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

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

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UT Knoxville does not discriminate on the basis of sex or handicap in the education programs and activities which it operates, pursuant to the requirements of Title IX of the Educational Amendments of 1972, Public Law 92-318; and Section 504 of the Rehabilitation Act of 1973, Public Law 93-112, respectively. This policy extends both to employment by and admission to the University.

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Publication Authorization Number: E01-0425-004-94
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THE UNIVERSITY OF TENNESSEE BOARD OF TRUSTEES

Legal Title: The University of Tennessee
His Excellency, THE GOVERNOR OF TENNESSEE
The Commissioner of Education
The Commissioner of Agriculture
The President of the University
The Executive Director of Tennessee Higher Education Commission

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Treasurer, Charles M. Peccolo, Jr., B.S., MAcc, CPA, CCM
# ACADEMIC CALENDAR FOR 1994-95

## FALL SEMESTER, 1994

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<td>Classes Begin</td>
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<tr>
<td>September 5</td>
<td>LABOR DAY HOLIDAY</td>
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<tr>
<td>October 3</td>
<td>Graduation application deadline</td>
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<td>October 20-21</td>
<td>Fall Break</td>
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<tr>
<td>November 24-25</td>
<td>THANKSGIVING HOLIDAYS</td>
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<td>December 8</td>
<td>Classes End</td>
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<td>December 10-12-15</td>
<td>Final Examinations</td>
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## SPRING SEMESTER, 1995

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<td>January 11</td>
<td>Classes Begin</td>
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<td>January 16</td>
<td>MARTIN LUTHER KING, JR. HOLIDAY</td>
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<td>February 10</td>
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<td>March 20-24</td>
<td>SPRING BREAK</td>
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<td>April 14</td>
<td>SPRING RECESS</td>
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<tr>
<td>May 1</td>
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### JULY 1995

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THE UNIVERSITY OF TENNESSEE, KNOXVILLE

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Chancellor, William T. Snyder, B.S., M.S., Ph.D.
Executive Assistant to the Chancellor, Marianne R. Woodside, B.A., M.A., Ed.D.
Vice Chancellor for Academic Affairs, John G. Peters, A.B., M.A., Ph.D.
Associate Vice Chancellor, Ralph V. Norman, Jr., A.B., B.D., M.A., Ph.D.
Associate Vice Chancellor, LaVerne B. Lindsey, B.S., M.Ed., Ed.D.
Associate Vice Chancellor and Dean of the Graduate School, C.W. Minkel, B.A., M.A., Ph.D.
Vice Chancellor for Business and Finance, Raymond L. Hamilton, B.S., M. Acct., C.P.A.
Associate Vice Chancellor, Betsey B. Creekmore, A.B., M.A., M.A.L.S.
Associate Vice Chancellor, Edward K. Bennett, B.S.
Acting Vice Chancellor for Research, Leo L. Riedinger, B.A., Ph.D.
Vice Chancellor for Administration and Student Affairs, Philip A. Scheurer, B.A., M.S.
Associate Vice Chancellor for Administration and Student Affairs, Bert E. Sams, B.S., M.S.
Vice Chancellor for Computing and Telecommunications, Fred H. Harris, B.S., M.A., M.B.A.
Vice Chancellor for Development and Alumni Affairs, Jack E. Williams, B.S.

General Administrative Officers

Director of Men's Athletics, Doug Dickey, B.S.
Director of Women's Athletics, Joan Cronan, B.S., M.S.
Physical Plant, Executive Director, John C. Parker, B.S.
Academic Affairs:
Admissions and Records, Dean, Gerald Bowker, B.A., M.A.
Admissions Office, Gordon E. Stanley, Director, B.A., M.E., Ph.D.
Interim Registrar, Alfred Crews, B.A., M.A.
Student Affairs:
Career Services, Director, Robert Greenberg, B.A., M.S., Ed.D.
Center for International Education, Director, James N. Gehlhar, B.A., Ph.D.
Student Conduct, Dean, Charles R. Burchett, B.S., M.A.
Student Counseling Center and Special Services, Director, Gary Kukkunen, B.A., M.A., Ph.D.
Student Health Service, Administrator, Fred E. Young, Jr., A.B., M.C.

Colleges and Schools

AT KNOXVILLE

Dean, College of Agricultural Sciences and Natural Resources, O. Glen Hall, B.S., M.S., Ph.D.
Dean, College of Veterinary Medicine, Michael Shires, B.V.S.C.; M.S., M.R.C.V.S.
College of Architecture and Planning
Dean, John W. Rudd, B.A., M.A.
College of Business Administration
Dean, Elena Nepel, B.S., M.B.A., Ph.D.
College of Communications
Dean, Dwight L. Teeter, B.A., M.J., Ph.D.
Division of Continuing Education
Dean, LaVerne B. Lindsey, B.S., M.Ed., Ed.D.
College of Education
Dean, Richard Wisniewski, B.S., M.E.D., Ed.D.
College of Engineering
Dean, Jerry E. Stoneking, B.S., M.S., Ph.D.
College of Human Ecology
Dean, Jacquelyn O. DeJonge, B.S., M.A., Ph.D.
College of Law
Dean, Richard S. Wirtz, B.A., M.P.A., J.D.
College of Liberal Arts
Dean, Lorman A. Ratner, A.B., M.A., Ph.D.
Public Libraries
Dean, Paula T. Kaufman, B.S., M.S., M.B.A.
Graduate School of Library and Information Science
Director, Jose-Marie Griffiths, B.S., Ph.D.
College of Nursing
Dean, Joan Ubi Pierce, B.S., M.N., FAAN, Ph.D.
College of Social Work
Dean, Eunice O. Shatz, B.A., M.S.S.A., Ph.D.
College of Veterinary Medicine, Dr. Michael G. Shires, B.V.S., MRCVS, M.S., ACVS
Independent Departments
Air Force Reserve Officers' Training Corps Professor of Aerospace Studies, Colonel Thomas N. Trolta, USAF
Army Reserve Officers' Training Corps Professor of Military Science and Tactics, Lt. Colonel, David A. Jones, USA

AT OAK RIDGE

Oak Ridge Graduate School of Biomedical Sciences
Director, Raymond Popp, B.S., M.A., Ph.D.

AT TULLAHOMA

Space Institute
Vice President, T. Dwayne McCay, B.S., M.G., Ph.D.
Dean of Academic Affairs, Kapuluru C. Reddy, B.A., M.S., Ph.D.
Dean of Research and Development, Joel W. Muehlhauser, B.S., Ph.D.
The University of Tennessee, Knoxville is the state's "campus of excellence" in undergraduate, graduate, and professional studies; research and creative activity; and public service.

The University offers more than 300 degree programs to its 25,000 students, who come from every county in Tennessee, every state in the nation, and more than 95 countries.

The faculty and staff of UT Knoxville are constantly working to enhance the quality of students' educational experiences, using information from student tests and surveys to improve teaching and student services. Recent improvements at the undergraduate level include an increased emphasis on advising and better training of graduate teaching assistants.

Developments in graduate education have been accompanied by expanded cooperation with Oak Ridge National Laboratory (ORNL) and the Tennessee Valley Authority and by growth of major research programs, including those in the fields of energy, biotechnology, and robotics.

The Science Alliance is the largest in Tennessee's Centers of Excellence program for higher education. The Science Alliance's Distinguished Scientist Program, designed to strengthen cooperative instructional and research activities, attracts many eminent scientists to joint appointments at UT Knoxville and ORNL.

The campus has other Centers of Excellence in hazardous waste management, materials processing, and veterinary medicine.

The University's libraries, with more than two million volumes and volume-equivalents, enhance an educational program dedicated to keeping pace with a changing society. A 350,000-square-foot library in the center of the campus meets student and faculty research space needs and incorporates the latest advances in computer and automation technology.

Through public service activities, the University extends its resources throughout the state and nation. Continuing education programs, offered in more than 40 locations across Tennessee, respond to the needs of working adults who are seeking college degrees or preparing for career advancement.

HISTORICAL BACKGROUND

The University of Tennessee, one of the nation's oldest institutions of higher education, celebrates its Bicentennial in 1994. Two years before statehood was achieved, the Legislature established the University of the Federal Territory which later became Tennessee. The University 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 non-sectarian in character, which was unusual for an institution of higher education in that day. The University has remained non-denominational and is said to be the oldest such institution west of the Appalachian Divide.

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 1870 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 the state legislature selected the University as the state's Federal Land-Grant Institution, under terms of the Morrill Act passed by Congress in 1862. This enabled the University to broaden its offerings by establishing an Agricultural and Mechanical College.

Ten years later, East Tennessee University was chosen by the state legislature as Tennessee's State University, and its name was changed to the University of Tennessee. The University pledged itself to the service and interest of the entire state, and the state pledged its name and reputation to the University, promising the institution a vital role in the progress of the state.

Today, the University is a statewide institution in terms of its physical locations as well as its services. The medical campus, founded in Nashville and acquired by the University in 1879, was moved to Memphis in 1911. The Martin campus, established in 1900 as a private institution, became part of the University of Tennessee in 1927. A fourth primary campus was established in 1969 when the University of Chattanooga merged with the University of Tennessee. A graduate education and research center, the University of Tennessee Space Institute, is located near Tullahoma.

Three statewide programs—the Institute of Agriculture, the Institute for Public Service, and the Division of Continuing Education—extend the University beyond its campuses to serve the entire state.

The statewide University is administered by a president and central staff headquartered in Knoxville. A chancellor directs each primary campus.

State legislatures and governors, particularly those of the past half century, have shown an active interest in the development of the University of Tennessee. Their support has helped the University broaden and strengthen its efforts to meet the educational, research, and service needs of the people of Tennessee through programs which have earned national and international recognition.

STUDENT AFFAIRS AND SERVICES

ACADEMIC COMMON MARKET

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

Cooperating states in the Academic Common Market are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia. 24 doctoral, two Specialist in Education, 30 Master's, and 25 Bachelor's programs at UT Knoxville 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 issued by 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 Admissions Specialist in the Office of Graduate Admissions and Records or the Southern Regional Educational Board, 592 Tenth Street, N.W., Atlanta, GA 30318-5790, (404) 875-9211.

UT KNOXVILLE SENIORS

Accepted by approval to The Gradual School, a senior at UT Knoxville who needs fewer than 30 semester hours to complete requirements for a Bachelor’s degree and has at least a B average (3.0) may enroll in graduate courses for graduate credit, provided the combined total of undergraduate and graduate coursework does not exceed 15 credit hours per semester. Approval must be obtained each semester at the Office of Graduate Admissions and Records during registration. A maximum of 15 hours of graduate credit can be obtained in this status. Some departments do not permit seniors 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.

ANNUAL FACULTY PHI KAPPA PHI LECTURES


ATHLETICS

The University of Tennessee, Knoxville, 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 in the Division of Student Affairs and are under the direction of the Department of Intercollegiate Athletics for Women, Joan Cranor, Director.

There are men’s teams in football, basketball, volleyball, cross country, and indoor and outdoor track and field. Intercollegiate varsity games are played according to the rules of the NCAA, SEC, and the University faculty.

There are women’s teams in basketball, swimming, 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.

Thompson-Boling Assembly Center and Arena

Thompson-Boling Assembly Center and Arena opened its doors in December, 1987. The facility, which seats 23,535, is named for the late B. Ray Thompson and recently retired UT President Edward J. Boling. Thompson-Boling Arena has already attracted such events as the 1989 SEC Basketball Tournament, 1990 Southeast Regional first and second round games, and the 1989 NCAA Women’s Final Four to the University of Tennessee. The 1994 Men’s Mid-East Regional finals were 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 football 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, built and developed by the Department of Athletics over a period of years, has now accommodate over 91,902 spectators, the largest in the South.

OTHER FACILITIES

Tom Black Track is host to regional and national meets and is built to Olympic specifications. A new baseball facility, the 2,300-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. New tennis courts also afford an excellent vantage point for spectators.

BLACK CULTURAL CENTER

The Center is the focal point of the University’s effort to retain African-American students. The Center fulfills this role through a number of services and programs. These include free tutoring, group study sessions, workshops, a collection of African-American books and magazines, and a computer lab. Typical of its cross-campus work is sponsorship of Black History Month activities and the Black Arts Festival which promotes awareness of African-American contributions.

The Center is located at 812 Volunteer Boulevard. The University community is encouraged to visit the facility and take advantage of the opportunities provided by the Center.

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 on-campus interview help which includes on-campus recruitment, job referrals, and other sources of job contacts.

Included in the services offered at Career Services are two computer-assisted career guidance programs, DISCOVER and the Strong Interest Inventory; Exploring Majors and Careers, a one credit course designed to help with choosing a major; a CAREER RESOURCE CENTER that includes a comprehensive collection of career-related books, magazines, articles, and videotapes; COOPERATIVE EDUCATION, a program for alternating terms of school and full-time work experience for non-engineering majors; CAREER CARNIVAL, an annual career fair providing opportunity to speak informally with representatives from 80-100 different companies about entry level jobs and hiring practices; an annual SUMMER JOB FESTIVAL and a SUMMER JOBS NEWSLETTER.

Also available are a GRADUATE SCHOOL INFORMATION DAY and NURSING OPPORTUNITIES DAY; EMPLOYER INFORMATION which includes types of majors sought, job descriptions, career profiles, annual reports, and other pertinent information for hundreds of companies that recruit at UT; WORKSHOPS providing instruction in skills and tactics for successful interviewing, resume preparation, Business and Dining Etiquette, and other topics; CREDIT COURSES, including Business Career Planning & Placement, Engineering Career Planning & Placement, Job-seeking Skills for Non-technical Majors, and Exploring Majors and Careers.

ON-CAMPUS INTERVIEWS are scheduled during the senior year, and require an orientation workshop for registration and participation. Thousands of interviews are scheduled each year which include approximately 375 companies, government agencies, and school systems. Two JOB NEWSLETTERS are published biweekly, one for positions in education and one for business, industry, and government. An ALUMNI PLACEMENT SERVICE offers assistance in the job search after graduation and a CREDENTIAL SERVICE is available for professions requiring documentation of career-related experiences along with letters of recommendation.

For information regarding Career Services call 974-5435.

CENTER FOR INTERNATIONAL EDUCATION

(Individual students interested in applying to UT Knoxville should consult the requirements listed in the International Student Application section of this Catalog, or for graduate studies, the Graduate Catalog.)

The goal of the Center for International Education, 1520 Melrose Avenue, is to promote and facilitate the internationalization of the UT Knoxville campus, curriculum and community. It assists 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. It maintains current information on all UT, Knoxville related U.S. visa holders.

The Center serves as a liaison with international students and scholars and the faculty and other University units. It assists with adjustment 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 assist in preparing for 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 at more than 100 universities throughout the world becomes possible and affordable for UT Knoxville students are available. The phone number of the Center is: (615) 974-3177. E-Mail: CIE@UTKVVX.UTK.EDU.

COMPUTING CENTER
Mr. Fred Harris, Vice Chancellor for Computing and Telecommunications, Interim Director, UTCC

Faculty Associates:
Instructional Technology: Dr. Patricia L. Fisher
Art: Susan E. Metcalf
Computer Science: Dr. David W. Straight
Engineering: Dr. Osama Soliman
Physics: Dr. William Bass
Statistics: Dr. James L. Schmidhammer

The University of Tennessee Computing Center (UTCC), which is part of the Division of Computing and Telecommunications, provides computing facilities and services for the University's teaching, research, public service, and administrative activities. UTCC offices and principal computing facilities are located on the first two floors of Stokely Management Center (SMC) and on the third floor of Dunford Hall.

The Computer Access for Education (CAFE) program provides access to UT Knoxville computer resources through the use of the UTCC library of computer programs. Student accounts for use in coursework are requested by the department through which the course is offered. Faculty and staff members may access the computing center by completing a request for computing services. Forms are available on the UTCC web page. Each UTCC account is assigned a consultant who is available to answer questions about UTCC resources and to assist in accessing the UTCC library of computer programs.

Noncredit short courses covering levels of computing from personal computing to supercomputing are taught throughout the year. Topics include programming languages, job control language, vector processing, the use of graphics, word processing, and the statistical and mathematical programs available at UTCC. Many courses are available on videorecorded programs in the John C. Hodges Library. Short courses are announced in the UTCC Newsletter, the "Campus Capsule" section of the UT Daily Beacon, and Tennessee This Week. During the break following each academic term, consultants conduct a four-day seminar for faculty, staff, and graduate students on the use of either the IBM or DEC VAXCluster computers.

UTCC maintains online and printed documents describing the availability and use of system hardware and software. The IBM User's Guide and the VAXUser's Guide are available at the UT Book and Supply Store. The monthly UTCC Newsletter announces changes to systems, equipment, and procedures, and contains other items of interest to users.

The UTCC computing network connects mainframe computers, workstations, microcomputers and video terminals through Ethernet, fiber optic cable, or one of more than 1200 direct or dial-up terminals. Hardware and software for the two mainframe networks are supported. A terminal port selection and multiplexing system connects additional systems at the Oak Ridge National Laboratory. Ethernet and fiber optics connect many buildings on the Knoxville campus in a multivendor, heterogeneous network that provides rapid access to data in remote locations and supports several protocols including TCP/IP, DECnet, and LAT.

The UTCC network is connected to the Internet which provides access to other Internet sites via the Southeastern University Research Association Network (SURAnet). SURAanet connects to the National Science Foundation Network (NSFNET) which joins other state and regional networks as well as directly connecting to the five NSF supercomputer centers: The Cornell National Supercomputing Facility, The National Center for Supercomputing Applications at the University of Illinois, the Pittsburgh Supercomputing Center, the National Center for Atmospheric Research, and the San Diego Supercomputer Center.

UTCC is an affiliate of the Pittsburgh Supercomputing Center, a National Center for Supercomputing Applications at the University of Illinois, and the Cornell National Supercomputer Center. Consulting services are provided by UTCC on those systems.

UTCC is also a member of BITNET, a network of more than 3400 computers located at educational and research institutions throughout the United States and the World Wide Web (WWW) network. UTCC provides access to BITNET resources for educational activities.

Mainframe computers operated by UTCC include an IBM 3090-000E with three vector processors, an IBM 2090-000E with one DEC VAX 7000-640 processor, one DEC VAXvector 6000-420, and one DEC VAX 6000-460 processor in a DEC VAXCluster. The UTCC mainframe computers provide both batch computing and timesharing services. The latter includes the Time Sharing Option (TSO) under MVS/ESA on the IBM 3090-000E, the Conversational Monitor System (CMS) under the VMS operating system on the IBM 3081-00, the VMS operating system on the DEC VAXCluster.

UNIX based operating systems are available on two Sun Microsystems file servers, a 4/280 and a 4/490, and several workstations, including Sun Microsystems SPARCstations running Solaris and Digital Equipment Corporation DECstations running ULTRIX.

Cultural Opportunities
THETRE
The University of Tennessee Theatres consists of the Clarence Brown Theatre Company and the University Company.

The Clarence Brown Theatre Company is the 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 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) and a student production of "Cat on a Hot Tin Roof" for Fall 1994. These 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 their own productions as time, man power, 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 proscenium stage, and the Studio Theatre, a 125-seat proscenium thrust theatre. The Clarence Brown Theatres is also home to the costume, electrics and scene shops and box office.

The Ula Love Dougherty Carousel Theatre is an arena theatre constructed in the early 1960s. Originally a tent theatre, the Carousel provides intimate surroundings for smaller and contemporary staging is flexible, accommodating 350 to 500 patrons. The season runs from September through June, and features a combination of student/faculty and professional productions. A primary series of six shows is complemented by a series of two to three contemporary productions. The Department of Theatre also hosts an annual residency of an international theatre company and several international artists. All University students are welcome to join the University of Tennessee Theatres and participate in the productions.

FRANK H. MCCLUNG 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.

Temporary and permanent exhibits are presented on those subjects. 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 major exhibition "The American Indian in Tennessee." A new major exhibition "Ancient Egypt: The Eternal Voice" highlights life in the Nile Valley from the predynastic period, with statuary, artifacts and a diorama. 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 second 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. The Museum's comprehensive medical collection is reflected in the exhibit "Late 19th-Early 20th Century Medical Practices in East Tennessee." Planned open house exhibits, "The Decorative Experience," in 1995. 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.

ART

Exhibitions of the work of artists, craftsmen and architects are sponsored on a regular basis by the Department of Art and the School of Architecture. 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 four to six weeks. A second gallery, also located on the ground floor of the Art and Architecture Building, is used for short-term exhibits and project critiques. 1010 Gallery, which is organized, sponsored and administered by the Student Art League, is located off-campus in the Candy Factory Building on the World's Fair Site. This gallery features student work in exhibitions varying from one to four weeks in duration.

The Outdoor Sculpture Tour displays sculpture at various locations on campus. The sculptures are replaced biennially with new works of artists of regional and national reputation. The Reese Collection, a group of works purchased from prior tours, is on permanent display. Catalogs and walking tour maps are available in the Art Department, 213 Art and Architecture Building.

Arrowmont School of Arts and Crafts, a UT Knoxville 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 Clack Hall. 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. Head 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 Committees are exhibited on a monthly basis in the Concours Gallery and the Barton Music Lounge.

MUSIC

UT Choral Groups consist of Concert Choir, University Chorus, Women's Chorale, Chamber Singers, and UT Singers. These choirs are open to all students by audition, except University Chorus which does not require auditions. UT Singers are known as the University's "Good Will Ambassadors." Among the many projects of the choir are the annual statewide "Goodwill Ambassadors." Among the many projects of this group are the annual statewide tour each spring.

UT Opera Theatre and Workshop 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.

UT Symphony Orchestra plays concerts on campus yearly as well as serving 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.

Requests for information on scholarships and memberships should be sent to the Director, Pride of the Southland Band.

Fine Arts Presentations, scheduled under the auspices of the Department of Music, consist 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, Symphony Orchestra, Jazz Ensemble, Percussion Ensemble, and small ensembles.

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

The Grace Moore Collection. After the death of opera star Grace Moore, a native of East Tennessee, her family donated to the University a large collection of memorabilia which is viewed by appointment at the Frank H. McClung Museum.

CONCERTS

Popular and cultural concert series provide the University community with some of the finest artists in the entertainment field.

Thompson-Boling Arena. Major popular music artists regularly perform in this 25,000 seat venue.

Campus Entertainment Board. This student committee has an 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.

Cultural Attractions Committee. A student committee, this group is responsible for the presentation of programs in the arts to include dance and music. Jazz, strings, vocal, brass, modern and classical comprise the committee's selections.

LECTURES

Each semester the 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.

BROADCASTING

WUOT, 91.9 FM, Knoxville, serves East Tennessee with news, information, and programs of cultural interest. WUOT broadcasts in stereo with an effective radiated power of 100,000 watts, as authorized by the FCC, 24 hours each day. WUOT provides a classical fine arts format designed to enrich and improve the quality of life for those within reception range. Programming includes classical, folk, and jazz music; news and public affairs; drama; documentaries; discussion and exposition of current events; and other programs of social significance. WUOT is a charter member of National Public Radio, American Public Radio, and the Southern Public Radio. WUOT meets the 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. A sample program guide may be obtained at station offices in Room 232 Communications Building.

WUTK-FM is a student-oriented radio station operated by the Department of Broadcasting at the University of Tennessee, Knoxville. Broadcasting majors serve as announcers, news writers and reporters, producers, and account executives. The station is programmed as an album-oriented 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 Knoxville. Studios are located at P-103 Andy Holt Tower.

WUTK-AM is a 50,000 watt day-time AM station located at 850 on the AM band. The
station is licensed to the Board of Trustees of the University of Tennessee and operated by the Department of Broadcasting. Advanced. 

Mentoring - A series of structured cultural and academic review advising is an additional academic advising. 

