overcash Tax Law Scholarship Endowment
Woodrow W. Overcast Agriculture Scholarship Fund
Pacific West Cancer Fund
Colonel John Wallace Page Memorial Scholarship
Paine Scholarship Endowment Fund
Kathy Palko Memorial Scholarship Award
Panenergy Corporation Scholarship Fund
Mr. and Mrs. Marcus Parker Agricultural Scholarship Fund
Hugo Clinton Parkey and Wayne Parkey, Jr. Memorial Scholarship
Larry Parks Agriculture Scholarship
Mary Lu Bedkin Parks and Robert G. Parks, Jr. Scholarship
Travis M. Parman Public Relations Scholarship
Pasqua Excellence Freshman Scholarship
William L. and Frances R. Patterson Engineering Scholarship
Ken and Wanda Patton Scholarship/Fellowship
Charles M. Peccolo Scholarship
Paula Z and Joseph N. Peeden Scholarship
Pella Traveling Scholarship
Mike P. Pelton-Ober Gatlinburg Scholarship
Joseph R. Penland Memorial Fund
William Britt Pennebaker Scholarship Fund
J.C. Penney Scholarship in Business
Paine Endowment Scholarship Fund
Presidential Scholarship
Prestin Scholarship
Purdue University Scholarship
Proctor and Gamble Alumni Fund in Business
Proctor and Gamble Cellulose/MESP Minority Engineering Scholarship
Proctor and Gamble Minority Chemical Engineering Scholarship Fund
Proctor and Gamble Cincinnati – MESP Scholarship
Proctor and Gamble GA/MESP Minority Engineering Scholarship
Proctor and Gamble General Minority Scholarship
Proctor and Gamble Minority Scholarship
D. W. Proffitt Foundation Scholarship Fund
Harry H. Proffitt, Sr. Agriculture Scholarship
The Harwell Proffitt Excellence in Retailing Scholarship
Project Include
Pugh and Company Scholarship Endowment
Gary R. Purcell Scholarship Fund
Purity Dairies Food Technology and Science Scholarship
Scripps-Howard Ernie Pyle Award
Quaker Oats/Jackson – MESP
Quaker Oats Minority Scholarship in Logistics and Transportation
P. David Qualls Fellowship
Ralph E. Quarles Scholarship
Janenne Jones Quillen Memorial Scholarship Fund
Rachellef Scholarship in Metallurgical Engineering
Rader Merit Scholarship for Composers
Ira Vincent and Sophronia Ragsdale Memorial Scholarship
W. F. "Rex" Raney Scholarship
Albert Rapp Memorial Scholarship Endowment
Virginia M. Raskin Scholarship Endowment Fund
Ratledge Family Student Support
Larry Ratner Scholarship Fund in Arts and Sciences
Nina V. Ratner Memorial Scholarship in the Arts and Humanities
Virginia Tech Raulston Music Scholarship
John R. and Nancy S. Ray Scholarship Endowment
Richard and Ann Ray College Scholarship Endowment
William T. Ray Endowment Scholarship
Reagan Undergraduate Scholarship
Reagan Excellence Fund
Alma and Hal Reagan Scholarship
Alma and Hal Reagan MABA Fellowship
Beverly and Hal Reagan Scholarship in Human Ecology
V. Hal and Beverly Hal Reagan Scholarship in Veterinary Medicine
Beverly Hal Reagan Scholarship in Animal Science
Kyle Reed MBA Scholarship
Reeder-Siler Graduate Fellowship in Communications
Refreshments, Inc. Undergraduate Scholarship
Rehabilitation Counselor Education Program
Rehabilitation Corporation of Tennessee Scholarship
Rehabilitation Corporation of Tennessee Scholarship in Veterinary Medicine
Dr. Barbara M. Reid Minority Nursing Scholarship
Republic Newspaper Inc. Scholarship
R. J. Reynolds Tobacco Company Scholarship
Noah Porter and Myrtle Couts Rhinehart Scholarship
J. Clark Rhodes Graduate Scholarship in Music Education
The Malcom Rice Architectural Award
Richland Ventures MBA Fellowship
Alex and Gandace Richmond Scholarship Endowment Fund
Rich’s/Lazarus/Goldsmith’s Retailing Scholarship
Stephen Dean Rimmer Memorial Scholarship
Chris H. Ritts Scholarship
Ruby McKeel Rivers Scholarship
Claude K. Robertson Scholarship
Judson Hall Robertson Scholarship Prize in Analytical Chemistry