Counseling - Trained professionals offer advise 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 advise about general curriculum and major requirements. 

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. 

Mentoring - A series of structured cultural and social events is available for selected students. Students are invited to meet with students. 

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

Mathematics 100 - Intermediate Algebra 

Mathematics 110 - Algebraic Reasoning 

Mathematics 120 - Calculus B 

Biology 110, 120 - General Biology 

Chemistry 120, 130 - General Chemistry 

Ronald McNair Post-Baccalaureate Achievement Program 

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

The McNair Program provides comprehensive student needs assessment and a paid eight-week summer research internship ($1,800). In addition, it provides students six hours of academic credit (summers course work 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 900 1/2 Volunteer Blvd., or phone (615) 974-7900. 

Food Service Facilities 

Excellent University-operated food service facilities are air-conditioned, conveniently located in relation to residence halls, and serve nourishing food at reasonable prices. The University recognizes the educational role that its food service facilities play in student life and group living. The Dining Services Department employs a skilled dietary and management staff to ensure that the student gets the highest quality meal at the lowest possible cost. 

Room and board meals arrangements offer the best combination of balanced, nutritious meals, carefully planned and served at a reasonable charge to the student. Meal plan arrangements are Seven Star Dining (i.e. Seven Day meal plan, meals Monday-Sunday noon) and Five Star Dining (i.e. Five Day meal plan with meals Monday-Sunday noon) and Five Star Dining (i.e. Five Day meal plan with meals Monday-Sunday noon) and Five Star Dining (i.e. Five Day meal plan with meals Monday-Sunday noon). The Physical Plant Office coordinates efforts to ensure that the student gets the highest quality meal at the lowest possible cost. 

The Dining Services Department offers two additional dining options; the All Star account debit plan where students make a minimum deposit and can then make purchases at any Food Service location. Any deposits over the minimum enable the student to make purchases at other participating campus locations. 

The other option, the Dining Club account, works just a like a charge card! No money is deposited in advance. Food may be purchased at any Food Service location and convenient monthly statements are sent to students or parents. 

For the late evening snack or morning coffee break, popular spots on campus are the delicatessens and the coffee shop. Students are invited to take advantage of the special "theme" meals offered in the University dining facilities throughout the year. 

For additional information, offices are located at 405 Student Services Building or phone at (615) 974-4111. 

Disabled Student Services 

Disabled Student Services provides counseling and academic support services to ensure that disabled students have access to educational opportunities provided at The University of Tennessee. Any student having a disability which restricts his/her participation in academic life is eligible for services. Services provided include personal and office counseling, interpreters, reader referral, and other services designed to meet the student's individual needs. Assistance is available for making arrangements for special in-class assistance. Information regarding transportation and housing is provided. The office offers an adjustment capacity with the Tennessee Division of Vocational Rehabilitation. Registration and other forms of administrative assistance and academic support are provided through the Office of the Dean of Admissions and Records. 

These services include assistance during registration (preregistration, collection of class schedule, payment of fees, drop and add), the adjustment of schedules to assure classroom accessibility, and similar efforts to relieve the special mobility problems of the students. 

The Physical Plant Office coordinates efforts to eliminate physical barriers to the degree possible, with priority being given to access and facilities for academic buildings. 

Hearing and Speech Services 

The Hearing and Speech Center, located at the corner of Yate Avenue and Stadium Drive, offers complete diagnostic and treatment services to all University students with speech and language disorders/differences and/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 University student health services 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. 

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 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 occupancy. If a student withdraws from the University, the housing contract is cancelled in accordance with policies stated in the contract. Students assigned to residence halls desiring a board plan will be issued contracts written to handle both room and board. A contract for housing signed by a student is binding for the term of the contract and is rigidly enforced by the University.

Additional information pertaining to single student housing may be obtained from the Department of Residence Halls, 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. Information and assistance in locating off-campus housing is available in the Off-Campus Housing Office located in 336 University Center.

Graduate Students. Single graduate students may be assigned to the residence halls or the single student apartments. A graduate student wing has been reserved in the Apartment Residence Hall. For information concerning University residence facilities, please refer to the appropriate paragraphs above describing Undergraduate Students and Off-Campus Housing.

Married Students. The University has provided 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 Office of Rental Properties, The University of Tennessee, Knoxville, Tennessee 37996-0730.

LEARNING RESEARCH CENTER
Recognizing that the learning process is exceptionally complex, the University established the Learning Research Center in 1964. Its primary purpose is to encourage faculty members to utilize the results of research in creating arrangements and conditions for learning. The Learning Center publishes the Teaching-Learning Issues quarterly which circulates throughout the University system and on other campuses across the nation.

MINORITY STUDENT AFFAIRS
The Office of Minority Student Affairs is designed to enhance the quality of life for Minority Students. Working in conjunction with other campus and community groups, the office helps identify, encourage, and assist students who have academic potential and motivation to develop their talents at UT Knoxville. Housed within the Black Cultural Center, the office furnishes information about educational, employment and financial assistance opportunities, offers tutorial services, workshops, and career development programs. The office is located at 812 Volunteer Blvd.

OMBUDSMAN OFFICE
The Ombudsman Office in the University Center supplements existing appeals channels and actively seeks better ways for the University to serve students. Students who encounter problems with any aspect of the University may receive assistance in resolving them from the Ombudsman. Problems are treated confidentially.

OAK RIDGE ASSOCIATED UNIVERSITIES (ORAU)
The University of Tennessee is a sponsoring institution of Oak Ridge Associated Universities (ORAU), a not-for-profit consortium of 62 colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) with principal offices located in Oak Ridge, Tennessee. Founded in 1946, ORAU identifies and helps solve problems in science, engineering, technology, medicine, and human resources, and assists its member universities to focus their collective strengths in science and technology research on issues of national significance.

ORAU manages the Oak Ridge Institute for Science and Education (ORISE) for DOE. ORISE is responsible for national and international programs in science and engineering, education, training and management systems, energy and environment systems, and medical sciences. ORISE's competitive programs bring students at all levels, precocious through postgraduate, and university faculty members into federal and private laboratories.

ORAU's office for University, Industry, and Government Alliance (UIGA) seeks out opportunities for collaborative alliances among its member universities, private industry, and federal laboratories. Current alliances include the Southern Association for High Energy Physics (SAHEP) and the Center for Bio-Electromagnetic Interaction Research (CBEIR). Other UIGA activities include the sponsorship of conferences and workshops, the Visiting Scholars program, and the Junior Faculty Enhancement Awards.

Contact the Associate Vice Chancellor for Research for more information about ORAU programs.

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 Orchard Road behind Tyson Park. Also, bus service is provided to Married Student Housing Units.

Each person who operates a motor vehicle in connection with attendance or employment at the University must register that 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 with the following exceptions:

1. Staff and students with current UT Knoxville motor vehicle registration tags in their vehicles may park in any reserved area.

EXCEPT THOSE AROUND RESIDENCE HALLS BETWEEN THE HOURS OF 10 P.M. AND 7 A.M. MONDAY THROUGH FRIDAY, AND 12 NOON SATURDAY TO 7 A.M. MONDAY.

2. General parking is permitted in student areas around the residence halls between 5 P.M. and 3 A.M. After this time, vehicles without permits for these areas may be towed.

3. Staff and students with current UT Knoxville parking permits may park in unreserved staff areas around the academic buildings from 5 P.M. TO 7 A.M.

4. Overnight parking is not permitted in the Student Commuter Parking Areas or in Student Aquatic Center Parking Area.

5. At times, certain areas will be reserved for parking for special events, such as athletic events, conferences, etc. Parking for these events will be by special parking permit for the specific event.

A University Traffic and Parking Authority determines the parking policy, traffic regulations, tolls. This information is published each year in the “University Traffic and Parking Regulations,” and is available at the Parking Services Office, 1411 White Avenue, at the Campus Information Center at Circle Park, and at the vehicle point of registration.

RE-ENTRY AND NONTRADITIONAL STUDENTS OFFICE
The Office of Re-entry and Nontraditional Students 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, this office works with other departments on campus to provide admissions and readmissions counseling, academic advising, peer support programs, orientation programs, information about careers and financial aid, and educational workshops for adult students. Personalized referral for university services will be made as well.

The Office of Re-entry and Nontraditional Students is located at 407 Student Services Building. 8:00 a.m.-12:00 p.m. on Monday, Tuesday and Thursday; and 8:00 a.m.-5:00 p.m. Wednesday and Friday.

RELIGIOUS RESOURCES
The University, established by a government that recognizes no distinction among religious beliefs, seeks to promote no 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 CONDUCT OFFICE
The Student Conduct Office is concerned with the individual rights and responsibilities of students. The personnel of this office serve as advisors to the judicial system and, when necessary, initiate appropriate disciplinary proceedings.

STUDENT COUNSELING SERVICES CENTER
The Student Counseling Services Center provides services designed to help students with educational, vocational, personal, and social problems. Professional counselors work with the student in a setting that allows confidential discussion of the student's concerns. In addition, various groups are employed to meet
transportation service for the campus is available throughout the university of tennessee memorial hospital. appointments for counseling may be made by phone or in person at the student counseling services center at 900 volunteer boulevard.

student government association

composed of the student senate, the undergraduate academic council, the graduate student association, student services committees, and the freshman council, the student government association is the governing body of the students at ut knoxville. some objectives of the sga are to provide a vehicle for responsible and effective student participation in the organization of 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 sga, the senators and the members of the three elected branches of the sga. student senate members are elected to represent geographical areas of the campus. the academic council and graduate student association representatives are elected from the academic colleges and graduate student programs, respectively. offices of the sga are located in room 341 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 nine but at least three hours, paying the optional health fee). these out-patient services are available continuously throughout every term.

the health service has a regular staff of primary physicians, nurses, laboratory and x-ray technicians of tennessee licensure. out-patient services in the fields of family practice, internal medicine, pediatrics 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. most all medical services at the campus clinic are provided to eligible students at no additional cost. however, charges are made for some services such as x-rays, lab tests, and injections received through the evening/weekend clinic at the university of tennessee memorial hospital.

the primary clinic at 1818 andy holt avenue maintains scheduled daytime hours Monday through Friday. while acute needs may be handled on a walk-in basis, appointments should be made in most instances. (appointment line: 974-3648). emergency care during evenings and weekends is available through the emergency room student health clinic at the university of tennessee memorial hospital except during the break after the fall term. transportation service for the campus is

student organizations

on the campus there are a large number of student chapters of professional organizations, social interest clubs, and other extracurricular organizations. each school year serve as sources of information for new 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 vol jer, yearbook of campus activities, and the phoenix, literary magazine, are sponsored by the university of tennessee student publications board.

student rights and responsibilities

by registering in 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 relating 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 so that students are aware of the university standards of conduct and all disciplinary regulations and procedures.

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.

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 historical perspective. information is available on a variety of topics ranging from racism, violence against women, and spirituality, to sex roles and health. the women's center is located in 301 university center.

writing center

to aid students in regaining and improving their skills in writing, the university operates a writing center. students, faculty and staff may visit the center at any time for help with their writing. in addition, students enrolled in english 101 or 102 may enroll in the writing workshop for one hour of credit.

fees and expenses

university fees and other charges are determined by the board of trustees and are subject to change without notice. the general fees in effect at the time of publication are as follows:

<table>
<thead>
<tr>
<th>MAINTENANCE FEE</th>
<th>PER SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>undergraduate students</td>
<td>$880</td>
</tr>
<tr>
<td>graduate students</td>
<td>$1,055</td>
</tr>
<tr>
<td>law students</td>
<td>$1,435</td>
</tr>
<tr>
<td>veterinary students</td>
<td>$2,004</td>
</tr>
</tbody>
</table>

all students both in and out-of-state are required to pay the established maintenance fee.

<table>
<thead>
<tr>
<th>TUTION (additional for all out-of-state undergraduate and graduate students)</th>
<th>PER SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,850</td>
<td></td>
</tr>
<tr>
<td>TUTION (additional for all out-of-state law students)</td>
<td>PER SEMESTER</td>
</tr>
<tr>
<td>$2,312</td>
<td></td>
</tr>
<tr>
<td>TUITION (additional for all out-of-state veterinary students)</td>
<td>PER SEMESTER</td>
</tr>
<tr>
<td>$2,447</td>
<td></td>
</tr>
</tbody>
</table>

Tuition is required of all students who are classified as non-residents for fee assessment purposes. note: in lieu of the above charge for tuition and/or maintenance fee, part-time students may elect to pay fees 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.

<table>
<thead>
<tr>
<th>undergraduate students</th>
<th>PER SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-state</td>
<td>$87</td>
</tr>
<tr>
<td>or fraction thereof</td>
<td></td>
</tr>
<tr>
<td>out-of-state</td>
<td>$231</td>
</tr>
<tr>
<td>or fraction thereof</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>graduate students</th>
<th>PER SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-state</td>
<td>$135</td>
</tr>
<tr>
<td>or fraction thereof</td>
<td></td>
</tr>
</tbody>
</table>
Out-of-State ................................................. $332 per semester hour or fraction thereof; minimum charge $332
Law Students: .................................................
In-State ................................................. $180 per semester hour or fraction thereof; minimum charge $160
Out-of-State ................................................. $417 per semester hour or fraction thereof; minimum charge $417

UNIVERSITY PROGRAMS AND SERVICES FEE
Per Semester ....................................................... $111

All undergraduates, graduates, and law students taking in excess of eight hours per term will be assessed a University Programs and Services Fee of $111 per semester for the academic year and $85 for the summer term. Part-time students taking eight semester hours or less will be assessed at the rate of $8 per semester hour (minimum $5) but are not entitled to admission to general activities programs. Such students may elect to pay the $36 student health fee.

Knoxville campus students taking a course load of six, seven, or eight hours may elect to pay the full University Programs and Services Fee.

Graduate and teaching assistants as well as fellowship students who may have waivers of fees (tuition and/or maintenance) must pay the appropriate University Programs and Services Fee. Activity cards are non-transferable and may not be duplicated. The activity fee is non-refundable.

MUSIC FEE
One half-hour lesson per week, per semester ....................... $45
One hour lesson per week, per semester ......................... $90
Payable by eligible full-time students receiving individual instruction in music.

GRADUATION FEE
Bachelor's Degree ........................................... $20
Master's, Law and Veterinary Medicine Degree .......... $30
Doctoral Degree .............................................. $75
Hood Rental ................................................... $5

Payable at the beginning of semester in which the candidate is to be graduated. This fee is non-refundable and is valid for only one year beginning with and including the semester it is paid.

LATE PAYMENT FEE
Graduated Late Service Fee
Upon receipt of a schedule (full, partial, or incomplete) a student is registered and is immediately responsible for payment of fees. Students who preregister for a semester must pay their fees (or make satisfactory arrangements with the Bursar's Office) on the regular registration dates in order to avoid late payment service charges. The following late payment charges are applicable on the dates indicated:

<table>
<thead>
<tr>
<th>Advanced</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered</td>
<td>Registered</td>
</tr>
<tr>
<td>Day 1</td>
<td>6.00</td>
</tr>
<tr>
<td>Day 2</td>
<td>4.00</td>
</tr>
<tr>
<td>Day 3</td>
<td>6.00</td>
</tr>
<tr>
<td>Day 4</td>
<td>8.00</td>
</tr>
<tr>
<td>Day 5</td>
<td>10.00</td>
</tr>
<tr>
<td>Days 6-10</td>
<td>20.00</td>
</tr>
<tr>
<td>Days 11-15</td>
<td>30.00</td>
</tr>
<tr>
<td>Days 16-20</td>
<td>40.00</td>
</tr>
<tr>
<td>Days 21-25</td>
<td>50.00</td>
</tr>
<tr>
<td>Days 26-30</td>
<td>60.00</td>
</tr>
<tr>
<td>Over 30 days</td>
<td>70.00</td>
</tr>
</tbody>
</table>

REINSTATEMENT FEE ........................................ $45
A student whose grades are withheld for failure to pay appropriate fees who is reinstated for the semester will be charged a $45 reinstatement service fee.

RETURNED CHECK POLICY
DURING REGISTRATION CHECK-IN DAYS, ALL CHECKS ARE DEPOSITED THE DAY THEY ARE RECEIVED. A $10.00 service charge will be assessed when checks fail to clear the bank on which drawn. In addition, if the returned check is in payment of initial fees and charges, the late payment fee in effect at the time the check is redeemed (minimum charge - $20) will be added to the returned check service fee. If the check is not cleared within seven days an additional $10 service charge will be added. Returned checks will not be reprocessed. Cash or cashier's check are required for payment of the returned check, late fee, and service charges. Failure to clear returned checks will result in the forfeiture of all University services including the receipt of grades, transcripts, and schedules of classes.

TUITION PAYMENT PLANS
All student fees are due in advance and should be paid in full at registration each semester.
Prepayment Plan
A prepayment plan has been developed to assist parents and students with planning and budgeting their academic year expenses. Under the plan, students may choose the expenses they wish to prepay including room, board, tuition, and fees. Expenses can be prepaid over a period of eight months. Students and/or parents wishing to participate in the prepayment plan should contact the Bursar's Office for details.

Deferred Payment Policy
Although fees, rent, and other University expenses are due and payable at the beginning of each semester, a student in good financial standing with The University may request a deferral of up to 50% of the total charges at registration. The deferred payment may be divided into two equal payments payable on the 28th and 56th day of the term. All financial aid monies must be applied to fees before a deferral will be considered. A deferred payment service fee of $10.00 is assessed when any portion of tuition, fees, and other charges are deferred with the approval of the Bursar's Office. An additional $25.00 late payment charge will be assessed on each monthly installment which is not paid on or before the due date. For more details, contact the Bursar's Office.

Room and Board Payment Plan
Semester room and board charges may be paid in monthly installments. The first month's rent plus a deposit of one month's rent is due at registration. The remaining installments are due every four weeks. For more information and an application, contact the Bursar's Office.

DEFERRED PAYMENT SERVICE FEE ..................... $10
(See Tuition Payment Plans)
This fee is applicable when the payment of any part of a student's account is deferred, including accounts which must be billed to outside agencies, organizations, and institutions.

LATE PAYMENT SERVICE FEE ............................. $5
This fee is applicable when a supplemental charge (tuition, room and board adjustments, etc.) is not paid within seven calendar days after the date it is incurred. Students are expected to take the initiative to pay all University obligations promptly. The $10 deferred payment service fee will be added if it is necessary for the Bursar's Office to send a notice regarding non-payment of the adjustment.

APPLICATION FEE ............................................. $15
Each first-time undergraduate, graduate, and College of Law application for admission to The University of Tennessee, Knoxville, must be accompanied by a fee of $15 before it will be processed. This fee is not refundable and is not required for transfers within the University system.

CLEP FEES
$5 per credit hour for evaluation and proficiency credit.

PROFICIENCY FEES
Fees for proficiency examinations are $5 per credit hour for undergraduates and $7 per credit hour for graduates. See page 38 for other information on proficiency, and CLEP examinations.

CO-OP REGISTRATION FEE ................................. $23
If credit is received, the appropriate semester hour rate will be added.

AUDITOR'S FEE
Fees for courses being audited are the same as those taken for credit. Auditors do not take the examination, receive credit, or participate in class discussions.

TUITION/FEE REFUND POLICY FOR WITHDRAWALS
Withdrawal from school for the term, after receiving a schedule, even though classes have not been attended or fees paid, must be by official notification to the Withdrawal Office, 212 Student Services Building. The effective date of withdrawal is the date the Withdrawal Office is notified by completion of the official Withdrawal Request Form. FAILURE TO ATTEND CLASS DOES NOT AUTOMATICALLY CANCEL ENROLLMENT. The appropriate percentage of fees will be charged unless the Withdrawal Office is notified by the close of the last day designated for Registration Check-In and before the first official day of classes for the term. Failure to notify the Withdrawal Office promptly when withdrawing could result in a larger fee assessment.

Withdrawal Date | Percentage Refund | Registration Days | 100%
----------------|-------------------|-----------------|-----
1-5              |                    | 1-5             | 100%
6-10             |                    | 6-10            | 100%
11-15            |                    | 11-15           | 100%
16-20            |                    | 16-20           | 100%
21-30            |                    | 21-30           | 100%

Business days after registration days | 90% | 80% | 60% | 40% | No Refund
1-5              |        |        |        |        |        
6-10             |        |        |        |        |        
11-15            |        |        |        |        |        
16-20            |        |        |        |        |        
21-30            |        |        |        |        |        

Refunds resulting from withdrawal will be made, as soon as possible, after the drop deadline. Room and board refunds are determined by the Office of Residence Halls in accordance with the terms of the Housing and Food Services Contract.
First time students who withdraw during the 60% point in time for which the student was charged and who received Title IV funds will
have the refund calculated by the pro-rata refund policy published in the "1993-1994 Federal Student Financial Aid Handbook".

Refunds are defined as the portion of maintenance and/or tuition and University housing charges due as rebate when a student withdraws or is expelled from the University. The amount of a refund is determined by the Refund/Charge table above.

Repayments are defined as that portion of aid, received by a student after the University direct charges have been paid by that aid, that must be repaid by a student when a student withdraws or is expelled. The amount of the repayment is determined by the Refund/Charge table above.

Refunds and repayments to the Title IV programs are determined according to the formula published in the "1993-94 Federal Student Financial Aid Handbook". The Bursar's Office is responsible for calculating the amount of the refund and/or repayment and distributing the correct amount back to the financial aid programs according to the Refund/Repayment Allocation Policy.

The above withdrawal refund policy does not apply to the off-campus Graduate Centers. Refunds, in accordance with the withdrawal refund policy, will be made after the drop deadline.

TUITION/FEE ASSESSMENT POLICY FOR DROPPED COURSES

THE DROPPED PROCEDURE CANNOT BE USED TO WITHDRAW FROM SCHOOL FOR THE TERM. Students who drop courses and continue with a reduced course load are eligible for a refund only if the total charges at the semester hour rate for the courses continued plus the percentage assessed at the semester hour rate for the courses dropped results in an amount less than that paid.

A course is not officially dropped until a drop add slip has been processed and recorded by the admissions and records office. Failure to attend class does not automatically withdraw or drop a student from school or class.

The following assessments are applicable for courses dropped (if fees are assessed at the semester hour rate):

<table>
<thead>
<tr>
<th>Drop Date</th>
<th>Percentage Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-8</td>
<td>100%</td>
</tr>
<tr>
<td>9-10</td>
<td>80%</td>
</tr>
<tr>
<td>11-15</td>
<td>60%</td>
</tr>
<tr>
<td>16-20</td>
<td>40%</td>
</tr>
<tr>
<td>21+</td>
<td>No Refund</td>
</tr>
</tbody>
</table>

NOTE: The drop deadline for grades and the drop deadline for refunds are NOT the same. All charges and refunds will be made to the nearest even dollar.

Refunds resulting from dropped courses will be made after the final audit at the end of the term.

OTHER INFORMATION REGARDING FEES

All 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 are required to have a validated fee receipt to complete the registration procedure. This includes graduate and teaching assistants, staff, others whose fees may be billed, prepaid, or waived. Delayed registration service fees are also applicable to such students.

No student is authorized to attend classes who has not obtained a class schedule from the Office of the Dean of Admissions and Records and a validated fee receipt from the Bursar's Office.

The University is authorized by statute to withhold diplomas, grades, transcripts, and registration privileges on any student until student debts and obligations (other than Student Loan Fund notes which have not matured) owed to the University are satisfied.

Student Health Insurance. The University makes available, by contract with an insurance company, group health insurance expressly for students. The program is designed to supplement the care provided by the campus Student Health Service and provide basic benefits at low group premium rates. Primary emphasis is placed on hospitalization benefits since in-patient care is not provided on campus. Students not otherwise covered are urged to avail themselves of this or comparable insurance since paying for hospital care is the student's own responsibility.

Information about the insurance is mailed to the company to the student's home and participation is solicited. Enrollment in the plan (or alternative coverage) is mandatory for international students. Students may obtain applications from the Student Health Service or the Office of International Student Affairs. Except for international students, enrollment for insurance is not a part of registration for classes.

NOTE: The family health insurance policy should be carefully reviewed since most family policies do not cover the dependent child after a given age, some as early as age nineteen.

Uniform Deposits. All students who are members of the band are required to make a deposit of $50 each to cover damage to or loss of property issued to them. The unused portion of the deposits will be returned to the students after completion of the training.

Identification Card. ID cards, issued during registration or anytime during the year to all students, are prepared during registration of the first semester a student enrolls in the University and are valid for each term thereafter. These cards are required for many purposes such as use of library facilities, check cashing facilities in the UT Knoxville Bookstore, and admission to various athletic, social, and cultural events. These cards are non-transferable and may not be duplicated. A current validated fee receipt is necessary to obtain a new or replacement ID card. IDENTIFICATION CARDS MUST BE CARRIED AT ALL TIMES FOR PURPOSES OF IDENTIFICATION. Lost or stolen cards should be replaced by contacting the Vol Card Office at Room 344, University Center. There is a minimum charge for replacement or duplicate ID cards.

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.

SUMMER TERM FEES AND EXPENSES

Fees and expenses for the summer term are the same as for the other terms during the academic year with the exception of the University Programs and Services Fee as noted above.

Although the summer term is divided into terms of varying lengths, tuition and fees are assessed at the regular semester hour rate and are not increased to exceed the maximum charge for a complete regular semester.

The refund policy covering withdrawals and dropped courses for the summer term is based on the length of the term for the course(s) dropped.

ESTIMATE OF EXPENSES

The following estimates of the necessary expenses for an undergraduate student during the 1993-94 academic year are average. Actual expenses vary greatly according to the habits of economy or extravagance of the individual student. The room and meal estimates are averages based on accommodations and 20-meal board plan in University facilities. Estimates for equivalent accommodations and meals elsewhere will usually be somewhat higher.

Undergraduate Maintenance Fee ................................................................. $1,760
Programs and Services Fee ................................................................. $222
Room and Board ................................................................. $3,340
Books, Supplies, Transportation, etc. .............................................. $2,000
Total for Tennessee Residents ......................................................... $7,322
Add for Non-Resident Tuition ......................................................... $3,780

$11,102

These figures give a fair idea of average expenses, exclusive of clothing, travel, and pocket money. Expenditures for extracurricular activities are not included in the above.

STUDENT FINANCIAL AID

The University of Tennessee, Knoxville offers a comprehensive program of financial aid for students who otherwise would not be able to attend. Through these federal, state, and University programs, an eligible student may receive one or more types of assistance. Federal Financial Aid is available to U.S. citizens and certain permanent residents. All students must comply with current Selective Service laws prior to receipt of aid. Additionally, all students receiving Federal Financial Aid are expected to maintain satisfactory academic progress toward a degree. Students must be admitted into a degree program and must be enrolled at least half-time. When funds are limited, preference will be given to full-time students. All students who receive federal financial aid must have a social security number.

Financial need is defined as the difference between a family's ability to pay and the total cost of attendance. If there is a deficit, the student is considered to be in need of financial assistance. UT Knoxville utilizes the need analysis document Free Application for Federal Student Aid. Through the use of the Free Application for Federal Student Aid, the Federal Aid Office determines the amount the parents and student can contribute toward educational expenses. For more detailed information on the determination of need, please refer to the brochure entitled, "This is Tennessee: Investing in Your Future," available in the Financial Aid Office.

UT Knoxville has three types of financial aid—scholarships and grants, loans, and part-time employment. These may be awarded individually or in combination according to the circumstances of the financial aid program.
needs of the student. For detailed information on application procedures for each aid program, please refer to the brochure, "This is Tennes-
see: Investing in Your Future."

PRIORITY DATE FOR APPLICATIONS

Because a student’s family resources can change significantly during an academic year, UT Knoxville students apply annually for renewal of financial aid. Students desiring assistance based upon financial need (some scholarships, grants, loans, and employment) must submit a Student Aid Report. Students desiring only scholarships based upon academic merit are not required to complete any financial aid forms.

UT Knoxville is not able to meet the financial needs of all applicants. Priority in awarding will be given to those students with financial aid forms completed and mailed by: February 14.

TRANSFER STUDENTS

UT Knoxville Financial Aid applicants who have attended another college or university are required to have a Financial Aid Transcript sent to UT Knoxville whether financial aid was previously received or not. Forms and further information on this requirement are available in the Financial Aid Office.

SCHOLARSHIPS AND GRANTS

Scholarships. The UT Knoxville scholarship program is made possible through funds provided by the University, outside foundations, estates, private businesses, civic groups, individuals, and alumni. The majority of these scholarships are coordinated by the Financial Aid Office. Some undergraduate scholarships for currently enrolled students are administered in the various schools and departments and may require applications.

Most scholarships are awarded to students who demonstrate strong academic achievement and a proven need for assistance. There is, however, an academic merit scholarship program which makes awards on the basis of academic achievement only. To compete for merit scholarships only, a student must be admitted or currently enrolled by February 1. An application form is not necessary, except for Honors Program scholarships. Academic achievement for entering freshmen students is judged by the applicant’s secondary school academic record and scores on the American College Testing Battery (ACT) or Scholastic Aptitude Test (SAT). Academic achievement for currently enrolled and transfer students is judged by the applicant’s collegiate cumulative grade point average.

All scholarships, including merit scholarships, are highly competitive; despite the generosity of University friends and alumni, there are not enough funds to provide scholarship aid to all qualified students. Most annual stipends range from $100 to $250. Most scholarships are awarded for one year, with the recipients competing for scholarships each year of enrollment.

Federal Pell Grant. This is a federal grant program for undergraduate students displaying a financial need for funds. Because the Federal Pell Grant is an entitlement program, all undergraduate students applying for need-based financial assistance from the University must apply for this program. Other forms of financial aid will not be extended to a student until eligibility for the Pell Grant has been determined.

When the program is fully funded, maximum grants are $2,300 and not more than one-half the cost of education. The above regulations and provisions of the Pell Grant Program are correct as of July 1992 and are subject to change by federal legislative action.

Federal Supplemental Educational Opportunity Grants. This program of direct grants is available to undergraduate students with exceptional financial need. An FSEOG may not be less than $200 or more than $4,000. The above regulations and provisions of the Federal Supplemental Educational Opportunity Grant are correct as of July 1992 and are subject to change by federal legislative action.

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

More information may be obtained on this program by writing to the Tennessee Student Assistance Corporation, 404 James Robertson Building, Suite 1950, Nashville, Tennessee 37243.

STUDENT LOANS

Federal Perkins Loan. (Formerly National Direct Student Loan). A low interest loan 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 repaid to the Student Loan 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. Students will be notified, at the time of award, of the maximum loan eligibility available for undergraduate study or graduate/professional study during an academic year. The total debt a student can accumulate in undergraduate study is $15,000 and in graduate/professional study (including undergraduate loans) is $30,000.

Loan repayment and interest accrual is deferred as long as the borrower remains in half-time attendance at an accredited institution of higher education. The borrower has a grace period of nine (9) months after graduation, withdrawal, or less than half-time enrollment. Certain circumstances may allow for a borrower to defer payments or cancel a portion of the loan. Deferred payments and cancellations must be applied for through the Student Loan Department in the University of Tennessee, Knoxville Bursar’s Office. The above regulations and provisions of the Federal Perkins Loan Program are correct as of March 1994 and are subject to change by federal legislation or regulation.

The University of Tennessee Student Loan. Student loans from University sources are available to undergraduate students with a 2.0 or higher cumulative grade point average. A loan of an annual maximum of 1 and 1/2 times the amount of fees paid per term can be extended. One surety or cosigner who meets specific credit requirements is required for each promissory note and a new promissory note must be completed each year loan is renewed. The interest rate is 6 percent per year payable on July 1 of each year. Repayment of the amount borrowed plus any unpaid accrued interest shall begin six (6) months following graduation, withdrawal, or when the student ceases to carry at least half-time attendance. Minimum monthly installment will be $30 or 1/26th of the amount borrowed, whichever is greater. The borrower may choose to pay, without penalty, all or any part of the loan plus interest before entering the normal repayment period. The above regulations and provisions of the Stafford Loan Program are correct as of March 1994 and are subject to change by action of the Board of Trustees.

Federal Stafford Loan Program. (Formerly the Guaranteed Student Loan Program). This is a low interest loan made by a lender such as a bank, credit union, or savings and loan association. These loans are insured by a Guaranty agency in each state and reinsured by the Federal Government.

To receive a Federal Stafford Loan, a student must apply for federal aid with 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 a 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. 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.

All first-time borrowers must attend Entrance Interview Loan Counseling at the Financial Aid Office before receiving the first disbursement of loan funds. Charges of up to 4% 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 ($65,000 in unsubsidized 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 enrollment. Certain circumstances may allow for a borrower to defer payment or cancel a portion of the 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 1994 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. The 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 4% will also be deducted from
the loan disbursements for federal government and bank loan costs.

A Federal PLUS may be requested by the 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 1994 and are subject to change by federal legislation or regulation.

STUDENT EMPLOYMENT

Two employment programs are administered by the Financial Aid Office to help students find part-time employment.

Federal Work-Study. This is a federal work program which 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 work approximately 15 hours per week. Jobs are available in a wide variety of academic departments and other campus units. The rate of pay is the federal minimum wage.

Student Employment Service operates as a central referral agency. It coordinates listings of part-time employment from both University and private employers with the requests of students seeking part-time employment. Part-time jobs average from 15 to 20 hours per week. If part-time employment is a financial necessity to the student with a low grade point average, the student is advised to accept a job requiring fewer hours of work per week.

SCHOLARSHIPS

The University of Tennessee, Knoxville, wishes to express gratitude to the contributors and donors of the following scholarships:

American Association of Cost Engineers Scholarship
Acacia Fraternity-John L. Wooten, Jr. Scholarship Fund
Accounting Development Endowment Fund
Accounting Development Scholarship Fund
Accounting Excellence Fund
Roy & Mildred Acuff Scholarships in Band
The Roy & Mildred Acuff Scholars Program & UT Singers
The Roy & Mildred Acuff Scholars/Choral Program & UT Singers
Agriculture Faculty Alumni Scholarship
Agriculture Scholarship Fund
Agricultural Communication Scholarship
Agricultural Economics and Rural Sociology Scholarship Fund
Agricultural Engineering Scholarship Fund
Agricultural Extension Education Scholarship Fund
Ailor Memorial Scholarship & Emergency Studies Aid
Alcoa Foundation Scholarships
Alcoa Foundation CBA Minority Scholarship
Alcoa Foundation Scholars Scholarship in Accounting
Alcoa Foundation Scholars Program in Engineering
Alcoa Foundation Scholarship in Law
Alcoa Foundation/MESP
Alcoa Foundation Scholarship in Transportation
Alcoa Foundation Scholarships
Howard Aldmon Memorial Scholarship Fund
Clyde and Grace Alley, Sr. Agricultural Scholarship
Allied Student Program
Allied - Social Science RSH - MESP
Alpha Delta Kappa - Agnes Shipman Roberts Scholarship Award
Alpha Gamma Rho Scholarship
Alpha Gamma Rho - John D. Moss
Alpha Gamma Rho - Bill Mullins
Joe Mac Alphin Memorial Scholarship Fund
Elise P. Alexander Scholarship - UT Knoxville
Ahmed Alsaafar Graduate Scholarship
Allen & Hoshall Engineering Scholarship Fund
Howard B. and Wendy C. Allenburg Accounting Endowment Fund
Allied-Signal Scholarship Fund
Allied-Signal Scholarship Mechanical & Aerospace Engineering
Alumni Scholarships
Alumni Scholarship
American Express Scholarship Fund
American Express Undergraduate Scholarship Fund
American Marketing Association Scholarship
American Nuclear Soc Need Scholarship
Amoco Foundation
Ioa A. Anders Scholarship Fund
Arthur Andersen Alumni Scholarship
Andersen Consulting Engineering Scholarship Fund
Anderson County Agricultural Scholarship
Winfred A. Anderson MBA Fellowship
Ray & Mary Andres Memorial Fund for Excellence in Design
Professor Duncan Angus Scholarship Fund
Animal Science Scholarship Fund
Anonymous Accounting
Anonymous Nursing Scholarship
Anonymous Student Awards
Susan B. Anthony Fund
Anthropology Development Scholarship
School of Architecture Scholarship
(AFCEA) Armed Forces Communications and Electronics Association Electrical Engineering Scholarship Fund
Armstead Award in Agriculture
Armstead Award in the College of Veterinary Medicine
James H. Armstead Scholarship in Journalism
Armstrong Minority Educ Scholarship
Max B. & Lalla Block Armstrong Scholarship
J. Clayton Arnold Teaching Training Award
Scholarship Fund
Grace R. Agee and Willis M. Clark End. Fund
American Watercolor Society Scholarship Fund
Andersen Consulting Engineering Scholarships
Art Department Scholarship Fund
Daniel Arthur Rehabilitation Center
Helen S. A. Asher Memorial Scholarship
Ashrae Grant-In-Aid Goswami
Athletic Department Scholarship Fund
Atlantic Richfield Fellowship
Audio & Speech Pathology Scholarship Fund
E.H. (Buddy) Avery Athletic Scholarship Fund
The Earline Chandler Aytes Scholarship Fund
B & W Nuclear Technologies Scholarship Fund
Babcock & Wilcox Scholarship Fund
Bacon-Beard Scholarship in Philosophy Fund
Karl F. Bahret Memorial Swimming Fund
Hop Bailey, Sr. Scholarship Fund
Bain-Swigett Poetry Prize
Howard H. Baker Memorial Law Scholarship Fund
Band Scholarship
Lois Beatrice Dunn Barbee Scholarship
Raymond Barnes Award in Woodwind
Porter Barnett Athletic Scholarship
Dorothea H. Barton Scholarship
Colonel T.H. Barton Scholarship Fund
Bass, Berry, & Sims Student Scholarship
Dr. Mary Ann Bass Scholarship
Betty J. Baster Winner's Circle Scholarship for Alternate Power Forward
Grace-Brodie Baynes Scholarship in Accounting
Dr. & Mrs. J. Dees Scholarship Fund
C. Grier Beam Scholarship Fund
Alvin G. & Sally M. Beaman Scholarship Endowment Fund
Beard Scholarship in Philosophy Fund
John Beatty Scholarship Award
Hubert Bebb Scholarship Endowment Fund
Bechtel/MESP
Fred E. Bell Athletic Department Scholarship Fund
Ray F. & Addie J. Bell Scholarship Fund
Becorle - MESP
Carl M. Bennett Scholarship Fund
Jim Bennett Memorial Development Fund
Phil Sherman Bennett Prize
Amanda (Mindl) Benningfield Memorial Scholarship Endowment
Edna & King Benson Memorial Scholarship Fund
Benwood Foundation Athletic Scholarship Fund
Berkinline MBA Graduate Fellowship
Berkinline Corporation Scholarships
Beta Phi Chapter of Eta Kappa Nu Scholarship
Beta Theta Pi Memorial Scholarship Fund
Better English Graduate Aid
Hodges Better English Scholarship Fund
Bible-Nieman STudent Development Fund
Karl and Madira Bickett Scholarship in Communication
Big Orange Swimming Scholarship
Joe and Helen Billig Women's Volleyball Scholarship Endowment
Biomedical Engineering Scholarship
J.J. Bird Memorial Scholarship in Agriculture
Dr. William Bishop Scholarship
Voula Biztas Voice Scholarship Fund
Black Alumni Associates Scholarship
Black Cultural Programming Committee Scholarship
Black Faculty/Staff Association Scholarship
J. Paul Blakely Sch. in Technical Communications
Lowell Blair Scholarship Fund
Robert E. Bodenheimer Scholarship
Boeing Company Scholarship
Bohan Advertising Scholarship
Bohan Agency Scholarship Fund
Edward J. & Carolyn P. Boling Special Awards
Amanda Minnis Bonham Journalism Award
Frederick T. Bonham Journalism Award
Frederick T. Bonham Scholarship Fund
Walter Melville Bonham Memorial Scholarship
Boring Athletic Scholarship
F and P Borthick Scholarship
Dr. Wade H. Boswell Scholarship
Martha Bowen Scholarship
Cameron Brackney Scholarship
Tutt and Elizabeth Bradford Scholarship
Tutt and Elizabeth Bradford Scholarship - Journalism
Tutt and Elizabeth Bradford Scholarship - Advertising
Dr. & Mrs. Donald Bradley, Sr. Scholarship Endowment Fund
Robert Brashear Athletic Scholarship Fund
Janet Fay Breazeale Memorial Journalism Scholarship
The University/Scholarships