Victor Mansfield Robertson Awards for Military Excellence
Allie Mae Howard Robinson Endowment
Andrew Charles Robinson Memorial Scholarship
Thomas L. and Emma H. Robinson Scholarship
Fred M. Roddy Scholarship
Fred M. Roddy Merit Scholarship
Roddy Upper-class Scholarship
Johnnie Rogers Scholarship
King W. Rogers, Jr. Scholarship Endowment
Ralph T. & Louise Rogers MBA Fellowship in New Venture Analysis & Entrepreneurship
Rohm and Haas Tennessee/MESP Minority Engineering Scholarship
The Ruby Buckman Knoxville Chapter of National Association of Women in Construction Romance Languages General Scholarship Fund
T. Harold Rose Scholarship
Callie Wood Ross Scholarship
Douglas V. Roseberry Memorial Fund
The Rosemary Snyder Roush Memorial Scholarship
W. Harold Row, Jr. Memorial Scholarship
Ruby Ruckman Scholarship
Darrell Russell Scholarship Endowment in Architecture and Interior Design
The Margaret and Robert Russell Scholarship Endowment Fund
The William L. And Sarah E. Russell Scholarship
Dr. J. E. Salisbury Foundation Veterinary Medicine Endowment Fund
The Dottie Sanders Interior Design Scholarship Endowment Fund
Sanders Minority Scholars
Saturn/MESP Scholarship
Jane R. Savage Scholarship
The Norman B. Sayne Scholarship
Milton/Ruth Schootmann Scholarship
Bernadette E. Schmitt Award
Cooper D. Schmitt Mathematics Scholarship
Gary and Joretta Schneider Scholarship Fund
Schneider Honors Award College of Veterinary Medicine
John F. Schrankel Scholarship
Scholars Bowl Scholarship
Scholarship Appreciation Scholarship Endowment
School of Social Work Alumni Association Scholarship Fund
Robert C. Schutt, Jr. Scholarship
Scrabbis Intern Program Fund
Robert Seals Scholarship
Sedgwick Construction Industry Engineering Scholarship
Louise and Aileen Seilaz Scholarship Endowment
Emile Seilaz Scholarship Endowment Fund
College of Business Administration
Louise Sr. and Lydia Buffat Seilaz Memorial Scholarship Fund
Mary Louise Seilaz Scholarship Endowment Fund
Sevier County Scholarship in Organ
Sevier Farmers Cooperative Agricultural Scholarship
Sevier County Swim Scholarship
Richard C. Sexton Memorial Rugby Scholarship
Jeff Seymour Memorial Scholarship
Evelyn Martin Shafer Human Ecology Scholarship
Michael Shaffer Memorial Scholarship
J. & Evelyn Sharp Endowment Fund
Dr. and Mrs. David L. Shear Award for Excellence in Theatre Movement or Dance
Leonard and Betty Shealy Scholarship
J. Rueben Sheeler-Writing and Research Award
Shelby Accounting Career Scholarship
Shell Oil Undergraduate Awards
Shell Mechanical Engineering Scholarship
Mary Phipps Shepherd Graduate Fellowship Fund
Mr. and Mrs. E. D. Shipley Engineering Scholarship Quasi-Endowment
Gordon Sherman Scholarship
Patricia Grubbs Sherwood Scholarship
David A. Shirley Scholarship/Fellowships
L. Raymon Shobe Scholarship
Beverly Shrode Agricultural Fund
Charles Francis Shultz Scholarship
The Keith David Sidersky Memorial Scholarship
Stewart G. and Ann T. Stewart Endowment Fund
Accounting Sigma Phi Epsilon Balanced Man Scholarship
Betsy and Toby C. Silberman Scholarship
Tina Stewart Scholarship
Burton B. Simcox Chemical Engineering Scholarship
Colene Lawrence S. Simcox Scholarship Fund
Howard Simmons Agriculture Scholarship
Charles S. Simms Scholarship
Garvia and Winnie Simpson Scholarship
Gladys Glapha Simpson Memorial Scholarship
Irving G. Simpson Award
Robert H. and Jean S. Sinclair Scholarship Endowment
The SKAL Club of Nashville Scholarship
Warren Slagle Accounting Scholarship
Susie Benson Slyman Scholarship
Flora Smith Small Scholarship
Elizabeth Z. Smith Scholarship
Hilton A. Smith Scholarship
Clarice and Orville Smith Scholarship
Thomas Smith Finance Scholarship
Wade and Mary Smith Scholarship Endowment Fund