Bridge to the Future Engineering Scholarship and Fellowship
Bridge to the Future Materials Science & Engineering Scholarships and Fellowships
Broadcasting Department Scholarship
Margaret Cornelia "Connie" Rankin Brock Scholarship
Galen Brooker British Studies Scholarship
Dr. Betty Bronson Textbook Scholarship
Sarah Alice and Tommy Bronson Excellence Endowment Fund
T.E. Tommy-Bronson Athletic Scholarship Fund
Brooks, Ledgentwood, Testerman Memorial Merit Scholarship Endowment
Harry W. Brooks Scholarship Fund
Clarence Brown Career Development Awards
Elaine and Arthur Brown Microbiology Endowment
Fred Brown Minority Scholarship in Engineering
Grover C. Brown Memorial Scholarship Fund
Neil Mann Brown Scholarship in Agriculture
Neil Mann Brown Scholarship in Architecture
William Lester Brown Memorial Fund
Pat & Frank Bryant Scholarship Fund
William P. Bryant Scholarship
BTIV-Civil Engineering Scholarship
BTIV-Industrial Engineering Scholarship Fund
BTIV-Materials Science Scholarship Fund
Calvin A. Buchler Chemistry Scholarship
The Burchfield Burnside Warner Graduate Fellowship in Chemistry
William W. Burnfield, Sr. Scholarship Fund
Robert A. Burgin Sch. End. in Transportation and Logistics
Captain Robert Arnold Burke Award
Eleanor Richards Burke Award
James Henry Burke Sch. End. Fund in College of Law
R. Vance Burke Scholarship
Burlington Industries Aid to Education Fund
Terry Burnette Art Endowment
Terry Burnette Memorial Scholarship Award
Paul C. Burns Memorial Scholarship
Ray & Ada Burns Scholarship
Catherine Burnham Award
Business Administration Minority Scholarship Fund
August A. Busch, Jr. Memorial Wholesaler Scholarship
CBCG Burlington Fellowship in Transportation
CBCG Scholarships Award
CLEO-Stipend Support
William Hooper Coffey, Jr. Memorial Scholarship Fund
Nat Caldwell Journalism Scholarship Fund
Alber Lea Callahan Memorial Agricultural Scholarship
John L. Callaway Civil Engineering Fund
Lawrence H. Callaway Sch. End. Fund for Women's Intercollegiate Athletics
Campbell County County Farm Bureau Scholarship
Jerry Carney/ASHA Leadership Scholarship Endowment Fund
Carolyn Freitag Carriers
Woodrow M. & Margaret T. Catherman Scholarship
CBA Support Account
Hoechst Celanese Outstanding Junior Award in Business Excellence
Center for Theatre Excellence Graduate Fellowship
David Chambers Scholarship Fund
Jody Chambers Scholarship Endowment
The Myron G. Chambers Scholarship Fund
Dean F. A. Chamblin MBA Fellowship Award
Champion International, NC/MESP Scholarship Fund
B.A. Chandler-ORNL Fed. Credit Unit Scholarship
E.J. Chapman Agricultural Scholarship Award
James T. Chappell Endowment Fund
The James T. and Anne Mae Davis Chappell Scholarship Endowment
Chattanooga Kennel Club Scholarship
CHE Board of Visitors Scholarship
Robert L. Cheek, Sr. Memorial Scholarship Endowment
Chemistry Department General Scholarship/Fellowship
George S. Child, Jr. and Helen P. Child Scholarship
George S. Child, Sr. and Helen M. Child Memorial
James & Virginia Childress Scholarship
Mr. and Mrs. D.R. Chopra Memorial Endowment Scholarship
Matthew Keith Christian Memorial Scholarship
The Church Street Methodist Church Scholarships
CIBA Geigy Employee Agriculture Scholarship
Edward & Catherine Cifers Agricultural Scholarship
Clyde Cramp Agricultural Scholarship
Kimberly Clark Chemical Engineering Scholarship
Kimberly Clark, QAMESP Minority Engineering Endowment Fund
Class of 1990 Law Scholarship Fund Endowment
Class of 1991 Dana Collier Scholarship
Class of 1991 Franklin Scholarship
Class of 1993 Scholarship Fund
Class of 1993 Scholarship Fund Endowment
Dale Cleaver Art History Fund
Frank Clement/Cordell Hull Fund
O.H. Clements Memorial Scholarship Fund
Clevenger-Redmond Scholarship
Jesse Davis Clevenger Memorial Scholarship
Randall Cline Memorial
Coca-Cola/MESP Scholarship
Cochran-McDonald's Scholarship Fund
Litton Bunch Band Scholarship
Cooke County Farm Bureau Agricultural Scholarship
Cooke Farmers Coop Agricultural Scholarship
Guy Coheleach Conservation Fund
Hugo Colditz Memorial Scholarship Fund
Cole-Franklin Sociology Scholarship
J.W. Cole Meat Scholarship and Award
Dr. Williams College Scholarship
College of Agricultural Sciences and Natural Resources
College of Business Minority Scholarship Fund
College of Education Alumni Scholarship Fund
College of Veterinary Medicine General Scholarship
Dana A. Collier Memorial Scholarship
J. Howard Collett Scholarship Fund
Ed Collins Memorial Scholarship Fund
Colonial Baking Company Scholarship
Community College Scholarship
Computer Science Support Fund
Cookeville PCA Scholarship
J.A. Cooley Memorial Scholarship Fund
Coopers & Lybrand Scholarships in New Venture Analysis & Entrepreneurship
Charles W. Costello, III Scholarship
Conagra Scholarship Fund
Conservator Education Workshop
Coors/Pinnacle Sales Veterans Scholarship
Coors Veterans Scholarship Endowment Fund
Cortese Arboriculture-Urban Forestry Award
The Coughlin Women's Athletic Endowment Fund
L.C.D. Courtney Scholarship Fund
Carl Cowan Scholarship Fund
Raymond Rankin Cowles Memorial Scholarship
Allan Rice Cox Memorial Scholarship
Carl T. Cox Scholarship Fund
John Cox, Sr. Memorial MBA Fellowship
Dr. E.C. Crafton Scholarship Endowment Fund
CPA Auxiliary Accounting Scholarship
Crafts & Interior Design Award
John M. Cranor, Jr. Scholarship Fund
Betsey B. Creekmore & Betsey Creekmore Scholarship
Frank B. Creekmore Memorial Award
Elsie L. Crenshaw Student Aid Fund
Frances Creswell Scholarship
Nellie Crooks Scholarship Award Fund
Robert A. & Mary Neal Culver Award in Music
Robert & Mary Culver Scholarship Awards
Robert A. Culver Scholarship in Business
Robert E. Curry Tennessee Forage and Grassland Council Scholarship
Howell C. Curtis Memorial Scholarship
Stephen Earl Curtis Scholarship
CVM Minority Undergraduate Scholarship
Bernard I. Dahihel Memorial Scholarship Fund
Dairymen Inc. Scholarships
Mildred H. Davis Scholarship
Stephanie Plais Davis Memorial Scholarship
John S. Daniel, Jr. Scholarship Fund
Carroll H. Davenport ATO Scholarship Fund
Charles B. Davis/Greater Knoxville Advertising Club Endowment
Capt. Herbert L. Davis Memorial Scholarship
Vic Davis Torchbearer Award Fund
Nellie Crooks Scholarship Fund
Durant H. Daponte Discount Fund
Davidson County Farm Bureau Agricultural Scholarship
Frank & Ruth DeFratee Scholarships
DeLoach and Company Scholarship Fund
Delta Nu Alpha Scholarship Fund
Delta Zeta-Amanda (Mandi) Benningfield-Amy Thompson Endowment
Billie Cannon DeMont Graduate Scholarship
Jimmy and Warren Dempster Scholarship Fund
Department of Advertising General Scholarship
The Derthick, Henley & Wilkerson Architects Endowment
H.R. DeSelm Botany, Plant Ecology Scholarship
William Desmond Scholarship in Performing Arts
George F. Devine Scholarship Fund
Digital Equipment Corporation
Dorothy N. Dille Art Scholarship
Robert R. Dince Memorial Scholarship
Dixie Cement Company Fellowship
Robert R. Dince Memorial Scholarship
Dorothy N. Dille Art Scholarship
Robert R. Dince Memorial Scholarship
Dixie Cement Company Fellowship
Robert R. Dince Memorial Scholarship
Dixie Cement Company Fellowship
Robert R. Dince Memorial Scholarship
Dixie Cement Company Fellowship
Robert R. Dince Memorial Scholarship
Mid-East TSHCSW Scholarships in Social Work & Human Services
Mike Milburn Memorial Scholarship - TVA & I J. T. Miller Food Tech and Science Scholarship Fund
John M. & Grace G. Miller Fellowship
Carl W. Miller Memorial Student Assistance Fund
Charles Miller Award of Excellence in Civil Advocacy
Charles Miller Clinical Achievement
Evelyn Miller Scholarship Fund
Mr. & Mrs. Miller Scholarship
Wilhemina and F. DeWolfe Miller Scholarship Fund
John W. Minchey Scholarship Endowment Fund
Minority Engineering Program
Minority Scholarship in Accounting
Minority Student Scholarship in Finance
Minority Student Program in Forestry
Minority Undergraduate Scholarship Program (THEC)
Minority Engineering Scholarship Program
Miss America Co-Ed Scholarship Fund
T.A. Mitchell Scholarship Fund
Anne Y. and Herman L. Modlin, Jr. Scholarship Endowment in Business
Mobil Oil Corporation Development Fund
Clarence Hillman Moody Scholarship
Clarence Hillman Moody Scholarships in Human Ecology
Susan L. Moeller Memorial Scholarship Fund
Philips W. Moffitt Scholarship Fund
Chester A. Molley Memorial Scholarship Fund
Monsanto Fellowship in Botany
The Moore Co. Scholarship
Billy J. & Sylvia F. Moore Scholarship Endowment in Child and Family Studies
Billy M. & Sylvia F. Moore Scholarship
Moore County Agriculture Extension Scholarship
Fulton B. Moore IIIMemorial Scholarship Fund
George C. Moore Co. Scholarship Fund
Grace Moore Scholarship Music
The James L. Moore, Jr., Golf Scholarship For Women’s Athletics
Kyle Campbell Scholarship
Pearl E. and Edward R. Moore Memorial Scholarship Endowment
Richard L. Moore Jr. Graduate Fellowship
Roger M. Moore, Sr. Scholarship Endowment Fund in Finance
Molson Company Scholarship in Agriculture Mr. & Mrs. Herman Morris Mechanical Engineering Scholarship Endowment
Philip Morris USA Scholarship
Philip Morris Ag Ed Scholarship
Tom and Linda Moore Endowment Fund in Business
Mabel Miller Morelock Scholarship Fund
A.H. Moser Memorial Scholarship in Classics
Flora B. & Bessie A. Moss Scholarship Fund
John D. Moss Alpha Gamma Rho Scholarship Fund
J. Owen Donald Scholarship Fund
W.F. & Goldie Moss Agriculture Scholarship Fund
Mrs. Yuen Leung Mo-Tak Memorial Scholarship
C&P Mountcastle, Jr. Band Scholarship
P&C Mountcastle Athletic Scholarship Fund
R. Mountcastle Memorial Law Scholarship Fund
Alpha Gamma Rho-Bill Mullins Scholarship Fund
Music Department Scholarship
Music Department Scholarship-Cello
MXDesign Inc Scholarship Fund
NAC-Minorities in Engineering Scholarship Fund
NACME- National Action Council for Minorities in Engineering, Inc.
The N.A.P. Undergraduate Scholarship in Engineering
Jesse B. Naive Scholarship Fund
NAP Marketing Scholarship Fund
Earl W. Napier Memorial Scholarship Fund
Nashville Banner Scholarship
Nashville Kennel Club Scholarship Memorial National Association of Women in Construction Scholarship Fund
National Science Foundation Scholarship
Native American Studies Scholarship
Martina Navratilova Women’s Athletic Tennis Scholarship Endowment
Jeff Neely Athletic Scholarship
Lindsey Nelson Scholarship Endowment
Thomas P. Nelson, III Memorial Scholarship
Len B. & Nancy Lois Neubert Scholarship
Earl Rick Newton Memorial Scholarship
Jake and Dorothy Newman Scholarship
General Bob Neyland Fund
Robert R. Neyland Academic Scholarship
NFEA Education Foundation Scholarship
NFS Memorial and Honors Scholarship Fund
J.H. Nicholson Memorial Scholarship Fund
Harry Nides Scholarship Fund
A.H. Nielsen College Scholarship Fund
Nippondenso Freshman Scholarship Fund
Nippondenso Scholarship Fund
Mr. & Mrs. Seward Norris Athletic Scholarship
William B. Nowling Athletic Fund
Randall K. Nutt Scholarship Fund
Oak Ridge Waste Management Association
Mickey O’Brien Scholarship
Francis “Red” O’Donnell Scholarship Fund
John Dal Ogle Scholarship Fund
Olin Chemicals/Charleston MESP Engineering Scholarship Fund
Olin Chemical/KY MESP Engineering Scholarship Fund
Olin Chemical/LA MESP Engineering Scholarship Fund
Gene Oliver MEMorial Scholarship
James R. Omer Scholarship Fund
Rhoda O’Meara Scholarship Fund
ONC Steering Committee Scholarship Fund
O’Neal Family Scholarship Fund
Opening Night Club Steering Committee Scholarship Fund
Ornamental Horticulture and Landscape Design Club Scholarship Foundation
Ornamental Horticulture and Landscape Design Scholarship Fund
W. Hugh Overcash Tax Law Scholarship Endowment
Evelyn & Bergein Overholt Scholarship
Kathy Paiko Memorial Scholarship Award
Mr. & Mrs. Marcus Parker Agricultural Scholarship
Parkey Memorial Scholarship
Dr. Larry Parks Agricultural Scholarship
Pasqua Excellence Freshman Scholarship Fund
Charles M. Pasqua Scholarship Fund
Paula Z. & Joseph N. Peeden
Pella Traveling Scholarship
Mike R. Pelton-Ober Gatlinburg Scholarship
William Britt Pennebaker Scholarship Fund
Frank “Bob” & Stella Perry Scholarship
Angie Warren Perkins Prize Fund
Carl Perry Music Scholarship Fund
Martha L. Peters Scholarship Fund
Carl I. Peterson Scholarship Fund
Pettway Athletic Scholarship
P&G Minority Scholarship in Chemical Engineering
HONORS AND AWARDS

DEAN’S LIST
Public announcement of students passing a semester’s work “Summa cum laude” (3.60 through 4.00), “Magna cum laude” (3.65 through 3.79), “Cum laude” (3.50 through 3.64). To be eligible, a student must complete at least 12 hours, not including work taken on a satisfactory/no credit basis.

The honors and awards available to students at UT Knoxville are listed with donors below; the right not to award any of the honors or awards listed herein is reserved to The University of Tennessee, Knoxville.

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 selects an outstanding agricultural engineering student for the ASAEE Student Honor Award. Based on scholarship, activities, and community contributions, the award consists of a key and certificate.

The American Society of Agronomy makes available a Certificate of Merit for an outstanding senior in the Department of Plant and Soil Science who has a superior academic record and displays evidence of high potential in this field.

The American Society of Animal Science awards scholarship medals and embossed certificates to sophomore, junior, and senior students in the Department of Animal Science who are of good moral character and rank scholastically in the top 10 percent of their class.

The Block and Bridle Club recognizes students in Animal Science who are successful in their academic program, have made unusual contributions to the club’s program, and show evidence of leadership in their chosen field. Junior and Senior recipients may be entered in National Competition precipitating 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 made to an active senior Block & Bridle member with interest in the affairs and activities of the Animal Science Department, and a member of the Meats and/or Livestock Evaluation and judging teams.

M. Jacob Animal Husbandry Award. This award originally sponsored by the J.B. Madden family to honor Dr. M. Jacobs who was both head of the Animal Science Department and later Dean of the College of Agriculture. 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.

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 scholastic averages.

SCHOOL OF ARCHITECTURE
Ray and Mary Evelyn Andrus Award. Awarded for excellence in design.
Neil Mann Brown Scholarship in Architecture. Awarded to outstanding student.
Hubert Bebb Scholarship. Awarded to outstanding student at end of second year.
General Shale Products Corporation Fellowship Fund. Scholarships awarded to scholastically outstanding fifth year students.

College of Business Administration

Armstrong Minority Education Scholarship. Minority students in their junior years with a 3.0 GPA.
Arthur Andersen & Co. Alumni Scholarship. Awarded to Accounting students.
Grace and Brodie Baynes Scholarship in Accounting. Awarded to a junior or senior majoring in accounting.
Bible-Nieman Student Development Fund. Student awarded.
R. Vance Burkey Scholarship. Awarded to business students.
Rhea and Ada Burns Scholarship. Awarded to an entering freshman who graduated in the upper twenty-five percent of their class.
William Caffey, Jr. Scholarship. Students in BA/MBA Program in Liberal Arts and Business.

Carolina Freight Carriers Scholarship. Students majoring in Transportation.

Hoechst Celanese Outstanding Junior Award in Business. Student awarded.
David Chambers Memorial Scholarship. Awarded to a student majoring in Statistics.

College of Business Administration Scholarship. Monies awarded to students when available.
College of Business Minority Scholarship. Monies awarded to minority students when available.

Coopers & Lybrand—New Venture Analysis in Accounting. Named for the company of year award.

C.P.A. Auxiliary Accounting Scholarship. Awards for Accounting students.

James M. Cranor, III Scholarship. Awarded to an entering freshman.

Robert A. Culver Scholarship. Awarded to a business student who exhibits outstanding academic scholarship.

Howell C. Curtis Memorial Scholarship. Awarded to a senior majoring in Finance.

Bernard I. Dahlberg Memorial Scholarship. Junior or senior majoring in Accounting.

Delioach & Co. Scholarship. Monies awarded to Accounting students when available.

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.

Dupont Minority Scholarship in Accounting. Minority students in Accounting.

David Ferrell Memorial Scholarship. Awarded to a rising junior or senior who wishes to major in marketing.

Liston M. Fox Memorial Undergraduate Scholarship. Awarded annually to a rising sophomore who is being admitted to a major in the College of Business Administration.

Frito-Lay Minority Scholarship. Awards for minority students.

Joe Frye Scholarship Fund. Monies awarded to Transportation students when available.

James H. Healy Scholarship. Established by participants in the Tennessee Executive Development Program.

J.J.B. Hillard & 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.
Awards for minority students.

Accounting.

Tennessee in the Finance Department.

Business Administration.

full-time minority students in the College of Business.

majoring in Logistics.

Inc. Awarded to a student from Knox County or

fund endowed by the parents.

a business student.

ship. Students majoring in Marketing.

Scholarship. For Accounting majors with 3.0

Monies awarded to Marketing students when

available.

Scholarship. Monies awarded to Logistics and

Statistics students when available.

College of Business students.

minority student intending to major in Logistics.

Alma and Hal Reagan Scholarship.

College of Business students.

King W. Rogers. Awarded to a graduate of Dyer County High School.

Rosemary Snyder Rousch Scholarship. Junior or senior from Tennessee with 3.0 GPA.

Emily Sellaz. Applicant must have a 2.50 average.

Warren Slagle Scholarship. Monies awarded to Accounting students when available.

Clarice and Orville Smith Scholarship. Scholarships awarded to students who have demonstrated successful academic performance.

William B. Stokely, Jr. Primary consideration is given to students from Cocke, Monroe or Loudon counties.

Joe Sullivan, III. Awarded to students majoring in Finance.

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 Accounting majors when available.

Transportation & Logistics Excellence Scholarship. Monies awarded to Logistics and Transportation students when available.

Stephen R. Trotter Memorial Scholarship. Full-time students in Accounting.

John Frank B. Ward Memorial Scholarship. Awarded annually to an Economics major.

Ira A. Watson. Applicant must be a junior majoring in Marketing.

William Way, Jr. Memorial Award. Gold medal or key to senior transportation major with highest average academic achievement.

John and Wanda Wisecarver Scholarship. Business with outstanding academic achievement.

Ronald Wolfe Scholarship Fund. Monies awarded to Economics students when available.

Yellow Freight Scholarship in Transportation. Students majoring in Logistics and Transportation.

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.

James H. Armistead Scholarship. Given to students who are committed to a career in journalism; are graduates of an accredited high school; have a minimum high school grade point average of 3.0 and a cumulative ACT score of 22.

Karl and Madira Bickel Scholarships. Freshman, upperclass and doctoral scholarships. Open to all students showing academic performance (3.5 or better), professional promise, and need.

The Bohan Agency Scholarship. Given to an advertising student 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 one or more juniors in the Department of Broadcasting who have demonstrated outstanding academic achievement and professional promise.

Net 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.

Charles B. Davis Scholarship. Given to an outstanding rising senior in the Department of Advertising.

Greater Knoxville Advertising Club Scholarship Fund. Awarded to an undergraduate student in advertising.

Alex Haley/Playboy Interview Scholarship in Magazine Journalism. Given to an outstanding student in the School of Journalism who shows the greatest interest in magazine journalism with a minimum 3.0 GPA based on academic performance, professional promise and financial need.

Julian Harriss Memorial Scholarship. 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 based on financial need.

Donald G. Hileman Scholarship. Given to an outstanding student in the College of Communications who displays outstanding professional promise.

Darrel W. Holt Scholarship. Given to one or more juniors in the Department of Broadcasting who have demonstrated outstanding academic achievement and professional promise.

Richard Joel Scholarship. Given to a student 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 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 Tennessee resident in the School of Journalism who has an interest in a career in newspaper work.

The Knoxville News-Sentinel Journalism Scholarship. Given to one or more students in the School of Journalism who have shown exceptional professional promise.

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.

Lamar Outdoor Company Scholarship. Given to an outstanding student in the Department of Advertising.

Kelly Leiter Scholarship. Given to an outstanding student in the School of Journalism.
who has an interest in news and public affairs journalism.

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 Shelby County area who is a news-editorial major from the sponsors of the annual gridiron show.

Chester A. Molley Memorial Scholarship. Given to an outstanding member of the staff of student publications.

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 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 student in the public relations sequence in the School of Journalism.

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.

Irving G. Simpson Scholarship. Given to an outstanding junior or senior in the Department of Broadcasting.

Society of Professional Journalists Scholarships. Given by East Tennessee professional chapter of SPJ to a junior majoring in news-editorial journalism or broadcasting/news/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.

Tom Sweeten Memorial Journalism Scholarship. Given to an undergraduate student in the School of Journalism with a minimum 3.0 GPA based on professional promise.

Claude A. Tomlinson Scholarship. Given to a junior or senior in the Department of Broadcasting.

Escar Thompson Memorial Scholarship. Given to an upcoming senior in the School of Journalism who has exhibited outstanding professional promise.

The Charles P. Tombrus Sr. Scholarship. Given to a student majoring in advertising who demonstrates strong professional promise and who has an interest in the creative function in advertising.

Willis C. Tucker Scholarship Award. Given by Society of Professional Journalists. Silver bowl or key for Outstanding senior with highest academic average.

Horse W. Wells Jr. Scholarship. Given to an outstanding student in the School of Journalism based on professional promise.

Leslie Meredith Williams Scholarship. Given to a senior minority student in the College of Communications based on academic excellence, self-motivation, strong will, ambition, charisma and commitment to community service.

James Wolskiel Scholarship. Given to a journalism major interested in a career in newspaper graphic arts.

COLLEGE OF EDUCATION

Alcoa Foundation Scholarship. Awarded to deserving initial teacher licensure students in the field of Economics.

J. Claydon Arnold Teacher Training Schedule. Awarded to deserving initial teacher licensure students from southern states.

Max B. & Lalla B. Arnold Scholarship. Awarded to meritorious students and deserving teachers desiring to improve teaching abilities.

Edna M. & K.M. Benson Memorial Scholarship. Awarded to teachers from Rhea County High School.

Dr. Betty Broman Textbook Scholarship. Awarded to deserving initial teacher licensure students in Elementary Education.

Paul C. Burns Memorial Scholarship. Awarded to deserving initial teacher licensure students in Elementary Education.

College of Education Alumni Scholarship Fund. Awarded to deserving initial teacher licensure students in Elementary Education.

Dr. Lillian L. Gore Scholarship Endowment in Elementary Education. Awarded to deserving initial teacher licensure students in Elementary Education.

The Greater Knoxville Chamber of Commerce Teachers of the Future Scholarship. Awarded to deserving graduates of a public or private high school in Knox County who wish to become teachers in the Knox County School System.

Helen Gilliam Headlee Memorial Scholarship. Awarded to deserving initial licensure students from Loudon County.

A.W. Hobt Memorial Scholarship Fund. Awarded to deserving freshmen in Physical Education.

Edith N. Jessop Scholarship. Awarded to deserving students in Physical Education.

Wanda Wheeler Johnston Memorial Scholarship. Awarded to deserving initial teacher licensure students in Art Education.

Gippie Jones Scholarship Endowment Fund. Awarded to deserving initial teacher licensure student from Cumberland County.

New Repertory Dance Company Scholarship Fund. Awarded to dance majors.

Martha L. Peters Scholarship. Awarded to deserving student in Leisure Studies.

Earle Rick Newton Memorial Scholarship. Awarded to deserving students who are admitted to the Teacher Education Program in Social Sciences Education who are in their fourth or fifth year.

Charles M. Peccolo Scholarship. Awarded to deserving students in the teacher education program.

Ralph F. Quaries Scholarship. Awarded to deserving graduate students in Educational Leadership.

Pi Lambda Theta Fraternity Scholarship Key. Key to junior woman showing most outstanding qualities for professional leadership in education, attaining high scholastic average through junior year.

Dr. & Mrs. David L. Shee Scholarship Excellence in Dance. Awarded to deserving junior or senior students in Dance.

William B. Stokely, Jr. Scholarship Endowment Fund. Awarded to deserving initial teacher licensure students from Cooke, Monroe, and Loudon Counties.

R.R. Vance Scholarship Fund. Awarded to deserving initial teacher licensure students from Tennessee.

Charles Whiteside Memorial Scholarship Fund. Awarded to deserving initial teacher licensure students.

COLLEGE OF ENGINEERING

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 made to a branch member whose performance scholastically and in branch activities has been outstanding.

American Institute of Chemical Engineers Professional Achievement Award. Given to chemical engineering senior who has contributed most to student chapter. Name engraved on permanent plaque. Also certificate.

American Institute of Chemical Engineers Award. Given to chemical engineering junior who has attainted 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 and certificate presented each year to a member of the student section for outstanding contribution to the department and the University.

Joel F. Bailey Award. Given by Tennessee Tau Eta Chapter of Pi Tau Sigma to the student in mechanical and aerospace engineering graduating with the highest scholastic record.

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.

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.

Kenneth L. Elliott Chemical Engineering Scholarship. Awarded annually to a chemical engineering student who demonstrates both academic ability and leadership.

Homer F. Johnson Chemical Engineering Scholarship. Awarded annually to an outstanding incoming chemical engineering freshman. Covers in-state fees for freshman year.

Kimberly Clark Chemical Engineering Scholarship. Annual award by Kimberly Clark Company to outstanding Chemical Engineering junior or senior.

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.


Burton B. Simcox Chemical Engineering Scholarship. Awarded annually to an outstanding incoming chemical engineering freshman. Covers in-state fees for freshman year.
Tau Beta Pi Outstanding Senior Award. Given by the Tennessee Alpha Chapter. Recognition of a senior in engineering who displays outstanding service, leadership, and scholarship. Name on plaque, cash award.

Tau Beta Pi Outstanding Sophomore Award. An annual recognition by the Tennessee Alpha Chapter of a sophomore in engineering who has demonstrated outstanding academic performance and service. Plaque, cash award.

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.

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.

H.L. Weissberg Memorial Award. An annual award given by the department to an outstanding senior major in engineering science. Letter of recognition, plaque.

COLLEGE OF HUMAN ECOLOGY

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 all majors.

Nellie Crooks Award. Awarded to an outstanding student.

Elliott J. Day Scholarship. Awarded to a rising junior or senior in Child and Family Studies.

Frank and Ruth Ligg net DeFriese Scholarship. Awarded to a human ecology student annually.

Irene Hill Greene and Condon L. Greene Memorial Scholarship. Awarded to a student from Anderson County.

Jami High Scholarship. Awarded to interior design students.

Fred Hurst Scholarship. Awarded to students in all majors.

Joseph K. Hach Family Scholarship. Awarded to hotel and restaurant administration students.

Jessie W. Harris Scholarship. Awarded to junior and senior with highest scholastic records.

Jefferson County Cooperative Scholarship in Agriculture. Shared with Agriculture.

Kappa Omicron Nu. Awarded by the home economics honor fraternity.

Knoxville A la Carte Scholarship. Awarded to hotel and restaurant administration students.

Lewisohn Scholarships. Endowed by Frederick Lewisohn.

Rosalie Lockenbach Scholarship. Awarded to deserving students in Technological and Adult Education.

Dr. James D. Marsh Memorial Scholarship Fund. Awarded to deserving junior or senior initial teacher licensure students in Technology Education.

Catherine and 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.

Nutrition Memorial & Honor Scholarship. Travel award for department majors.

Bevile Hal Reegan Scholarship. Awarded to merchandising majors.

Breville Sanders Scholarship. Awarded to an interior design student.

Jane Savage Scholarship. Awarded to nutrition students.

Louis Sr. and Lydia B. Seilaz Memorial Scholarship. Awarded to child and family studies majors.

Shelby Williams Scholarship. Awarded to an outstanding student in all majors except hotel and restaurant administration.

Betty Smith Foundation Scholarship. Awarded to hotel and restaurant administration students; preference given to students from Morristown (Morristown) area; may be awarded to out-of-state students.

Patricia Grubbs Sherwood Scholarship. Awarded to a student from Blount County or East Tennessee.

Statter Foundation Scholarship. Awarded to hospitality students throughout the United States.

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.

University of Tennessee General Scholarships. Variable.

COLLEGE OF LIBERAL ARTS

John M. Allen Mathematics Prize. Medal, to outstanding freshman mathematics student. Prize is determined by competitive examination.

Bain-Swiggett Poetry Prize. For excellence in writing convention for English poetry.

John H. Barrett Prize. Presented to the outstanding senior mathematics student.

Philo Sherman Bennett Prize. Established by the late Honorable William J. Bryan, cash award to student submitting best essay discussing principles of free government.

Biology Award. Plaque, to the outstanding biology senior.

Calvin A. Buehler Chemistry Scholarship. Awarded to an outstanding undergraduate chemistry major who plans to pursue chemistry as a career.

Eleanor R. 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.

Chi Omega Prize. Given by Pi Chapter of sorority to the senior woman majoring in the social sciences, who has the greatest proficiency in the subject.

Randall Cline Award. For writing an outstanding master's degree thesis 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.

Dorothy and Edgar D. Eaves Outstanding Teaching Award and Summer Fellowship Awards. Awarded each year to the GTA in mathematics with previous teaching experience who is named the outstanding teacher of the year in his or her group. Cash award each year to beginning GTA in mathematics who is named the outstanding teacher of the year in his or her group. One or both awards are made to qualified high school teachers who wish to continue their training in mathematics by attending summer school at UT Knoxville.

Arnett A. Elliott Award. Established by the Department of Political Science to honor Arnett A. Elliott's outstanding work in Political Theory. This award or scholarship is given to undergraduates for distinguished performance in Political Theory.

James O. and Minnie Elliott Memorial Scholarship. For “deserving and high ranking students” in any branch of Political Science.

Ann Hight Gore Scholarship. Awarded to the English major who is judged the most outstanding student in the two honors courses, English 398 and 498.

Senior Greek Prize. Established by friends of the classics. Cash award, to member of senior Greek class showing greatest proficiency in the course.

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, or other related subjects.

Edward H. Hamilton Scholarship. Awarded to deserving initial teacher licensure students in Music Education.

Maud Cowl a way Hays Scholarship. Variable scholarship to senior history major with special interest in U.S. History.

History Department Scholarship. Given to a history major with financial need.

John C. Hodges Scholarships. Each year, ten of the best English majors earn Hodges Merit Scholarships, which pay full tuition. One of these is for an incoming freshman, two are for sophomores, three for juniors, and four for seniors. Applications are not accepted; selection is made by a departmental committee on the basis of superior academic performance in English.

Italian Studies Award. Established by the Italian Division of the Department of Romance Languages. Cash award to outstanding student in upper-division courses in Italian.

Knickerbocker Poetry Prize. For excellence in writing English poetry. Founded by the late Stephen L. Mooney 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.

Charles T. McClung Prizes. Cash prizes to junior and senior Speech Communication majors for excellence in compositions pertinent to the speech discipline.

Louise Carr McClure Scholarship. Established for undergraduates 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 Prof. A.D. Melaven. Cash awards given each term to outstanding students.

Judson 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.

Bernadotte Schmitz History Scholarships. Two scholarships for academic excellence and one based on financial need. History majors only.

Cooper D. Schmitz Scholarships. Given to mathematics majors for academic excellence.

Caesar and Edith Stair Music Education Fund. Awarded to junior or senior initial teacher license 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.

Rush Strong Medal. Established by the late Benjamin Rush Strong, Knoxville. Medal to student submitting best essay on “The Value of Truth”.


COLLEGE OF NURSING

Susan Moeller Scholarship. Awarded each year to a senior student having a GPA of 3.0 or better in all nursing courses.

UT Hospital Auxiliary Nursing Scholarship. Awarded each year to either a junior or senior student. It is based primarily on financial need and preference is given to in-state students.

Knoxville Academy of Medicine Auxiliary Scholarship. Available to junior and senior students with a major in nursing and a minimum GPA of 2.5. Major must be in nursing.

Knoxville Orthopaedic Clinic Scholarship. Awarded annually to a senior nursing student with a strong academic background, well developed clinical skills, and a demonstrated interest in orthopedic or rehabilitation nursing.

Dale H. Goodfellow Scholarship. Awarded annually to a senior nursing student with average academic performance and demonstrated excellence in acute care nursing practice.

Army ROTC Nursing Scholarships and Air Force ROTC Nursing scholarships are available through the University of Tennessee ROTC programs.

Other scholarships are made available through the University Financial Aid Office.

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, professional 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.

Alpha Epsilon Delta, for students preparing for study in medicine. Students with minimum 3.0 average in all courses may be eligible at the time of graduation.

Alpha Lambda Delta, an academic honor society for freshmen who have a 3.5 GPA carrying a full load. The purpose is to encourage academic scholarship 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. Scholarship awarded annually to a student with a major or minor in health and safety. Eligibility is based on academic performance, character, and potential for leadership.

Beta Gamma Sigma, national business honorary society for undergraduate students. A minimum 2.5 GPA is required. The society recognizes outstanding contributions to the field of business education.

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. A minimum 3.0 GPA is required. The society recognizes outstanding contributions to the field of industrial education.

Kappa Delta Pi, for secondary and college level teachers. A minimum 3.0 GPA is required. The society recognizes outstanding contributions to the field of education.

Kappa Omicron Nu, Home Economics Honor Society. Membership is by invitation and based on scholastic achievement.

Kappa Delta Sigma, for students enrolled in the College of Business Administration. A minimum of 30 Miami GPA is required.

Delta Nu Alpha, for transportation students. Prospective members must have at least a 3.0 average in all subjects, and have a minimum GPA of 2.5.

Delta Pi Epsilon, for business education students. Prospective members must have a minimum 3.0 average in all business courses, and a minimum GPA of 2.5.

Delta Sigma Pi, professional business fraternity for students enrolled in the College of Business Administration. A minimum of 30 Miami GPA is required for initiation.

Delta Chi Eta Phi, for law students.

Eta Kappa Nu, for electrical engineering students. Membership is by invitation and based on scholastic achievement.

Epsilon Omega Sigma, for students enrolled in engineering majors. Membership is by invitation and based on scholastic achievement.

Gama Beta, for foreign language students. Membership is by invitation and based on scholastic achievement.

Gama Sigma, for students enrolled in the College of Business Administration. A minimum of 30 Miami GPA is required for initiation.

Iota Alpha Chi, for students enrolled in the College of Agriculture. Membership is by invitation and based on scholastic achievement.

Iota Lambda Sigma, for industrial education students. A minimum 3.0 GPA is required. The society recognizes outstanding contributions to the field of industrial education.

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Iota Lambda Sigma, for industrial education students. A minimum 3.0 GPA is required. The society recognizes outstanding contributions to the field of industrial education.

National Slavic Honor Society (Dobro Slovo), for students in their third year of study in Slavic literature, culture, or related subjects with a minimum average grade of 85 percent or its letter or point equivalent in the subject area and an 85 percent overall average. Members...
are chosen from the undergraduate and graduate students and faculty of the institution.

Omicron Delta Epsilon, honor society in economics for students and faculty. Student members must have a minimum 3.0 overall average. Omicron Delta Kappa, for junior and senior students. Omicron Nu, for home economics students. Members are elected from the upper one-fourth of the senior class and upper one-fifth of the junior class, not to exceed 20 percent of any given class. Order of the Colf, for law students.

Omicron Delta Kappa. Students are elected by the current membership, faculty elected by faculty members, junior or senior students in the upper 35% of their class and who possess outstanding leadership credentials.

Order of Omega. Greek honor society for junior/senior members of fraternities or sororities with the minimum of the all sorority/fraternity GPA. The purpose is to recognize those students who have attained a high standard of leadership in intergreek activities.

Phi Alpha Delta, for law students.

Phi Beta Lambda professional fraternity for students enrolled in the College of Business Administration. Prospective members must be enrolled in at least three hours in the college with a minimum of 2.2 average.

Phi Beta Kappa, the oldest national academic honorary society, for liberal arts 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 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 Liberal Arts Student Academic Affairs Office. 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.

Phi Kappa Phi, broadest of the national honor societies, recognizing all fields of learning. Prospective members must be seniors ranking among the upper 10 percent of their class, with a minimum 3.0 average. Meeting these requirements does not necessarily assure election.

Pi Delta Phi, for French students. Prospective members must have a minimum B-minus average in all French courses taken.

Pi Kappa Lambda, for students in music and music education.

Pi Lambda Theia, 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. Pi Sigma Alpha, for political science students and faculty. Student members are elected solely on the basis of scholarship.

Pi Tau Sigma, for mechanical engineering students. Prospective junior members must rank in the upper one-fourth, and senior members in the upper one-third of their respective mechanical engineering class.

Psi Chi, National psychology honor society for students with 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.

Scabbard and Blade, military science honor society for upperclass students.

Sigma Alpha Iota, 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 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 Theta Tau, national nursing honor society for those students who have demonstrated outstanding scholastic achievement, professional leadership potential, and/or marked 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 junior 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 persons 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 undergraduates majoring or planning to major in business who have a minimum GPA of 2.75 are welcome to pledge Alpha Kappa Psi.
ADMISSION TO THE UNIVERSITY OF TENNESSEE, KNOXVILLE

As the state's largest and most comprehensive university, The University of Tennessee, Knoxville 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 Knoxville 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 Knoxville 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 many students whose past academic records are average 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 Knoxville encourages persons whose interests and goals have changed with time. Many adults who have little or no college work find that, after some years in the working world, they are both willing and able to take advantage of the study opportunities provided by a major university such as UT Knoxville. Others who have completed a program of study or have received a degree may desire to expand their knowledge or prepare for a different vocation and may re-enroll or transfer previous credits to UT Knoxville.

REQUIREMENTS FOR ADMISSION AS A UT KNOXVILLE UNDERGRADUATE STUDENT

Anyone interested in attending UT Knoxville 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.

FRESHMAN ADMISSION

For admission purposes, a student is classified as an entering freshman if:

1. the student has graduated from high school; and
2. the total of attempted college-level credit work at an accredited institution after graduation from high school has been less than 12 hours, excluding summer school and college courses taken while still in high school.

Students are encouraged to apply as early as possible. Timely admission contributes to better orientation, course planning, class scheduling and financial aid consideration.

High school students planning to apply as freshmen should submit applications as soon as possible after completion of the junior year. Applications for admission are available from many secondary school guidance/counseling offices and from the Office of Admissions, UT Knoxville, 320 Student Services, Knoxville, TN 37996-0230.

The University seeks to admit those students who can provide evidence of the intellectual performance and potential that will permit them to benefit from UT Knoxville programs. In 1993, the freshman class had an average ACT score of 23.4 or an average SAT of approximately 1000 and a high school average of 3.2 on a 4.0 scale.

A prospective student must have completed at least:

- four (4) units of English
- three (3) units of math including two (2) units of algebra and one (1) unit of advanced math, trigonometry, geometry, or calculus (The College of Engineering requires 3 1/2 years of math including trigonometry and geometry as prerequisites for all courses. Students intending to major in the College of Business Administration should also take 3 1/2 years of math including trigonometry and geometry in preparation for the collegiate math requirement.)
- two (2) units of natural sciences including at least one (1) unit of biology, chemistry, or physics;
- one (1) unit of American history; one (1) unit of European or world history or world geography;
- two (2) units of a single foreign language.
- one (1) unit of visual or performing arts.

Applicants with foreign language deficiencies from those high schools that do not offer the required two years of a single foreign language may, with proper approvals, be admitted to the University. However, this deficiency must be removed during the first two years (60 semester hours) of University work; courses taken to satisfy foreign language deficiencies may be taken only as electives.

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

1. Have a final transcript of all high school credits sent to the Admissions Office. Transcripts carried by the student are not acceptable for the admissions file. If any courses have been taken for college credit, the institution(s) granting credit must be contacted and asked to send an official transcript to the UT Knoxville Admissions Office. Students who have achieved a high school diploma through the General Education Development (GED) Test also must have the GED scores sent. Older than average students may be given special consideration. (See re-entry student applicants below.)
2. Send the score report of the American College Testing program (ACT) or the Scholastic Aptitude Test (SAT) to the Admissions Office.
3. Pay a nonrefundable application fee of $15.00.
4. Submit any additional items and information requested in the application materials or by the Office of Admissions. Any applicant who is denied admission may make written appeal to the Director of Admissions.

Advanced Placement Examinations:

Freshmen admitted to UT Knoxville 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 Knoxville which grant advanced placement credit for satisfactory test scores include Art, Biology, Chemistry, Computer Science, English, French, German, History, Latin, Mathematics, Music, Physics, Political Science, Psychology, and Spanish. The CEEB sends scores and test books on request to the Director of Admissions at UT Knoxville 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 Liberal Arts 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 early required courses. Specific requirements for admission and progression are listed under the School of Architecture.

TRANSFER APPLICANTS

A student who has attempted 12 or more semester hours of college credit courses at one or more regionally accredited institutions of higher learning and who does not qualify as a freshman applicant under the rules described above must apply for admission as a transfer student. Remedial, developmental, and vocational or technical courses do not qualify as college credit courses for transfer purposes.

APPLICATION PROCESS:

1. A completed application for admission must be submitted to the Office of Admissions along with the $15 non-refundable application fee.

2. A complete and separate official transcript of all work from each college or university attended should be sent by each institution directly to the Office of Undergraduate Admissions, 320 Student Services Building, UT Knoxville, Knoxville, TN 37996-0230. Transcripts carried by the student or not directly received from the sending institution are unacceptable (although such documents may be used for advising purposes).

3. Complete high school transcripts should be sent by the high school directly to the Office of Undergraduate Admissions. Transfer students who have not taken the ACT or SAT are not required to do so.

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 Knoxville, 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 Knoxville and include both original and repeated coursework, regardless of the grade. The UTK 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 Knoxville 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 Knoxville; (2) which will transfer as general elective credit, and, in which cases, 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 Knoxville, has the responsibility for determining guidelines for which courses are accepted for transfer credit. Certain transferable courses are not equivalent to specific UT Knoxville courses. These courses may be used to meet specific curriculum requirements only with approval of the director of the 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 Knoxville college.

HIGH SCHOOL UNITS

Transfer students with 60 or more semester hours of transferable credit are exempt from high school course unit requirements. Transfer students who graduated from high school in 1989 or later and who have earned less than 60 semester hours are required to complete high school unit requirements within the first 30 semester hours at UT Knoxville. Prospective transfers to UT Knoxville 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 transfer to UT Knoxville.

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 Knoxville. These transfer programs lead to the awarding of the associate degree by the specified community college and the baccalaureate degree by UT Knoxville, 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 Knoxville, 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 to UT Knoxville as freshmen or transfer students. In addition to the information below, additional information for international students is available from the Admissions Office or from 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 types 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 below) - must present a "Test of English as a Foreign Language (TOEFL)" score of at least 525 (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.

   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 UT Knoxville.

   c. An undergraduate student whose first language is not English is exempted from taking the UT Knoxville English Placement Test and from presenting a TOEFL score of 525 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 525.

   d. A United States citizen or permanent resident whose first language is not English but who has graduated from a high school in a country whose first language is English, may be admitted with the minimum ACT English score of 21 (SAT verbal 430) or TOEFL 525. Any other United States citizen or permanent resident whose first language is not English must conform to the regulations stated in a, b, and c above.

4. Applicants from certain countries are required to make significant monetary deposit prior to issuance of Form I-20 to secure a student visa.

5. International students must enroll in the health and accident insurance plan provided by UT Knoxville.

6. For international students, completed application forms and supporting credentials must be received in the Admissions Office no later than the following dates: June 15 for Fall Semester; November 1 for Spring Semester; March 1 for Summer Term.

International students are subject to various enrollment limitation regulations comparable to those pertaining to 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 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 Knoxville because of the availability of certain course work or because of temporary residence in the Knoxville area.

VISITING STUDENTS are admitted for one semester. Students desiring to transfer to UT Knoxville must file an application for admission as a transfer student. Students desiring to attend UT Knoxville on an interim basis for only one semester must submit, in addition to the application form, a letter of good standing from the institution at which enrolled.

Since academic records will not be available at UT Knoxville for visiting students, use of UT Knoxville courses in a visiting student's degree program is a matter to be decided by the home institution. Academic advising will be limited to information about courses in which the student enrolls and may be obtained from the academic departments. Visiting students must have the required background (prerequisites) and meet all other course requirements. Academic overloads will not be permitted.

RE-ENTRY STUDENT APPLICANTS
A re-entry student is one who has not been enrolled in school for 3 years or more prior to making application for admission to UT Knoxville. Freshman re-entry students should have official high school transcript(s) submitted to the Admissions Office. Transfer re-entry students should have high school transcript(s) and transcripts of all previous college work submitted. ACT/SAT scores are not required for either freshman or transfer re-entry students.

Admissions decisions will be made on an individual basis. Exceptions to the admissions criteria may be made for those applicants who demonstrate sufficient preparation.

No applicant who has attended UT Knoxville will be considered a re-entry student. Former UT Knoxville students should follow readmissions procedures as described elsewhere in this catalog.

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 applications, regardless of intended registration location. Non-degree students must show evidence of satisfactory preparation for the courses they wish to take. Ordinarily the high school class of a non-degree student must have graduated. Former University of Tennessee 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 and 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. No more than 15 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 Knoxville.

SENIOR AND DISABLED APPLICANTS
Persons 60 years of age or older and/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 and/or totally disabled persons who are residents of Tennessee may enroll in credit courses at reduced fees. Interested persons should 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 10, 11, or 12 in public or private school in Tennessee may 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.

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 of 1180 or above. 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.

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 of the requirements for the category sought should not apply as stated, he/she 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 Knoxville and earn a degree.

DEADLINES FOR APPLICATIONS
Completed application materials and supporting credentials for first time freshmen and transfer students must be received in the Office of Admissions no later than the following dates: July 1 for Fall Semester; November 1 for Spring Semester; and April 1 for Summer Term. Any applicant who wishes to be considered for scholarships must be admitted to the university by February 1. An applicant who expects to be considered for any form of need-based financial aid must be admitted by February 15.

READMISSION
Submission of an application for readmission is required for a student who has withdrawn from school, who has been absent from a term other than the summer term or who has been academically dismissed. A student who previously attended as a non-degree student and wants to reenter as a degree seeking student must apply through the Office of Undergraduate Admissions. The Office of Readmissions approves or denies applications for readmission. A student may be asked to attend an interview with the Director of Readmissions or to appear before the Committee on Readmissions.

A student who has attended another college or university since attending UT Knoxville must have an official transcript sent to the University. A readmission decision will be based partly on this additional post-secondary work.

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.

All students must apply before the first day of classes, but special deadlines have been established to allow for the processing of certain categories of application for readmission. Students dismissed when they last attended the University and those who have registered at another institution of higher education since their last UT Knoxville enrollment must apply in advance. Official transcripts of any transfer work must be submitted before a decision on readmission can be made. For specific deadline dates, students should consult the Office of Readmissions, 212 Student Services Building.

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
Credit Hours, Grades and Grade Point Average/Academic Policies

The basic unit of credit at The University of Tennessee, Knoxville, 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 Knoxville by the number of hours the student has attempted at UT Knoxville, not including hours for which grades of I, N, NC, P, S, and W have been received.

UNDERGRADUATE GRADES

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

GRADES OF INCOMPLETE

Under extraordinary circumstances and at the discretion of the instructor, an "I" (incom-
complete) may be assigned to a student whose work is satisfactory but who has not completed a portion of the course. The terms for removal of the "I," including the time limit for removal of the "I," will be decided by the instructor. It is the responsibility of the student receiving an "I" to arrange with the instructor whatever action needed to remove the grade at the earliest possible date. and in any event, within one year of the assignment of incomplete. 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.

GRADUATE SCHOOL GRADES

Graduate students and undergraduates taking courses for graduate credit are graded as follows:

A (4 quality points per hour), superior performance
B+ (3.5 quality points per hour), better than satisfactory performance
B (3 quality points per hour), satisfactory performance
C+ (2.5 quality points per hour), less than satisfactory performance
C (2 quality points per hour), performance well below the standard expected of graduate students
D (1 quality point per hour), clearly unsatisfactory performance and cannot be used to satisfy degree requirements
F (no quality points), performance unsatisfactory and cannot be used to satisfy degree requirements
I (no quality points), a temporary grade indicating that the student has performed unsatisfactorily in the course but, due to unforeseen circumstances, has been unable to finish all requirements. An I is not given to enable the student to do additional work to raise a deficient grade. The course will not be counted in the cumulative grade average until a final grade is assigned. No student may graduate with an I on the record. Consult the Graduate Catalog for regulations concerning the removal of incomplete grades.

S/NC (carries credit hours, but no quality points), S is equivalent to B or better, and NC means no credit earned. Courses in which S/NC grading is allowed are indicated in the course description in the Graduate Catalog. The number of S/NC courses in a student's program is limited to one-fourth of the total credit hours earned.

P/MP (carries credit hours, but no quality points). P indicates progress toward completion of a thesis or dissertation. NP indicates no progress or inadequate progress.

W (carries no credit hours or quality points), indicates that the student withdrew from the course.

No graduate student may repeat a course for the purpose of raising a grade already received, with the exception of NC. A graduate student may not do additional work to raise a final grade.

LAW SCHOOL GRADES

Law students are graded on a numerical scale from 0.0 to 4.0. Quality points per hour of credit in a given course are equal to the numerical grade received in the course. Grades of 0.9 and below count as failures. Some courses are graded on an S/NC basis.

GENERAL REGULATIONS

ACADEMIC ADVISING AT UT KNOXVILLE

Faculty, administrators, and professional staff on this campus consider the 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 an advising system at UT Knoxville 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 Knoxville, 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 Liberal Arts Advising Center, 220 Ayres Hall, with assistance of advisors in other colleges and career planning.

New students at UT Knoxville 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, deans of undergraduate deans or advising centers. Numerous other sources of academic, career, and personal counseling exist on the UT Knoxville campus.
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 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>
<th>Undergraduate Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>0-31.9</td>
<td>0-29.9</td>
</tr>
<tr>
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<td>90-129.9</td>
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<tr>
<td>Fifth</td>
<td>128-159.9</td>
<td>130-169.9</td>
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</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 Student Counseling Services 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 subjects 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 Knoxville students who intend to take correspondence courses must have the approval of the dean of the college or school in which they are 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 Knoxville student if an equivalent correspondence course is available from The University of Tennessee Center for Extended Learning.

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, Knoxville. 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:

- Course Numbers Level
- 000-099 Non-credit; preparatory
- 100-299 Lower division—primarily for freshmen and sophomores
- 300-499 Upper division—primarily for juniors and seniors; when taken for graduate credit, the letter "G" will precede the course credit hours on the grade report
- 500-599 Graduate; sometimes available for undergraduate credit; when taken for undergraduate credit, the letter "U" will precede the course credit hours on the grade report
- 600-699 Advanced graduate; open to graduate students only
- 700-899 Law; occasionally open to other qualified students. Veterinary medicine
- 900-999 Non-credit; preparatory

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.

DEVOTION 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 study period. Courses that are exempt from this policy are so indicated in the catalog course description.

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 which 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.

HONORS 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/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.
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 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.

An essential feature of The University of Tennessee, Knoxville is a commitment to maintaining an environment of intellectual integrity and academic honesty. As a student of the University, I pledge to do my best to learn and to give no less than the best in my 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 that offer four credit hour courses, the total may be eight semester hours.

Letters are freshers 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, Knoxville, will remain open except in the most severe weather conditions. The Chancellor 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 television 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 telephone 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, administrators, 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 changing 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 academic work which they 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 five students at the lower division; twelve at the upper division; and nine at the graduate level except by permission of the Vice Chancellor for Academic Affairs. The University reserves the right to cancel, postpone, or combine classes as necessary.

PROFICIENCY EXAMINATION
A proficiency examination may be given in any academic course offered for undergraduate credit. The University policy is to reserve departments the decisions as to which courses, if any, cannot be passed by proficiency examinations. Proficiency examination credit is available only for UT Knoxville students.

When applying to a department for a proficiency 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 an 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 Knoxville 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 every student shall participate 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.

SECOND MAJORS AND MINORS
Students may pursue any available minors or second majors which will be noted on their transcripts upon graduation. Students should understand that meeting the requirements 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, Knoxville, who needs 30 semester hours or less to complete 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 undergraduate and graduate work per semester, subject to the approval of each term of the Dean of the Graduate School.