Smoky Mountain Antique Engine and Tractor Association Scholarship in Agriculture
Charles D. Snep Scholarship
John Milton Snoddy Scholarship Endowment Fund
Joe and Patricia Snodgrass Scholarship
William T. Snyder Engineering Scholarship Endowment
Social Work Undergraduate Scholarship Fund
Society of Professional Journalists – Broadcasting Scholarship
Society of Professional Journalists Scholarship Fund
SOILS Judging Fund
Wayne and Margaret Solomon Scholarship
Southern Appalachian Science and Engineering Fair
The Gilbert Southern Corporation Scholarship in Civil Engineering
W. H. H. Southern Memorial Student Assistance Fund in the College of Law
The Southeastern Bankruptcy Law Institute, Inc. Scholarship Endowment
Southeastern Food Processors Association Scholarship
Southeastern Regional Fellowship
Southeastern Transportation Center Scholarship
Richard T. Sowell Memorial Scholarship
Andrew W. and Marcia K. Spickard Engineering Scholarship
Herman Spivey Graduate Fellowship
Avron Spiro, Jr. Advertising Scholarship
The Hazel Taylor Spitz Graduate Fellowship in Home Economics Education
The Charles and Martha Sprankle Electrical Engineering Scholarship
Springs Industries/FT Mills Minority Engineering Scholarship
Springs Industries – Lancaster/MESP Science and Engineering
Caesar and Edith Stair Music Education Fund
A.E. Stanley Manufacturing Company PhD Fellowships
Jonathan C. Spear Memorial Scholarship Endowment
Special Education Enrichment
The Mary Stanfill Home Education 4-H Club Endowment
E. Eugene Starbuck Endowment in Materials Science and Engineering
Sadie K. Stanton Human Ecology Scholarship
Stapcloth Scholarship
William J. Starr Suzuki String Scholarship
Statistics Excellence Fund
The Statler Foundation Scholarship Fund
Connie Stelle Scholarship
Manfred and Fern Steinfeld Scholarship in Hotel/Restaurant Administration
Manfred and Fern Steinfeld Interior Design Scholarship
Dorothy B. Stephens Student And Faculty Support Fund
The Ruth Stephens Scholarship in International Relations, International Law, and International Organizations
The Ruth Stephens Award
Ruth Stephens/J. Wesley Hoffman Scholarship
Edith Smith Steven Scholarship Quasi-Endowment
Stevenson/Stephenson Family Endowment for History
Hassie Stiner Scholarship Endowment
Pauline Harsson Stockton Scholarship Endowment Fund
William B. Stokely, Jr. Scholarship Endowment Fund
William B. Stokely, Jr Foundation Masters of Business Administration Fellowship Endowment Fund
Stokely Institute for Liberal Arts Education
The Art Stolnitz Scholarship
MSC/Elsa Walburn Strong Music Scholarship
Stouffers Food Scholarship Fund
Judy Eller Street Golf Scholarship
Student Publications Scholarship Fund
Louis Henry and Beatrice Cawn Stumber Memorial Scholarship
Joe Sullivan, III Scholarship
Glenn G. Summers Agricultural Fund
1990 Summer Institute/MESP Scholarship
Pat Head Summit Women’s Athletic Scholarship
Sun Coal Company MBA Fellowship
SunTrust Bank Company Scholarship in Finance
Mr. and Mrs. W. H. Swain Endowment in Education
Swan Brothers Scholarship
Roy L. and Joyce W. Sweeney Scholarship
Tom Sweeten Memorial Journalism Scholarship
Swimmers Ex-Varsity Scholarship Fund
The George D. Swingle Graduate Fellowship in Geology
The Tampa Bay Alumni Chapter Scholarship
Tau Sigma Delta Design competition scholarship
Judge George C. Taylor Memorial Scholarship
Brigadier General Louis Carlton Taylor Scholarship
Taylor/Young Life Scholarship
Mr. And Mrs. Harvey R. Teague Scholarship
Teacher Internship
Jane Temple Memorial Scholarship
The George D. Swingle Graduate Fellowship in Geology
The Tennessee Bar Foundation Iota Scholarship
Tennessee Business Education Partners Scholarship Endowment
Tenneco Gas
Tennessee Council of Cooperative Agricultural Scholarship
Tennessee Eastman Scholarships in Anthropology
Tennessee Farm Bureau Leadership
Tennessee Farmers Cooperative Scholarship
Tennessee Farmers Mutual Insurance Company
Tennessee Federation of Garden Clubs
The Tennessee General Sessions Judges Auxiliary Scholarship
Tennessee Higher Education Commission African American Teachers Scholarship
Tennessee Higher Education Commission Minority Undergraduate Scholarship
Tennessee Higher Education Commission Minority Teaching Scholarship Project Enable Tennessee Holstein Memorial Scholarship
Tennessee Law Review Editing Award
Tennessee Mathematics Contest Scholarship
Tennessee Plant Food Educational Association Scholarship
Tennessee Rangers Scholarship Fund
Tennessee Tomorrow Law Scholarship
Tennessee Undergraduate Endowment Fund (In Business)
Tennessee Valley Personnel Scholarship
The Tennessee Valley Kennel Club Scholarship
Tennessee Road Builders Association Scholarship
Tennessee Higher Education Commission
Tennessee Junior Science and Humanities Symposium
Tennessee Scholars
Tennessee Valley Section Society of Tribologists and Lubrication Engineers Mechanical Engineering Scholarships
Daniel Hanley Testerman Memorial Scholarship
Texaco Inc. Fellowship
Texas Instruments Graduate Trainee Scholarship
Dr. Charles C. Thigpen Scholarship
Rian K. Thompson Scholarship
B. Ray Thompson Plant and Soil Science Scholarship
B. Ray Thompson for Ag Engineering Scholarship
The B. Ray Thompson Veterinary Medicine Scholarship Fund
Esca Thompson Memorial Fund
Lloyd Lawson Thornton Winner’s Circle Scholarship
William M. Tolley Scholarship
Charles P. Tombras, Jr. Scholarship
Claude Tomlinson Scholarship
Tony Torrice Educational Environments Graduate Fellowship and Research Award
The Beth Adair Townsend and Ann Adair Smith Scholarship
The Sally E. Townsend Memorial Scholarship Endowment Fund
Tourism, Food, and Lodging Scholarship Fund
Toys “R” Us Scholarship
Toyota Scholarship in Business
Transportation & Logistics Excellence Fund
Tredagar Industries Scholarship
Tri-Delt Transfer Student Scholarship
Stephen R. Trotter Memorial Scholarship Fund
A.J. Troxler Scholarship Endowment Fund
Trustees Scholarship
TRW Foundation Minority Scholarship
R. S. Tucker Graduate Fellowship Fund
TVA Minority Forestry Scholarship
TVA/MESP Minority Engineering Scholarship
USDA Minority Forestry Scholarship
US Forest Service Minority Scholarship
USDA 95-38413-1376 Multicultural Scholarship
US Forest Service/MESP Scholarship
US Student Abroad Scholarship
Union Planters Public Relations Award
United Handicapped Workers Scholarship
U.T. Evening School Scholarship
Upward Bound Scholarship
UTK Black Alumni Associates Scholarship Endowment Fund
University Book and Supply Store Award
University Book and Supply Store Award (College of Business)
UTK Chemistry Support Scholarship/Fellowship Award
USDA African American Scholarship in Animal Science
U.S. Army Corps of Engineers MEP Scholarship
UTK General Scholarship Fund
UTK College of Nursing Scholarship Fund
UTK Math Enrichment Scholarship
UTK National Piano Scholarship
UTK School of Architecture Endowment Fund
UTK-UTCHS Graduate Program in Medical Ethics
UTK 1968 Senior Class Scholarship
UWA Employee Scholarship Fund
R.R. Vance Scholarship Fund
Balance “Sal” Vaughn Women’s Golf Endowment
Lee L. Verstanding Scholarship
Anthony L. Vest Engineering Scholarship
Annette Roberson Vestal Scholarship
John M. and Manora C. Viles Scholarship Fund
Carl A. Vines Scholarship
Georgiana Fred Memorial Scholarship
Vinson & Elkins Scholarship
Visual Arts Committee Competition
Vocational Agriculture Education Fund
Volunteer Human Resource Scholarship
Volunteer of the Year Torch of Service Scholarship Award