SPECIAL REQUIREMENTS FOR STUDENT-ATHLETES
Student-athletes participating in intercollegiate 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, Knoxville. 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 Knoxville. All undecided students are designated University Students and are advised by the Liberal Arts Advising Center. While it is proper to explore alternative choices, student should also aim at pursuing a course of study that culminates in graduation. For this reason students who enter UT Knoxville as freshmen may remain as University Students no longer than through the completion of the second full term of study (30 semester hours). Students who transfer from another college or university may enroll as University Students, however, if the total number of hours transferred is more than 30 semester hours, transfer students may remain as University Students no longer than through the completion of 15 semester hours. UT Knoxville students who fail to progress in a given major, college, or school and are undecided about an alternative course of study may continue at UT Knoxville 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.
**REGISTRATION**

Dates for orientation and registration are announced to new transfer and freshman students when the Certificate of Admission is issued. Graduate students are instructed when to register upon receipt of their Admission Status. Former students who have been absent from UT Knoxville other than the summer term and students who have withdrawn from the previous 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.** Although 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 Dean of Student Conduct and 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 unless otherwise specified by the college or school in which the student is enrolled. 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 summer term. Students 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 Form and having it processed at a terminal in the Office of the Registrar. Between the add deadline and the drop deadline, the signature of the Special Services Office or College Adjunct member (see Timetable 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 or instructor 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 must fill out and submit the appropriate form for section changes in order to change credit for the course. Students may withdraw from courses without penalty prior to the drop deadline. For all undergraduate students, the drop deadline is 22 calendar days after the beginning of classes. Students must follow the current timetable for announced calendar dates.

The exceptions to these deadlines are summer and other special sessions. Students should consult the summer term timetable for the appropriate drop deadline.

Any course may be dropped before the drop deadline specified above without notation on the academic record. In order to drop a course students must fill out and submit a drop form to Computer Assisted Registration.

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.

After the drop deadline, any undergraduate or graduate student who drops a course will receive the grade of F unless it can be demonstrated that the request to drop the course is based on circumstances beyond the student’s control. Examples of such circumstances are illness or injury (verified by the Student Health Service or private physician), or necessary change in work schedule occurring after the drop deadline (verified by the student’s employer). Examples of circumstances which would not be acceptable for a late drop are improper registration by the student or failing a course.

**WITHDRAWING FROM THE UNIVERSITY**

Undergraduate day students who need to leave the University before a term is finished must apply for withdrawal through the Office of Readmissions. 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. No transcript record of the enrollment will be made when a student withdraws before classes begin. For later withdrawals, 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. Following the drop or withdrawal deadline (22 calendar days into the regular semester), the student will receive final grades unless it can be demonstrated that circumstances beyond the student’s control prevent completion of the term. In that case, a withdrawal is approved and the grade of "W" assigned in each course.

A student who simply decides to withdraw from classes without withdrawing officially will be assigned the grade of "F" in each course. Students who do withdraw officially, must apply for readmission in advance of their next term of enrollment. 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 attempt at UT Knoxville 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...
for at least one term or may request the student meet with a counselor to identify a more appropriate course of study. A student with a cumulative GPA of 2.00 or higher on UT Knoxville work may seek admission to an alternate college and major.

**GENERAL REQUIREMENTS FOR A BACHELOR’S DEGREE**

To receive a bachelor’s degree from The University of Tennessee, Knoxville, 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 the bachelor’s degree is reviewed and approved for meeting the degree requirements by the Office of the Dean of Admissions and Records.

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 Knoxville 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 Registrar’s Office.

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

3. Complete the last 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, Knoxville.

5. All students must accept the college or school of their major for a minimum of the last year of study (30 semester hours prior to graduation).

6. Comply with the state law that one unit of American history at the high school level or six semester hours of collegiate work be satisfactorily completed. This requirement is effective for those graduating July 1, 1978 and thereafter. It may be satisfied by completing History 251-252 or 257-258. History 449 may be used in lieu of the three 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.

7. 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.

8. Satisfy all financial obligations (fees or fines) due to the University.

9. Pay to the Treasurer’s Office the graduation fee no later than the beginning of the semester of graduation.

10. File an application for a degree with the Office of the Registrar, Room 208 Student Services Building, at Pre-Registration for your final term before graduation. 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.

11. Comprehensive Test in Major.

**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 a 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, Knoxville. Students must have earned at least 60 hours at UT Knoxville 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 UTK and the transfer work brought in to that date, or the average earned at UTK, 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.

**SECOND BACHELOR’S DEGREE**

A student who holds a bachelor’s degree may receive a second bachelor’s degree from The University of Tennessee, Knoxville, by satisfying the following:

1. Meet all requirements of both degrees, as specified above.
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 an intention to work for a second bachelor’s degree with the Office of Registrar.
THE UNIVERSITY REQUIREMENT
GENERAL EDUCATION

The goal of general education is to develop those basic skills, knowledge, 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 communication 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:
- Multicultural studies, which analyze international dimensions of critical issues or explore elements and values that shape a culture other than the student's own;
- Interdisciplinary studies, which incorporate the methods and approaches from two or more disciplines to explore major issues; or
- 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.
### TERMS COMMONLY USED IN ADMISSION AND REGISTRATION PROCEDURES

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Academic load</strong></td>
<td>The total semester hours of credit for all courses taken during a specified time—semester, summer term, or other special sessions.</td>
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<tr>
<td><strong>Accredited</strong></td>
<td>A term applied to a school or specific program which has been recognized by some national or regional organization as meeting certain academic standards for quality and educational environment.</td>
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<tr>
<td><strong>Add and drop deadlines</strong></td>
<td>The latest date in an academic term when a course may be added or dropped from a student’s class schedule without approval of someone other than the student (exception: when the additional hours produce an academic overload).</td>
</tr>
<tr>
<td><strong>Admission</strong></td>
<td>The process of being admitted to the University with the opportunity to take classes.</td>
</tr>
<tr>
<td><strong>Admissions file</strong></td>
<td>The set of documents related to a request for admission. The set contains the application form and official transcripts of previous work in high school or college and may contain standardized test scores (ACT or SAT for freshman applicants), a statement of career objectives, forms for international students, or other information required by the Admissions Office.</td>
</tr>
<tr>
<td><strong>AP exam</strong></td>
<td>An Advanced Placement Examination in a specific subject area available nationally to high school students from the College Entrance Examination Board (CEEB). Obtain information on taking the examination from a high school guidance counselor. Information on university course credit for these examinations is available from the Admissions Office.</td>
</tr>
<tr>
<td><strong>Application deadline</strong></td>
<td>The date which all documents required for the admissions file of a prospective student must be received by the Admissions Office.</td>
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<td><strong>CLEP test</strong></td>
<td>Subject area examination administered by the College Entrance Examination Board. Details and comparisons with the AP exam can be obtained from: The College-Level Examination Program Box 1821 Princeton, NJ 08540 Statements on acceptance of CLEP test scores for academic credit are found in this catalog.</td>
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<tr>
<td><strong>Concentration</strong></td>
<td>A collection of courses within a major which focuses on a particular subject area. The term “concentration” describes the nature of the set of courses.</td>
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<tr>
<td><strong>Corequisite</strong></td>
<td>A course to be taken or a requirement to be fulfilled at the same time as a particular course is being taken.</td>
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<tr>
<td><strong>Curriculum</strong></td>
<td>The set of courses offered in a particular degree program. More generally, the courses (in total) offered in a college or university. The plural word is curricula.</td>
</tr>
<tr>
<td><strong>English Proficiency Test</strong></td>
<td>A test taken at UT, Knoxville prior to initial registration (but after admission) by undergraduate international students to determine what English course (if any) must be taken. This test is in addition to the minimum TOEFL test requirement.</td>
</tr>
<tr>
<td><strong>Evening school</strong></td>
<td>An administrative unit of the Division of Continuing Education designed to serve students who work during the major portion of the day.</td>
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<tr>
<td><strong>Full-time</strong></td>
<td>One who is registered for 12 hours or more during a semester.</td>
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<td><strong>Grade point</strong></td>
<td>An average on the 4-point scale determined by dividing the total accumulated quality points by the corresponding total of hours of credit attempted. Certain grades do not influence this computation. High schools have a similar procedure for computing an average on the numerical grading scale (often abbreviated as HSGPA).</td>
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<tr>
<td><strong>Honors course or section</strong></td>
<td>A version of a regular course reserved for students with superior preparation for that course. See, for example, English honors; Chemistry honors; Mathematics honors; History honors.</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>Lower division</td>
<td>1. A course normally taken during the freshman and sophomore years. In the courses numbering system, lower division courses carry 100 and 200 numbers. Credit for lower division courses completed at another institution may be labeled &quot;LD credit.&quot;</td>
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<tr>
<td></td>
<td>2. A term referring to a student's location in the progression of coursework leading to an undergraduate degree and implying freshmen or sophomore classification.</td>
</tr>
<tr>
<td>Major</td>
<td>The principal education interest of a student as represented by one of the curricula offered by the various colleges. The undergraduate degree may or may not carry the same title as the major. Every student has one or more majors but may or may not have a concentration within a major.</td>
</tr>
<tr>
<td>Minor</td>
<td>A secondary subject area interest (to the major) represented by a specified set of hours and/or courses. Diffs from &quot;concentration&quot; in that a minor is not a subdivision of the major subject area.</td>
</tr>
<tr>
<td>Option</td>
<td>A concentration of elective courses within a major which emphasizes one aspect of the major, chosen by a student according to his/her interests.</td>
</tr>
<tr>
<td>Orientation</td>
<td>A meeting (or series of meetings) designed to acquaint a new student with the facilities, policies, sources of information and assistance, and academic and social atmosphere.</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>A requirement to be completed (or a level of skill or knowledge to be demonstrated) before enrollment in a course, a degree program, or association with a college.</td>
</tr>
<tr>
<td>Proficiency exam</td>
<td>A test given to an admitted student to evaluate knowledge or skills normally acquired through completion of a particular course.</td>
</tr>
<tr>
<td>Progression</td>
<td>An internal evaluation process in some colleges or degree programs by means of which a student's academic standing is examined to determine if prior work is complete and if the student should proceed towards completion of the remaining degree requirements. The most common evaluation point is at the end of the sophomore year.</td>
</tr>
<tr>
<td>Quality points</td>
<td>Academic performance records are compiled through use of a scale assigning 4 &quot;quality points&quot; per semester hour of credit for an &quot;A&quot; grade ranging to 1 quality point per semester hour of credit for a &quot;D&quot; grade.</td>
</tr>
<tr>
<td>Registration</td>
<td>The process of officially gaining entrance into one or more courses.</td>
</tr>
<tr>
<td>Semester</td>
<td>The division of the calendar year used in academic scheduling. A semester is roughly 4 months in duration.</td>
</tr>
<tr>
<td>Semester hour</td>
<td>The unit of academic credit at UT, Knoxville.</td>
</tr>
<tr>
<td>TOEFL test</td>
<td>An internationally administered examination measuring ability to use the English language. Required of any international student applying whose native language is not English. For information and to make arrangements to take the examination, contact:</td>
</tr>
<tr>
<td></td>
<td>The Test of English as a Foreign Language, Educational Testing Service, Princeton, NJ 08540.</td>
</tr>
<tr>
<td>University honors</td>
<td>Non-departmental enrichment courses available (by invitation only) from the University Honors Program.</td>
</tr>
<tr>
<td>Upper division</td>
<td>1. Courses normally taken during the junior and senior years (300 and 400 numbers). A student taking primarily junior and senior courses is said to be an upper division student. Credit for upper division courses may be labeled &quot;UD credit&quot; on a transfer evaluation.</td>
</tr>
<tr>
<td></td>
<td>2. The state of being classified as a junior or senior.</td>
</tr>
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</table>
## MAJORS, MINORS AND CONCENTRATIONS

<table>
<thead>
<tr>
<th>DEPARTMENT (UNIT)</th>
<th>MAJOR</th>
<th>CONCENTRATION WITHIN THE MAJOR</th>
<th>DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Agricultural Sciences and Natural Resources</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Agriculture (Interdepartmental Unit)</td>
<td>Agriculture</td>
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<tr>
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<td>Agricultural Economics and Rural Sociology</td>
<td>Agricultural Economics and Business</td>
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<td>Agricultural Engineering</td>
<td>Agricultural Engineering, Food Engineering</td>
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<td>Agricultural Engineering Technology</td>
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<td>Agricultural Extension Education</td>
<td>Animal Science, Animal Science Technology</td>
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<td>Animal Science, Animal Science Technology</td>
<td>Production/Management Science/Technology, Animal Science Curriculum with Pre-Veterinary (3-1)</td>
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<td>Entomology and Plant Pathology</td>
<td>Food Science and Technology</td>
<td>Bachelor of Science in Agriculture</td>
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<td>Forestry, Wildlife, and Fisheries</td>
<td>Forestry, Forest Resources Management, Wildland Recreation, Wood Utilization</td>
<td>Bachelor of Science in Forestry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wildlife &amp; Fisheries Science</td>
<td>Bachelor of Science in Wildlife &amp; Fisheries Science</td>
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<td>Ornamental Horticulture and Landscape Design</td>
<td>Ornamental Horticulture and Landscape Design, Business Science Technology</td>
<td>Bachelor of Science in Ornamental Horticulture and Landscape Design</td>
</tr>
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<td>Plant and Soil Science</td>
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<td>Bachelor of Science in Agriculture</td>
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<td></td>
<td>Environmental Science and Natural Resources</td>
<td>Bachelor of Science in Agriculture</td>
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<td>College of Architecture and Planning</td>
<td>Architecture</td>
<td>Architectural Design</td>
<td>Bachelor of Architecture</td>
</tr>
<tr>
<td>School of Architecture</td>
<td>Architecture</td>
<td>Architectural Design</td>
<td>Bachelor of Architecture</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>Accounting and Business Law</td>
<td>Accounting</td>
<td>Bachelor of Science in Business Administration</td>
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<td>Business Administration (Interdepartmental Unit)</td>
<td>General Business, Public Administration</td>
<td>Bachelor of Science in Business Administration</td>
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<td>Economics</td>
<td>Economics</td>
<td>Bachelor of Science in Business Administration</td>
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<tr>
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<td>Finance</td>
<td>Finance</td>
<td>Bachelor of Science in Business Administration</td>
</tr>
<tr>
<td></td>
<td>Management</td>
<td>Management, General Management, Human Resources Management, International Management, Operations Management</td>
<td>Bachelor of Science in Business Administration</td>
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<td>Management Science Programs</td>
<td>Logistics and Transportation</td>
<td>Bachelor of Science in Business Administration</td>
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<td></td>
<td>Marketing and Transportation</td>
<td>Marketing</td>
<td>Bachelor of Science in Business Administration</td>
</tr>
<tr>
<td></td>
<td>Statistics</td>
<td>Statistics, Statistics (General), Industrial Statistics</td>
<td>Bachelor of Science in Business Administration</td>
</tr>
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<td>College of Communications</td>
<td>Advertising</td>
<td>Advertising</td>
<td>Bachelor of Science in Communications</td>
</tr>
<tr>
<td></td>
<td>Broadcasting</td>
<td>Broadcasting, Broadcast Communication Skills, Broadcast Production Skills</td>
<td>Bachelor of Science in Communications</td>
</tr>
<tr>
<td></td>
<td>School of Journalism</td>
<td>Journalism, News-Editorial, Public Relations</td>
<td>Bachelor of Science in Communications</td>
</tr>
</tbody>
</table>

1 Minor available
2 Minor available for students in other colleges
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<tr>
<th>DEPARTMENT (UNIT)</th>
<th>MAJOR</th>
<th>CONCENTRATION WITHIN THE MAJOR</th>
<th>DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Education¹</td>
<td>Counseling Education and Counseling Psychology</td>
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<tr>
<td>Cultural Studies in Education</td>
<td>Human Services</td>
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<td>Bachelor of Science in Education</td>
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<tr>
<td>Education in the Sciences, Mathematics, Research, and Technology</td>
<td>Exercise Science</td>
<td>Exercise Science (Exercise Physiology/Fitness Option)</td>
<td>Bachelor of Science in Education</td>
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<tr>
<td></td>
<td>Health, Leisure and Safety Sciences²</td>
<td>Community Health Education³</td>
<td>Bachelor of Science in Education</td>
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<td></td>
<td>Recreation and Leisure Studies</td>
<td>Private/Commercial Therapeutic</td>
<td>Bachelor of Science in Education</td>
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<tr>
<td>Human Performance and Sport Studies</td>
<td>Exercise Science</td>
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<tr>
<td>Holistic Teaching/Learning⁴</td>
<td>Special Education</td>
<td>Modified &amp; Comprehensive</td>
<td>Bachelor of Science in Education</td>
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<tr>
<td>Inclusive Early Childhood Education</td>
<td>Art Education (Intercollegiate)</td>
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<tr>
<td>Language, Communication, and Humanities Education</td>
<td>Leadership Studies</td>
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<tr>
<td>Psychosocial Studies</td>
<td>Rehabilitation and Deafness</td>
<td>Special Education</td>
<td>Education of the Hearing Impaired</td>
</tr>
<tr>
<td>Sport and Physical Activity</td>
<td>Sport Management</td>
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<td>Bachelor of Science in Education</td>
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<tr>
<td>College of Engineering</td>
<td>Basic Engineering</td>
<td></td>
<td></td>
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<tr>
<td>Chemical Engineering</td>
<td>Chemical Engineering</td>
<td></td>
<td>Bachelor of Science in Chemical Engineering</td>
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<tr>
<td>Civil and Environmental Engineering</td>
<td>Civil Engineering</td>
<td></td>
<td>Bachelor of Science in Civil Engineering</td>
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<tr>
<td>Electrical &amp; Computer Engineering</td>
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<td>Bachelor of Science in Electrical Engineering</td>
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<td>Engineering Science and Mechanics</td>
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<td>Biomedical Engineering</td>
<td>Bachelor of Science in Engineering Science</td>
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<td>Industrial Engineering</td>
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<td>Materials Science &amp; Engineering</td>
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<td>Bachelor of Science in Materials Science &amp; Engineering</td>
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<td>Nuclear Engineering</td>
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<td>Bachelor of Science in Nuclear Engineering</td>
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<td>College of Human Ecology</td>
<td>Child and Family Studies</td>
<td>Child Development¹</td>
<td>Bachelor of Science in Human Ecology</td>
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<td>Family Studies</td>
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<td>Bachelor of Science in Human Ecology</td>
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<td>Human Resource Development</td>
<td>Business/Marketing Education</td>
<td>Teaching Training</td>
<td>Bachelor of Science in Education</td>
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<td>Industrial Education</td>
<td>Industrial Training Technology Education Trades &amp; Industries</td>
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<td>Hotel and Restaurant Administration</td>
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<td>Bachelor of Science in Hotel and Restaurant Administration</td>
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<td>Textiles, Retailing and Interior Design</td>
<td>Interior Design</td>
<td></td>
<td>Bachelor of Science in Interior Design</td>
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<tr>
<td></td>
<td>Retail and Consumer Sciences</td>
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<td>Bachelor of Science in Human Ecology</td>
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<tr>
<td>College of Liberal Arts</td>
<td>Anthropology</td>
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<td>Art</td>
<td>Art History¹</td>
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<tr>
<td></td>
<td>Art, continued</td>
<td>Graphic Design/Illustration</td>
<td>Graphic Design Bachelor of Fine Arts Illustration</td>
</tr>
</tbody>
</table>

¹ Minor available  
² Minor available for students in other colleges  
³ Minor available: General Special Education  
⁴ Minor available in Applied Music or Music History and Literature
<table>
<thead>
<tr>
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<th>CONCENTRATION WITHIN THE MAJOR</th>
<th>DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art, continued</td>
<td>Studio Art</td>
<td>Graphic Design/Illustration</td>
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<tr>
<td></td>
<td></td>
<td>Ceramics</td>
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<td>Fiber-Fabrics</td>
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<td>Inter-Area</td>
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<td>Painting</td>
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<td>Sculpture</td>
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<td>Concentration B</td>
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<td>Concentration B</td>
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<td>Honors</td>
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<td>Germanic and Slavic Languages</td>
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<td>Language and World Business</td>
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<td>Russian</td>
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<td>Latin American Studies</td>
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<td>Music Education/Vocal-General/ Keyboard Emphasis</td>
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<td>Piano</td>
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<td>Piano Pedagogy and Literature</td>
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<td>Sacred Music (Organ or Voice)</td>
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<tr>
<td></td>
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<td>Strings</td>
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<td>Studio Music and Jazz</td>
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<td></td>
<td></td>
<td>Voice</td>
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</tr>
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<td></td>
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<td>Woodwind or Brass or Percussion Instruments</td>
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</tr>
</tbody>
</table>

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<thead>
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<th>CONCENTRATION WITHIN THE MAJOR</th>
<th>DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy</td>
<td>Philosophy</td>
<td>Honors in Political Science, Public Administration</td>
<td>Bachelor of Arts</td>
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<tr>
<td>Physics and Astronomy</td>
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<td>Academic</td>
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<td>Political Science</td>
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<td>Bachelor of Science</td>
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<td>Psychology</td>
<td>Pre-Dental, Pre-M.B.A., Pre-Medical, Pre-Medical Technology, Pre-Pharmacy, Pre-Veterinary</td>
<td>Bachelor of Science</td>
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<td>Pre-Professional Programs</td>
<td>Pre-Professional Programs</td>
<td>Pre-Cytochemistry, Pre-Dental Hygiene, Pre-Medical Records, Pre-Optometry</td>
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<td>Pre-Teaching</td>
<td>Environmental Science, Mathematics, Mathematics and Science, Science, Arts, Ideas and Values, Language Arts, Multicultural Studies, Social Studies, United States Culture</td>
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<td>Religious Studies</td>
<td>Religious Studies</td>
<td>Student Initiated</td>
<td>Bachelor of Arts</td>
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<tr>
<td>Romance and Asian Languages</td>
<td>French, Italian, Japanese, Portuguese, Spanish</td>
<td>Language and World Business</td>
<td>Bachelor of Arts</td>
</tr>
<tr>
<td>Sociology</td>
<td>Sociology</td>
<td>Criminal Justice, Environment and Society</td>
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<td>Speech Communication</td>
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<td>Theatre</td>
<td>Theatre</td>
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<tr>
<td>Zoology</td>
<td>Zoology</td>
<td>Pre-Teaching, Environmental Science, Mathematics, Mathematics and Science, Science, Arts, Ideas and Values, Language Arts, Multicultural Studies, Social Studies, United States Culture</td>
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<td>Individualized Program</td>
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<td>University Studies</td>
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1Minor available
2Minor available for students in other colleges
3Minor available: Driver and Traffic Education and Health Education
4Minor available: General Special Education
5Minor in Elementary Education and Secondary Education
6Minor available in Applied Music or Music History and Literature
The College of Agricultural Sciences and Natural Resources traces its history to 1869 when the University was designated as Tennessee's Federal Land-Grant Institution. Under terms of the Federal Land-Grant Act, the University was enabled for the first time to offer instruction in agriculture. This later was expanded to include research for the development of new knowledge and extension for dissemination of such knowledge to rural people.

Two separate administration units—the Agricultural Experiment Station and the Agricultural Extension Service—were organized and assigned responsibility for research and extension functions, respectively. More recently a College of Veterinary Medicine was established. These three units and the College now constitute the University of Tennessee's Institute of Agriculture. Thus, the College of Agricultural Sciences and Natural Resources is not only an academic unit of The University of Tennessee, Knoxville campus, it is also an important administrative unit of the Institute of Agriculture.