Frederick Vickford Vreeland Scholarship
Fred Smith Vreeland Scholarship
Helen Vickford Vreeland Endowment Fund
Frankie Wade & T. Robert Hill Scholarship
Tom and Patti Wade Scholarship Endowment
Dwight R. and Kate Reagan Wade College Scholarships
The Wagner Scholarship
George A. Wagoner Graduate Scholarship in Business
Fred Collins Walker Scholarship
Robert B. Wallace Memorial Professor James G. Walls Geology Award
Walker, Lansden, Dortch & Davis Scholarship
Herbert S. Walters Scholarship
Dean Frank R. Ward Memorial Scholarship
Burchfield Burridge Warner Graduate Fellowship
Charles A. & Myrtle Warner Memorial Scholarship Fund
Harold C. Warner Centurion Fund
Washington Farmers Cooperative Scholarship
Eugene A. and Mildred T. Waters Scholarship
John and Patsy Waters Law Scholarship
Ira A. Watson Retailing Scholarship
Wattec Scholarship
WATTec Past Chairman’s Scholarship
William Way, Jr. Memorial Scholarship
William Way Scholarship
Charles Weaver Engineering and Band Scholarship Endowment
George T. Weaver Memorial Scholarship Awards
Brigadier General R. H. Weems Army ROTC
Dr. Ray Wells Memorial Scholarship Endowment
Horace Wells Jr. Scholarship
Ida B. Wells
Colonel Jack K. Westbrook ROTC Scholarship Endowment
Westinghouse/MESP Minority Engineering Scholarship
West Knoxville Sertoma Club Scholarship
Daniel B. Wexler Scholarship
The Charles and Julie Wharton Scholarship
Charles M. Wheeler Scholarship Endowment
Joe and Marianna Scholarship
White Lilly Consumer Services Internship Program
Charles F. Whiteside Memorial Scholarship Fund
Jerry H. Whittner Scholarship Endowment
Chris Whittle Scholarship
Whittle Scholarship
William H. Wicker in Law
The Louise Manning Wiley Fellowship Endowment
Howard and Ruby Wilkerson Fellowship
Maryjohn Wilkin Scholarship
Williamson County Scholarship Fund
Don Williams Scholarship
Shelley Williams Travel Scholarship
Shelley Williams Portfolio Scholarship
Leslie Meredith Williams Scholarship
Eleanor Waters Wilson Scholarship Endowment
Wilson Farmers Cooperative
Frank W. Wilson Scholarship
H. W. Wilson Scholarship
William B. Wilson Scholarship Endowment
Tony Wilson Memorial Athletic Scholarship Fund
J. H. Winstead, Jr. Memorial Scholarship Fund
John Q. and Wanda Wisecarver Scholarship
Dr. A. Paul Wishart, Sr. Scholarship
Ronald Wolf Excellence in Economics
Singleton Wolf Scholarship
James Wolfikel Scholarship in Graphic Arts
Arthur Brownlow Wood Fund
George H. and Martha Wood Scholarship
The Nancy R. Wood Scholarship Fund
Pat Wood Family Scholarship Endowment in Marketing
Glenn W. Woodlee Memorial Scholarship
Margaret Artley Woodruff Scholarship in Creative Writing
The John Wooten Scholarship Fund
The Richard Worden Scholarship
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Senator J. Parks Worley Scholarship
Jack Wright Memorial Scholarship Endowment Fund
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C. E. Wylie Scholarship
Arthur E. Yates Graduate Fellowships
Yellow Freight Transportation Scholarship
Dr. Richard W. Yoakley Fellowship
Emily W. Yoakum Winners’ Circle Basketball Scholarship
David A. York Scholarship Fund
Zdyrka Children Memorial Scholarship
George and Louise Zirkle Endowment
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Zukerman Family Scholarship Endowment
Edwin F. Zwicker Scholarship in the Agricultural Plant Sciences

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Bill Adams Student Emergency Fund
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Eleanor Audiger Art History Award
Evelyn H. Bales Scholarship
George Blitzen Voice Scholarship Quasi-Endowment
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Mary E. (Betty) Boling Piano Scholarship
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