There are many shared resources and positive interactions between various units of the College. For example, most of the faculty in the College of Agricultural Sciences and Natural Resources hold joint appointments in the Agricultural Experiment Station and they are actively involved in significant basic and applied research in agriculture and the associated natural resources. On campus and field research laboratories are utilized in the instructional programs of the College, while extension and research activities provide many students excellent part-time job opportunities.

The unique association the College has with the UT Knoxville campus and the other units of the Institute of Agriculture make it possible for the College to offer comprehensive high quality undergraduate and graduate programs.

**CURRICULA IN AGRICULTURE**

Broad opportunities for individuals to prepare for a future in agriculture, forestry, and wildlife and fisheries science are offered in the College of Agricultural Sciences and Natural Resources. The College provides curricula leading to the degrees of Bachelor of Science in Agriculture, Bachelor of Science in Agricultural Engineering, Bachelor of Science in Forestry, Bachelor of Science in Ornamental Horticulture and Landscape Design and Bachelor of Science in Wildlife and Fisheries Science. The professional degree program in agricultural engineering receives strong support from the College of Engineering and is fully accredited by the Accreditation Board of Engineering and Technology. The forest resource management and wildland recreation concentrations are fully accredited by the Society of American Foresters. A pre-professional curriculum in veterinary medicine 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.

Students pursuing programs leading to the degree of Bachelor of Science in Agriculture major in one of several specialized areas of agriculture offered in the college. These major areas are agricultural economics and business, agricultural education, animal science, food technology and science, and plant and soil science. Specific courses required for each of these areas 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 instruction; other courses are included to provide a liberal education. In all subject matter departments there is the opportunity to select elective courses appropriate to the educational objectives of individual students. The choice of electives in each curriculum should be made with the guidance of the faculty advisor.

Students pursuing a program leading to the degree of Bachelor of Science in Agricultural Engineering may select the concentration offered in food engineering. Students seeking the Bachelor of Science in Forestry may choose concentrations in forest resources management, wildland recreation or wood utilization.

All academic and general requirements of the University as stated in the front section of this catalog must be met by agricultural students, 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 technical 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. 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 technical agriculture 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**

**Master of Science Programs**

Programs of graduate study leading to the Master of Science degree are offered in all departments in the College of Agriculture.

**Doctoral Programs**

Graduate study programs lead to the Doctor of Philosophy degree in animal sciences, agricultural economics, agricultural engineer-
ing, 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.

FACILITIES

The College of Agricultural Sciences and Natural Resources uses the facilities on the University campus, on University farms located near Knoxville, and on the main University campus. On the agricultural campus are found the main agricultural building, Morgan Hall; the Agricultural Engineering Building; McCord Hall; the Dairy Products Building; McLeod Food Technology Building; C.E. Brehm Animal Sciences Building, which includes a large pavilion; Ellington Plant Sciences Building which houses the plant science departments; and greenhouses for teaching and experimental work. The buildings which have been erected recently provide facilities comparable to the best in the country for the departments of agriculture.

Four farms adjacent to or within eight miles of the agricultural campus are used both for instructional and experimental purposes. Morgan Farm (80 acres), Cherokee Farm (550 acres), Plant Sciences Farm (212 acres), and a livestock farm ($10 acres) provide excellent field laboratory facilities for instructional programs offered in the College. Cherokee Woodlot (120 acres), the Oak Ridge Forest (2,260 acres), and Amez Plantation (12,500 acres of forested land) provide excellent facilities for field work in forestry, wildlife and fisheries.

Transportation by bus is provided for classes of agricultural students from the agricultural campus to the University farms and to other points of interest where instruction may be given. Transportation by bus is provided between the agricultural campus and the main University campus so that students may make the change between classes without serious inconvenience.

The facilities of the University on the main campus are available to agricultural students. Courses in the basic sciences, business, communications, engineering, etc. are open to agricultural students and are taught on the main University campus.

SELECTION OF CURRICULUM

Agricultural students who have determined their areas of special interest may choose the curriculum most adaptable to their needs when they register as freshmen, and 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. Those who are in doubt will be assigned a special advisor to assist them in exploring agriculture 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 that department.

Students with special interest in science, business, or production technology should consult the advisor about selection of appropriate electives. A foundation for advanced study beyond the baccalaureate degree may be established in any curriculum if appropriate electives are included; also, 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. For this purpose, both the major-curriculum advisor and the agricultural extension advisor should be consulted.

A very careful choice of electives enables a student with an above average 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 each advisor should maintain a complete record of the student’s progress. The multiple major will normally require more than 132 hours credit for graduation.

OPTIONAL MINORS

Agricultural students may have single or multiple minors in agriculture or in other colleges recorded on their transcripts without regard to course overlap among majors and minors. A minor in a department of the College of Agricultural Sciences and Natural Resources 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 UT Knoxville. Specific requirements are listed by each department offering a minor. Minors offered in the College of Agricultural Sciences and Natural Resources are open to 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:

- Agriculture and Renewable Natural Resources Perspectives (3)
- Biological Sciences (College of Agriculture courses included)* (8)
- Computer Science (3) (Or equivalent experience. See specific departmental requirements)
- English and Communications (including English Composition (6), Speech (3), and Writing or Speaking elective (3) (12)
- English Composition (6)
- Speech (3)
- Writing or Speaking elective (3)
- Mathematics (6)
- Physical Sciences (Chemistry, Physics, Geology) (8)
- Social Sciences and Humanities (including Economics (4) and electives (8)) (12)
- Economics (4)
- Electives (8)

*Directed Electives (6)

Major Courses (24)
- College of Agriculture courses (outside of the major department) designated by the department and/or electives (12)
- Other courses designated by the department and/or electives (12)

For a total of 132 hours.

1 Bachelor of Science in Agricultural Engineering
2 Must be courses in English and communications, biological sciences, physical sciences, or social sciences and humanities or combinations of these subject matter areas.
3 Bachelor of Science in Agricultural Engineering and Bachelor of Science in Forestry program excepted.

INDEPENDENT STUDY

Independent study and special topics courses and seminars offered in each department provide exceptional students the opportunity to explore in greater depth subject matter of unusual significance to agriculture. Students gain experience and are encouraged to assume responsibilities not available in formally organized courses. Association with students and faculty from all phases of agriculture and the renewable natural resources in the study of a common problem provides an unusual challenge.

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 College of Agricultural Sciences and Natural Resources from another institution, or from another college at UT Knoxville, should consult the dean if in doubt about the curriculum they wish to follow and for assignment to an appropriate advisor. Requests for substitutions or special examinations should be submitted for consideration during the first semester of study in the selected curriculum.

AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

Professors:

H. Williamson (Head), Ph.D. Missouri; M.B. Badenhop (Emeritus), Ph.D. Purdue; J.R. Brooker, Ph.D. Florida; C.L. Cleland, Ph.D. Wisconsin; D.B. Eastwood, Ph.D. Tufts; B.C. English, Ph.D. Iowa State; L.H. Keller, Ph.D. Kentucky; T.H. Klink (Assoc. Dean), Ph.D. Kentucky; E.O. Ladolly, Ph.D. Wisconsin; J.A. Martin (Emeritus), Ph.D. Minnesota; D.L. McMclure, Ph.D. Clemson; 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 Polytechnic Institute; B.H. Pente- cost (Ass't. Vice Pres.), J.D. Tennessee; D.E. Ray, Ph.D. Iowa State; R.K. Roberts, Ph.D. Iowa State; C.B. Sappington (Emeritus), Ph.D. Illinois; T.J. Whately (Emeritus), Ph.D. Purdue.

Associate Professors:

K.L. Jensen, Ph.D. Oklahoma State; G.K. Pompeii, Ph.D. California (Davis).

Assistant Professors:

G.C. Davis, Ph.D. North Carolina State; P.M. Jakus, Ph.D. North Carolina State; J.A. Larson, Ph.D. Oklahoma State; P.B. Siegel, Ph.D. Virginia Polytechnic Institute.

AGRICULTURAL ECONOMICS AND BUSINESS CURRICULUM

Advisors:

Professors Cleland, Eastwood, McElmory, Mundy, Park and Roberts. Assistant Professors Davis, Jakus, and Larson.

This curriculum is designed to provide students with training in the social sciences as
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 duties, 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 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.

AGRICULTURAL AND EXTENSION EDUCATION


Associate Professor: R.G. Waters, Ph.D. Penn State.

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

AGRICULTURAL ENGINEERING


Associate Professor: R.S. Freeland, Ph.D. Tennessee, P.E.

Assistant Professors: D.O. Baxter, M.S. Missouri; W.E. Hart, Ph.D. Purdue, D.R. Roman, Ph.D. Cornell; J.B. Wilkerson, Ph.D. Purdue, D.C. Yoder, Ph.D. Purdue, A.R. Womac, Ph.D. Tennessee; R.E. Yoder, Ph.D. Colorado State, P.E.

Advisors: Professors Tompkins, Bledsoe, Freeland, Hart, Henry, McDow, Mote, Roman, Wilhelmin, Wilkerson, Womac, Yoder.

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 Agricultural Engineering. The curriculum is accredited by the Engineering Accreditation Commission of the Accreditation Board For Engineering and Technology, Industry, government agencies, research and testing organizations, and foreign service offer employment opportunities to agricultural engineers.

In addition to general requirements for admission to the University, the minimum requirements for association include two units of algebra, one unit in geometry, one-half unit in trigonometry, and one unit in physics or chemistry. Students may remove deficiencies by registering for special classes during the freshman year.

The curriculum provides instruction in the analytical and design skills needed to solve engineering problems related to agricultural and biological systems. Three concentrations: traditional Agricultural Engineering; Biological Engineering; and Food Engineering are available. A concentration should be selected early in the
academic program since there are some differences as early as the freshman year.

Graduate engineering majors interested in pursuing careers in design, analysis, or development in power and machinery, electrical and electronic systems, processing and materials handling systems, soil and water engineering, waste management, biological and environmental systems, and food engineering.

Freshman:
- Agriculture Engineering 105: 2
- Basic Engineering 100, 111, 121: 7
- Chemistry 120, 130: 8
- English 101, 102: 8
- Mathematics 141, 142: 8
- Senior Industrial Engineering 405: 3
- Agricultural Engineering 400, 403, 413: 7
- Senior: 7
- Electrical Engineering 301: 3
- Fluid Science Elective: 3
- Economics 201: 3
- Mechanical Engineering 331: 3
- Microbiology 210: 3
- Industrial Engineering 405: 3
- Total: 134 hours

Sophomore:
- English 101, 102: 8
- Mathematics 141, 142: 8
- Agriculture Engineering 311, 331, 400, 403, 413, 433: 16
- Public Speaking and Writing Electives: 6
- Design Elective: 3
- Total: 134 hours

Junior:
- Advanced engineering design: 3
- Agricultural Engineering 303, 451: 7
- Agricultural Engineering Electives: 6
- Basic Engineering 201: 2
- Electrical Engineering 301: 3
- Fluid Science Elective: 3
- Biology 110, 120: 8
- Mathematics 200, 231, 241: 8
- Physics 231: 3
- Industrial Engineering 405: 3
- Total: 134 hours

Senior:
- Agricultural Engineering 311, 331, 400, 403, 413, 433: 16
- Design Elective: 3
- Total: 134 hours

AGRICULTURAL ENGINEERING WITH CONCENTRATION IN BIOLOGICAL ENGINEERING

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AGRICULTURAL ENGINEERING WITH CONCENTRATION IN FOOD ENGINEERING

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<td>Total: 134 hours</td>
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AGRICULTURAL ENGINEERING TECHNOLOGY

Advisors:
- Professor Tomkins, Bledsoe, Hart, Henry, McDow, Mote, Wilheim, Wilkerson, Womac, D. Yoder and R. Yoder.

No baccalaureate degree program is offered in agricultural 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 agricultural engineering technology requires a minimum of 18 semester hours as follows: Agricultural 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 agricultural 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 agricultural engineering technology or who completed courses equivalent to those required for the minor in agricultural engineering technology.

ENTOMOLOGY AND PLANT PATHOLOGY

Professors:

Associate Professors:
J.F. Grant, Ph.D. Clemson; K.D. Gwinn, Ph.D. North Carolina State; B.B. Redlick, Ph.D. Clemson; M.T. Windham, Ph.D. North Carolina State.

Assistant Professor:

Advisors:
Southards, Gerhardt, Hilty, Lambdin, and Pless.

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, forest protection, plant pathology and veterinary pathology 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.

ANIMAL SCIENCE

Professors:
K.R. Robbins (Head), Ph.D. Illinois; K.M. Barth (Emeritus), Ph.D. Purdue; M.C. Bell (Emeritus), Ph.D. Oklahoma State; J.K. Bleiter (Emeritus), Ph.D. Ohio State; C.C. Chamberlain (Emeritus), Ph.D. Iowa State; B.H. Erickson, Ph.D. Kansas State; O.G. Hall (Dean, College of Agricultural Sciences and Natural Resources), Ph.D. Iowa State; S.L. Harsdard (Emeritus), Ph.D. Florida; R.W. Henry, D.V.M., Ph.D. Ohio State; E.R. Liddell (Emeritus), M.S. Tennessee; T.P. McDonald, Ph.D. Tennessee; J.B. McLaren (Emeritus), Ph.D. Auburn; S.P. Oliver, Ph.D. Ohio State; O.G. Pless, Ph.D. Illinois; D.O. Richardson (Dean, Agr. Exp. Sta.), Ph.D. Ohio State; A. Saxton, Ph.D. North Carolina State; T.W. Schultz, Ph.D. Tennessee; H.V. Shirley (Emeritus), Ph.D. Illinois; M.H. Sims, Ph.D. Auburn; R.L. Tugwell (Emeritus), Ph.D. Kansas State.

Associate Professors:

Assistant Professors:

Advisors:
Professors Erickson and Oliver. Associate Professors Backus, Bell, Godkin, Heitmann, Hitchcock, Kattesh, Masincup, Oliver, Quigley and Waller. Assistant Professors Grizzle, Mathew, Schrick, Smalling and Smith.

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 services, agricultural communication, public relations, and various organizations associated with agriculture.

A minor in animal science consists of 3 credits from Section A (Animal Industry & Market Evaluation) or 260 (Farm Animal Management Practices); 4 credits from 330 (Animal Nutrition, Feeds, & 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 WITH CONCENTRATION IN SCIENCE/TECHNOLOGY

Professors:
K.R. Robbins (Head), Ph.D. Illinois; K.M. Barth (Emeritus), Ph.D. Purdue; M.C. Bell (Emeritus), Ph.D. Oklahoma State; J.K. Bleiter (Emeritus), Ph.D. Ohio State; C.C. Chamberlain (Emeritus), Ph.D. Iowa State; B.H. Erickson, Ph.D. Kansas State; O.G. Hall (Dean, College of Agricultural Sciences and Natural Resources), Ph.D. Iowa State; S.L. Harsdard (Emeritus), Ph.D. Florida; R.W. Henry, D.V.M., Ph.D. Ohio State; E.R. Liddell (Emeritus), M.S. Tennessee; T.P. McDonald, Ph.D. Tennessee; J.B. McLaren (Emeritus), Ph.D. Auburn; S.P. Oliver, Ph.D. Ohio State; O.G. Pless, Ph.D. Illinois; D.O. Richardson (Dean, Agr. Exp. Sta.), Ph.D. Ohio State; A. Saxton, Ph.D. North Carolina State; T.W. Schultz, Ph.D. Tennessee; H.V. Shirley (Emeritus), Ph.D. Illinois; M.H. Sims, Ph.D. Auburn; R.L. Tugwell (Emeritus), Ph.D. Kansas State.

Associate Professors:

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A minor in animal science consists of 3 credits from Section A (Animal Industry & Market Evaluation) or 260 (Farm Animal Management Practices); 4 credits from 330 (Animal Nutrition, Feeds, & 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.
Electives allow students to select an area for specialization. Those interested in production/management would select additional courses in agriculture; in business administration, those interested in finance and accounting; in science/technology in chemistry, zoology, physics, and statistics, etc. Electives should be chosen with career objectives in mind and in consultation with the advisor. The animal science core courses are 220, 260, 320, 330, 340, and 380.

**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 include:

1. Completion of all pre-veterinary requirements.
   a. English Comp. 101-102 (3.3) - 6 hours
   b. Humanities and Social Sciences - 18 hours
c. Calculus A-B, 121-122 or Calculus I-II, 141-142 or Biocalculus I-II, 151-152 (3.3) - 6 hours
d. Elements of Physics 221-222 (4.4) - 8 hours
   e. General Chemistry 120-130 (4.4) - 8 hours
   f. Organic Chemistry 350-360 and Laboratory 369 (3.3, 2.8) - 8 hours
g. Cellular and Comparative Biochemistry 410 (4) - 4 hours
   h. General Biology 110-120 (4.4) - 8 hours
   i. Genetics 220 (3) - 4 hours
   j. Cell Biology 210 (3) - 4 hours
2. The last 30 hours of the three-year pre-veterinary curriculum must have been taken at UT Knoxville.
3. At least 12 hours of upper division (300 and 400 level courses) technical agriculture courses must be taken at UT Knoxville.
4. 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. Animal Science 101 - 1 hour
   b. Agriculture 101 - 3 hours
   c. Animal Science 260 - 3 hours
d. Animal Science 320 - 3 hours
e. Animal Science 330 - 3 hours
   f. Animal Science 340 - 3 hours
g. Animal Science 380 - 3 hours
   h. One course from Animal Science 481, 482, 483, 484, 485, 486, or 489 - 3 hours
   i. Computer Science Elective - 3 hours
   j. Economics 201 - 3 hours
   k. Speech 210 or 240 - 3 hours

**FOOD SCIENCE AND TECHNOLOGY**

M.P. Penfield (Acting Head), Ph.D. Tennessee; J.L. Collins, Ph.D. Maryland; F.A. Draughon, Ph.D. Georgia; H.O. Janes (Emeritus), Ph.D. Illinois; S.L. Melton, Ph.D. Tennessee; J.T. Miles (Emeritus), Ph.D. Wisconsin; W.W. Overcast (Emeritus), Ph.D. Iowa State.

**Associate Professors:**

G.L. Christian, Ph.D. Missouri; H.D. Loveday, Ph.D. Kansas State; J.R. Mount, Ph.D. Ohio State.

Assistant Professor:

D.A. Golden, Ph.D. Georgia.

Advisors:

Collins, Draughon, Loveday, Melton, Mount, and Penfield.

The major in food technology and science prepares students to apply the sciences and engineering technology to manufacture, preserve, store, and distribute foods that meet the needs and desires of consumers. Coursework emphasizes the basic principles of converting raw food materials into acceptable consumer products. Selected commodity courses deal processing of specific types of food materials. Students entering the program must have an interest in the sciences, particularly chemistry, microbiology, and biology.

This curriculum is designed to prepare students for a professional career in positions in the food industry such as food microbiologist, food chemist, quality evaluation and control supervisor, plant management, ingredients specialist, etc. The program of coursework conforms to the guidelines in the model Curriculum of the Institute of Food Technologists. 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 15 hours as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Engineering Technology</td>
<td>3</td>
</tr>
<tr>
<td>Food Science and Technology 420</td>
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</tr>
<tr>
<td>Food Science and Technology 425</td>
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<td>Food Science and Technology 990</td>
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<td>Total: 132 hours</td>
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### Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>English 101, 102</td>
<td>6</td>
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<tr>
<td>Mathematics 119, 121</td>
<td>6</td>
</tr>
<tr>
<td>Botany 110, 120</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 100</td>
<td>4</td>
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<td>Psychology 110</td>
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<td>Agriculture 101</td>
<td>3</td>
</tr>
<tr>
<td>Hours Credit</td>
<td>20</td>
</tr>
</tbody>
</table>

### Forestry Electives

- **Humanities Elective**: 3
- **Social Sciences Elective**: 3
- **Forestry Elective**: 3
- **Mathematics Elective**: 3
- **Economics Elective**: 3

**Total**: 135 hours

| Hours Credit | 20 |

### Forestry Concentrations

1. **Forest Resources Management Concentration**
   - Focuses on the management of forest resources, including techniques for sustainable woodland, wildlife, and timber management.
   - Coursework includes plant and soil science, forest biology, and forestry.

2. **Wildland Recreation Concentration**
   - Emphasis on the design and management of recreational areas, including parks and trails.
   - Coursework includes recreation management, environmental science, and natural resource management.

3. **Wildlife and Fisheries Concentration**
   - Focuses on the conservation and management of wildlife and fisheries.
   - Coursework includes wildlife biology, fishery management, and environmental science.

### Additional Electives

- **Sophomore Math**: 119, 121 (6)
- **Sophomore English**: 101, 102 (6)
- **Sophomore Economics**: 119, 121 (6)
- **Sophomore History**: 110, 120 (8)
- **Sophomore Psychology**: 110, 120 (8)
- **Sophomore Communications**: 110, 120 (8)
- **Sophomore Speech**: 110, 120 (8)

**Total**: 135 hours

### University Study Plan

- **Freshman Year**
  - Ten required courses totaling 18 credits.
- **Sophomore Year**
  - Electives totaling 18 credits.
- **Junior Year**
  - Additional electives totaling 12 credits.
- **Senior Year**
  - Additional electives totaling 18 credits.

**Total**: 135 hours

### Career Opportunities

- Students interested in forestry can pursue careers in forest management, wildlife conservation, and natural resource planning.
- Opportunities also exist in related fields such as environmental science, geology, and conservation management.
**ORNAMENTAL HORTICULTURE AND LANDSCAPE DESIGN**

**Professors:**
G.D. Crater (Head), Ph.D. Ohio State; L.M. Callahan, Ph.D. Rutgers; E.T. Graham, Ph.D. Pennsylvania State; P.M. Gresshoff, Ph.D. Australian National University; G.L. McDaniel, Ph.D. Iowa State; N.D. Peacock (Emeritus), Ph.D. Michigan State; D.B. Williams, Ph.D. Pennsylvania State.

**Assistants:**
Robert M. Auge, Ph.D. Washington State; Terri W. Starmann, Ph.D. Texas A&M.

**Instructors:**
Gary Menendez, B.S.L.A., University of West Virginia; Sue Wilson, M.S. Ohio State.

The curriculum in Ornamental Horticulture and Landscape Design provides five general areas of study designed to provide students with knowledge and skills needed for successful careers. The areas are landscape design, landscape construction, nursery management, floriculture, and turfgrass management.

Landscape design is the shaping and enhancement of the environment for our use, comfort, and enjoyment. It not only involves the use of plant material to accomplish this goal, but also involves an understanding of the functional requirements for work, recreation, and housing. Emphasis is on understanding the design process and the appropriate use of plants in a variety of settings. Opportunities include landscape design services, landscape development and maintenance, garden center operation, and related commercial areas.

Turfgrass management includes all aspects of growing and caring for turfgrass. The increasing number of golf courses and home lawns and the emphasis on better quality make new opportunities for turfgrass managers.

Graduates with training in economics, accounting, statistics, business management, finance, and marketing are attractive to prospective employers and are well prepared to advance into management positions or organize their own companies. Flexibility in the Ornamental Horticulture and Landscape Design curriculum permits students to qualify for a minor in Business Administration. Students should see their advisors for more information. A minor in Ornamental Horticulture and Landscape Design shall consist of 18 hours of courses in Ornamental Horticulture and Landscape Design. Three of the following four courses must be included: 280, 310, 330, 340. Any of the following may be taken as part of the nine additional hours: 210, 220, 230, 320, 350, 360, 370, 380, 410, 440, 450, 490, 498, 499. Prerequisites, if any, to these courses will not be waived, but must be included in addition to the total of 18 hours.

**BUSINESS CONCENTRATION**

**Freshman**
OHLD 110 .......................... 3
Agriculture 101 .......................... 3
English 101, 102 .......................... 6
Botany 110, 115 .......................... 8
Chem 100-110 .......................... 12
English 101-102 .......................... 6
Math 119-121 or 121-122 or 141-142 .......................... 6-8

**Sophomore**
Select 2 from OHLD 220, 230, or 280 .......................... 4-5
Accounting 201-202 .......................... 6
Agriculture 290 .......................... 3
Economics 401 .......................... 4
Humanities Electives .......................... 3
Plant and Soil Science 200 .......................... 1
Plant and Soil Science 209 .......................... 3
Speech 210 or 240 .......................... 3
Statistics 201 .......................... 3

**Junior**
Select 4-5 from OHLD 310, 320, 330, 340, 350, 360, 370 or 380 .......................... 12
OHLD 432 .......................... 3
Finance 301 .......................... 3
Marketing 301 .......................... 3

**Total:** 132 hours

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**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.

A minor in Wildlife and Fisheries Science consists of 16 hours from FWF 211 or 250, FWF 300, 317, 410, 416, WFS 341, 441, 443, 444, and 445. Prerequisites will not be waived.
CONCENTRATION

TECHNOLOGY

CONCENTRATION

SCIENCE CONCENTRATION

Hours Credit

Freshman

Agriculture 101

3

Botany 110-120 or Biology 110-120

6-8

Chemistry 120-130

6

English 101-102

6

Math 121-122 or 141-142 or 151-152

6-8

Select 1 from Psychology 110 or Sociology 110

3

Select 2 from Botany 330, Entomology & Plant Path 313, 321, Plant and Soil Science 311 or 334

6-7

Writing or Speech Elective

3

Unrestricted Electives

6

Senior

Select 3 from OHLD 410, 440, 450, 460, 480 or 492

9-10

OHLD 490

1

Business Electives

12

History Elective

12

Humanities Elective

3

Unrestricted Electives

3-4

Total: 132 hours

General Biology 110, 120 may substitute for Botany only if taken before entering Ornamental Horticulture and Landscape Design.

Lists of appropriate courses for these electives are available at the OHLD office.

Select from Business Law 301, Logistics 301, Management 301, 321, 341, 431, Marketing 310, 320, or 420.

These courses should be selected in conference with academic advisor.

NOTE: Students completing the above business courses qualify for a minor in Business Administration.

PLANT AND SOIL SCIENCE

Professors:

J.E. Foss (Head), Ph.D. Minnesota; F.L. Allen, Ph.D. Minnesota; F.F. Bell (Emeritus), Ph.D. Iowa State; D.L. Coffey, Ph.D. Purdue; B.V. Conger, Ph.D. Washington State; H.A. Fribourg, Ph.D. Iowa State; R.M. Hayes, Ph.D. Illinois; L.M. Josephson (Emeritus), Ph.D. Wisconsin; R.J. Lewis, Ph.D. North Carolina State; W.L. Parks (Emeritus), Ph.D. Purdue; J.H. Reynolds, Ph.D. Wisconsin; L.F. Seatz (Emeritus), Ph.D. North Carolina State; L.N. Skold (Emeritus), M.S. Kansas State; M.E. Springer (Emeritus), Ph.D. California (Berkeley); H.D. Swingler (Emeritus), Ph.D. Louisiana State; D.D. Tyler, Ph.D. Kentucky; D.R. West, Ph.D. Nebraska.

Associate Professors:


Assistant Professors:

M.E. Essington, Ph.D. California (Riverside); T.C. Muller, Ph.D. Georgia; G.V. Wilson, Ph.D. Arkansas.

Advisors:

Allen, Coffey, Foss, Lessman, Mullen, Reich, and Reynolds.

Plant and soil science deals with field and vegetable crops and soil resources. Plant science includes crop ecology and physiology, crop breeding and genetics for crop improvement; introduction of new varieties, crop management for high quality products, and weed control for efficient crop production. Soil science includes studies in soil formation and classification for better understanding of soil resources; soil management for optimum crop production, conservation and environmental quality; soil fertility for efficient nutrient utilization; basic studies in chemistry, physics, and biology of the soil to a better understanding of its properties and use.

The plant and soil scientist must have knowledge of the basic physical, chemical, and biological sciences and be trained in communication and computer skills. The scientist may be broadly trained or may specialize in a more specific phase of the subject.

Many employment opportunities are available for the well-trained plant and soil scientist including positions with public agencies such as Agricultural Extension Services, Soil Conservation Service, Forest Service, Federal Credit Service, and educational institutions.

Many plant and soil scientists are also employed in private industry as technicians, consultants, salespersons, appraisers, advisors, farm managers, and in international agriculture.

Students selecting this major must complete the basic curriculum for the College of Agriculture and fulfill the major group requirements. A minor may be selected from among many related disciplines.

Required courses for a major in Plant and Soil Science are 210, 211, 220, 401 and 471 plus 3 courses from Group A and 3 courses from Group B. Of the 6 courses chosen from Groups A and B, one must be a soil science course and one must be a plant science course.


Appropriate selection of the many electives available in the Plant and Soil Science curriculum permits students to select options that meet their interest and career goals. A departmental advisor will assist in designing a program to meet the student's individual objectives. Possible options include field crops, fruits, vegetables, soil and water conservation, plant breeding, pest management, agribusiness, international agriculture, environmental science, etc.

A minor in Plant and Soil Science consists of 16 credit hours including 210, 211, 230, and at least 9 elective hours. Plant and Soil Science 471 will not be accepted as a course to meet minor requirements.

Hours Credit

Freshman

Agriculture 101

3

OHLD 110

3

Botany 110, 120

8
### Environmental Science and Natural Resources Concentration

The Environmental Science and Natural Resources concentration will give students a background (both field and laboratory) in various ecosystems and acquaint them with problems associated with the management of natural resources. The program is designed to train students to address environmental problems such as soil and water pollution, land use, and waste disposal. Graduates in this concentration would be trained to work in private industry, on their own as concerned citizens, and in governmental agencies such as the Environmental Protection Agency, State Health Departments, Soil Conservation Service, and the Cooperative Extension Service to control, remediate, and regulate environmental problems.

<table>
<thead>
<tr>
<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
</tr>
<tr>
<td>English 101, 102</td>
</tr>
<tr>
<td>Agriculture 101</td>
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<tr>
<td>Agriculture 290</td>
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<tr>
<td>General Biology 110, 120 or Botany 110, 120</td>
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<tr>
<td>General Chemistry 120, 130</td>
</tr>
<tr>
<td>Mathematics 130-151 or 151-152 or 141-142</td>
</tr>
<tr>
<td>Sophomore</td>
</tr>
<tr>
<td>Plant and Soil Science 200, 210, 211, 230</td>
</tr>
<tr>
<td>Forestry 250 or FWF 211</td>
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<tr>
<td>Economics 201</td>
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<tr>
<td>Geology 101</td>
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<tr>
<td>Physics 121</td>
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<tr>
<td>Speech 210 or 240</td>
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<tr>
<td>History Elective</td>
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<tr>
<td>Chemistry 110 or 350</td>
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<tr>
<td>*Humanities Elective</td>
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<tr>
<td>Junior</td>
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<tr>
<td>Biology 230</td>
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<tr>
<td>Plant and Soil Science 312-313 or 415, 311 or 411</td>
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<tr>
<td>412, 433</td>
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<tr>
<td>University Studies 310 or 320</td>
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<tr>
<td>History Elective</td>
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<tr>
<td>*Humanities Elective</td>
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<tr>
<td>Forestry, Wildlife and Fisheries Science Elective</td>
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<tr>
<td>*Technical Electives</td>
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<tr>
<td>Senior</td>
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<tr>
<td>Agricultural Economics 470</td>
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<tr>
<td>English 461</td>
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<tr>
<td>Geography 436</td>
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<tr>
<td>Plant and Soil Science 401, 413, 471</td>
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<tr>
<td>Agricultural Engineering Technology 442</td>
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<tr>
<td>*Technical Electives</td>
</tr>
<tr>
<td>*Social Science Elective</td>
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</tbody>
</table>

Total: 132 hours

*Students with a Mathematics ACT of 26 or more or a satisfactory placement test score should take Mathematics 151-152 or 141-142.

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**List of approved courses in the humanities and social sciences available from the Department of Plant and Soil Science.**

**List of technical electives available from the student's academic advisor.**
The School of Architecture offers a program of professional studies which prepares its graduates for the practice of architecture. While emphasizing knowledge and skills required by architects in guiding the processes of building, the School especially emphasizes the development of that critical judgement which particularly distinguishes the architect from other professionals who serve the building industry. Therefore, the student must address the cultural, social, philosophical and ethical issues that appropriately concern the architect in performance of the art of building. The student must also discover and understand the principles of our physical universe and their impact on the science of building, as well as the characteristics of the natural environment which impact the physical behavior of materials. Consequently the program in the School emphasizes the process of learning while enabling its graduates to adapt to change in our complex world. How to learn is as much a consequence as the content of the learning process.

FACILITIES

In the spring of 1981, a new building housing the School of Architecture and shared with the Art Department was completed. The Art and Architecture Building contains all the primary activities of the School. Expressly designed for the School in an open architectural competition, the building has received widespread recognition and has become one of the models sought out by other schools. The building was designed by the Knoxville architectural firm of McCarty, Bullock, Holsapple, Inc. It contains as its major feature a large interior mall or street. Opening off this gathering space, which serves as a campus focal point, are open-designed classrooms, a reference library which contains extensive slide collections and other reference materials, computer rooms, faculty offices, lecture rooms, administrative offices, an elaborate darkroom, workshop, and the C. Kermit "Buck" Ewing Art and Architecture Gallery. The principal library holdings of the School are located in the James D. Hoskins Library, with additional volumes in the Undergraduate Library. A reading and reference room is maintained in the Art and Architecture Building.

FINANCIAL ASSISTANCE

A number of scholarships are made available each year through the Architecture Endowment Fund and the Tennessee Foundation for Architecture. Other scholarships have been funded by the Masonry Institute of Tennessee, the General Shale Corporation and other architectural firms, manufacturers of building materials, and other construction-related industries. Scholarships are also available through the national headquarters of the American Institute of Architects. Honor students in all the upper four years are eligible for this aid, but it is primarily awarded to students of third and fourth-year standing.

LECTURE PROGRAM

Throughout the academic year, the School organizes an extensive series of special lectures by experts in architecture and related subjects. Students are expected to attend regularly and benefit from this opportunity to hear the leading people of the field. The lectures are open to the University community and the public as well.

Included in the series is the ROBERT S. CHURCH MEMORIAL LECTURESHIP. Named for the School's second dean, it has become widely recognized in the field as an honor to be appointed to this lecturership. The most prominent architects from around the world are brought to the School with income from the endowment. Other important lectures are sponsored by the General Shale Corporation, the Masonry Institute and the Architecture Annual Fund. Annually in the spring term a special program, TAAST, "The Annual Architecture Spring Thing", is presented. Within a period of one week the students participate in special lectures, seminars, exhibits and informal gatherings. Featured are discussions by a series of visiting experts. TAAST is organized by the students.

PUBLICATIONS

Students in the School each year publish The University of Tennessee Journal of Architecture. Continuing several years of excellent publications covering work of the School and current thinking in the field, this journal has become a widely recognized part of the School's participation in the profession.

FOREIGN STUDIES PROGRAM

Each year the School offers at least two opportunities for foreign study to its students. In cooperation with the Danish International Student Committee a program is regularly offered in Copenhagen taught by outstanding Danish architects and educators. Exchange
programs are established with Royal Melbourne Institute of Architecture, Melbourne, Australia and Chongqing Institute of Architecture and Engineering, Chongqing, Sichuan Province, China.

One member of the School faculty leads a program in Europe each year at varied locations. These are designed to include visits to prominent architectural sites and major historic locations. Other programs that have been offered include experiences in Yugoslavia and Cracow, Poland.

Studies abroad, arranged to include a full semester's credit for advanced students, include design, history and theory of architecture and directed independent study.

OFF-CAMPUS OPPORTUNITIES

Each year, throughout the year, advanced students may begin an opportunity to work at locations off-campus while enrolled in a course: Architecture 492 Off-Campus Study or Architecture 493 Independent Study. These programs enable students to gain first-hand experience and work alongside outstanding professional architects while dealing with actual community based projects. Students may enroll in additional courses at off-campus locations to complete a full semester's program of study in keeping with curriculum requirements. The School has a grant from the Lyndhurst Foundation supporting an urban design studio in Chattanooga.

GENERAL INFORMATION

Students are advised to consult the University's general requirements as stated in the front section of this catalog as well as the requirements described in the School of Architecture's Student Handbook.

Self-advising is not permitted in the School of Architecture. Students must plan their schedule by consulting with an assigned advisor. Electives will be chosen with the concurrence of the advisor and with full consideration of the necessary prerequisites.

Most states require that an individual intending to become an architect hold an accredited degree. There are two types of degrees that are accredited by the National Architectural Accrediting Board: (1) The Bachelor of Architecture, which requires a minimum of five years of study, and (2) The Master of Architecture, which requires a minimum of three years of study following an unrelated bachelor's degree or two years following a related preprofessional bachelor's degree. These professional degrees are structured to educate those who aspire to registration/licensure as architects.

The four-year, preprofessional degree, where offered, is not accredited by NAAB. The preprofessional 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.

FRESHMAN ADMISSION REQUIREMENTS

The School of Architecture, being a professional program and having limited resources, has restricted enrollment based on the following criteria: (1) Accept applicants with a total of 65 or above using the formula of the high school grade point average times 10 plus the Enhanced ACT composite score. A minimum Enhanced ACT score of 23 (SAT 900) is required. The minimum high school GPA is 2.7; (2) Refuse all applicants with an Enhanced ACT composite score of 20 (SAT 600) or below; (3) Refer applicants not falling into items 1, 2 to the Committee on Admissions. This Committee will meet in March to review applicants—following receipt of high school records, test scores and other requested material necessary to complete the admission process. Applicants will be informed of their status by April 15th of each year.

DEADLINES FOR APPLICATIONS

Deadlines for application to the School of Architecture coincide with those set forth by The University of Tennessee. All applications must be received by August 1 for fall semester admission, and no later than three weeks before the start of classes for admission to any other semester. It should be noted that due to the strong sequential character of the curriculum and certain prerequisites, entry in any semester other than fall may be difficult.

TRANSFER STUDENTS

Transfer students as well as intercollegiate transfer students are required to have at least a 2.3 grade point average to be considered.

REQUIREMENTS FOR PROGRESSION TO SECOND-YEAR ARCHITECTURE

(1) Satisfactory completion of first-year architecture program with grade point average at least 2.3; exceptions may be made only by petition. (2) Application for progression must be submitted no later than June 15 preceding the start of the second year. Students must maintain an overall 2.3 grade point average by the end of 32 hours (attempted) in order to maintain "full status" in the program. Delinquent students must be put on "temporary status" for one semester. These students will have one semester to raise the overall GPA to 2.3 or have minimum 2.3 on each semester's work until overall average is raised to 2.3. If the GPA is not brought up to 2.3, the student will be dropped from the architecture program.

THIRD-YEAR PREREQUISITES

Students are required to have all first and second-year courses satisfactorily completed before entering the third-year design courses, Architecture 371-372. Students' progress and design work in second-year will be reviewed by a committee of the faculty to determine their readiness for advancement to third-year.

Students who register for a third-year design course holding first or second-year deficiencies may be required to drop the course at any point during the semester.

PROGRESSION TO 400-LEVEL COURSES

Architecture students must have attained third-year standing in the School before being admitted to any 400-level course, with the exception of Architecture 400 Service Practicum. Students must complete all requirements of the curriculum through the third year before entering Architecture 471.

COURSE LOAD

The average course load in any semester is 16 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 School of Architecture 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.

CURRICULA FOR ARCHITECTURE

The curriculum for the Bachelor of Architecture Degree includes a combination of required and elective courses which offer the student both a solid professional program of study and a sound general education. While the majority of the courses are designated as required, students may use the available architecture electives to expand their knowledge in areas of special interest. Academic non-architecture electives allow students to broaden their education in areas of general interest: the humanities, natural sciences, social sciences, arts, and multicultural studies. All electives are to be taken only with the approval of the student's advisor.

All students studying for a Bachelor of Architecture degree will include the following requirements in their course of study. Students are not allowed to enroll simultaneously in two design courses. For any additional specialized requirements, the student should refer to the Student Handbook of the School of Architecture and the student's advisor.

SERVICE PRACTICUM REQUIREMENT

A three-month, non-credit internship in an architect's office is required. Upon petition, work in an engineer's or contractor's office or related work may be approved by the School. This work must be evidenced by a letter from the employer indicating type and quality of student's work and time of employment prior to the fifth year. (See course description for Architecture 400.)

Foreign students may need to obtain Immigration and Naturalization Service Employment Authorization before service practicum begins.
To obtain authorization, foreign students should take their I-94 form to the Office of International Student Affairs not more than 60 days nor less than 30 days before the anticipated starting dates. Beginning service practicum employment without INS authorization constitutes unauthorized employment and may jeopardize a foreign student’s continued stay in the United States.

FIVE YEAR PROGRAM

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture 101, 102</td>
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<tr>
<td>Architecture 171, 172</td>
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<tr>
<td>English 101, 102</td>
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<tr>
<td>History 151, 152</td>
<td>6</td>
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<tr>
<td>Mathematics 141, 142 or 121, 122</td>
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<table>
<thead>
<tr>
<th>Second Year</th>
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</tr>
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<tbody>
<tr>
<td>Architecture 211, 212</td>
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<tr>
<td>Architecture 232</td>
<td>3</td>
</tr>
<tr>
<td>Architecture 271, 272</td>
<td>12</td>
</tr>
<tr>
<td>Architecture 231</td>
<td>3</td>
</tr>
<tr>
<td>Physics 121, 122 or Natural Science elective</td>
<td>6</td>
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<table>
<thead>
<tr>
<th>Third Year</th>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Architecture 213</td>
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<tr>
<td>Architecture 312</td>
<td>3</td>
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<tr>
<td>Architecture 331, 332</td>
<td>8</td>
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<tr>
<td>Architecture 341, 342</td>
<td>8</td>
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<tr>
<td>Architecture 371, 372</td>
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<table>
<thead>
<tr>
<th>Fourth Year</th>
<th>Hours Credit</th>
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<tr>
<td>Architecture 431</td>
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<tr>
<td>Architecture 471, 472</td>
<td>12</td>
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<tr>
<td>Electives</td>
<td>15-17</td>
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<table>
<thead>
<tr>
<th>Fifth Year</th>
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</thead>
<tbody>
<tr>
<td>Architecture 480, 462</td>
<td>7</td>
</tr>
<tr>
<td>Design Course Elective</td>
<td>6</td>
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<tr>
<td>Architecture 482</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
</tbody>
</table>

Total: 158 hours

1. Students are not allowed to enroll simultaneously in two of these design courses.
2. Electives consists of 12 hours in Architecture, 3 hours in Humanities, 6 hours in Social Science and 6-8 hours in Multicultural/Integrative Studies. These may be taken in any order of preference.
3. One course from the following: Architecture 481, 483, 484, 485, 486, 489.
College of Business Administration

C. Warren Neel, Dean
Michael J. Stahl, Associate Dean for Research and External Affairs
David A. Hake, Director, Center for Business and Economic Research
John E. Riblett, Director, Management Development Center
Monique W. Anderson, Director, Undergraduate Business Program
Scott Buechler, Director Graduate Programs

Size and breadth of program immediately distinguish the College of Business Administration at UT Knoxville from the other such programs in Tennessee and in most of the surrounding states.

Despite the size, emphasis is placed on quality at all levels. The harmonious blending of undergraduate and graduate programs, of teaching and research, and of development of technical skills on the one hand and broad concern for individual, social and economic values on the other makes the college a vital and exciting place to study and work.

College programs are fully accredited by the American Assembly of Collegiate Schools of Business. The UT Knoxville program in business was the first in Tennessee to be so recognized and one of the first ten in the South to receive accreditation.

UNDERGRADUATE PROGRAMS

General education, a business “core,” and area specialization: this trinity underlies the UT Knoxville business program. Building on a firm foundation in written and oral communications, mathematical and statistical methods, 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. Specialization comes through intensive study in one of the nine majors offered.

The combination of breadth and depth in the undergraduate program produces graduates who are prepared to grow in their personal and professional lives and employees who are well educated in one of the professional or functional fields of business. In the preparation of graduates for roles in society, the size of the college is an important advantage. Included among the nearly 110 faculty are many generalists, but also a rich variety of those with specialized knowledge and interests. Furthermore, the comprehensive nature of the University and the combined teaching/research/service mission of the institution and the college mean that the faculty are almost certainly on the cutting edge of their disciplines.

While size and diversity can be important advantages, those advantages can be overwhelmed if the personal touch is lost. In an attempt to avoid the pitfall of impersonal education, the college has in place a plan of administered enrollments, designed to assure that the numbers enrolled would not exceed the limited capacity of the college to provide a quality education. The plan calls for admission to the programs of the college in two stages: at the lower division level (freshmen and sophomores) and at the upper division level (juniors and seniors). Admission to the upper division is limited to those who have successfully completed the prescribed lower division courses, who have shown seriousness of interest and purpose, and who have records of substantial academic achievement.

A further aspect of the college which helps in the development and maintenance of “personal scale” is found in the many student organizations in the college. More than a dozen clubs and professional fraternities and sororities represent a broad spectrum of student interest and provide continuing opportunities for the development of leadership skills and involvement with small groups on an intensive basis.

Success of any academic program is difficult to define and hard to measure. In the final analysis, the building of character is probably the most valuable product of academe. On a more mundane level, however, we take a great deal of pride in our success in placing our graduates with local, regional, and national employers, and in the record of our graduating seniors on the nationwide Business Assessment Test, administered by the Educational Testing Service, which placed UT Knoxville students well within the top twenty percent of business school seniors nationally.

UNDERGRADUATE ADVISING CENTER

The College maintains a Student Advising Center staffed with full-time academic advisors to assist all students with their programs. Students who have been admitted to a major will confer with a faculty advisor from the selected major regarding career goals and opportunities and will receive their academic advising from the Center. The objective of the Advising Center is to provide students with needed academic information.

PROGRESSION STANDARDS

Admission to the College of Business Administration does not guarantee acceptance into the chosen major. Admission to the upper-division (major) is based on the availability of space in the College as a whole and in the major requested. The academic progress of those admitted to the College is evaluated periodically. Those failing to make acceptable progress toward meeting the standards for progression to the upper-division are encouraged to seek alternative educational opportunities. Progression standards are adjusted periodically and current requirements can be determined by consulting with an advisor in the Undergraduate Advising Center.

PREMAJORS

Students who enter the College of Business as freshmen or sophomores must apply for a major the semester after attempting 45 hours. The academic record presented will be assessed by the Director of the Undergraduate Advising Center. The following minimum requirements must have been met in order to be considered for admission to a major:

1. Must have followed a business curriculum.
2. Must have earned a minimum 2.75 (3.0 for Accounting) average, cumulative, over the courses specifically required in the lower-division of that curriculum, excluding non-business and non-departmental 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.

TRANSFERS FROM OTHER UT KNOXVILLE PROGRAMS

Students in other colleges at UT Knoxville must apply for progression to a major in the College of Business Administration at the earliest possible date but definitely prior to 75 hours. As a minimum, all students must be admitted to a CBA major for at least the last 30 hours of work. Only in exceptional cases will application be considered after 75 hours of coursework (at UT Knoxville or elsewhere) have been attempted. It should not be supposed that admission must be granted to those who accumulate a substantial number of hours in the CBA courses. On the contrary, an academic record reflecting substantial work after 75 hours in the Business Administration curriculum may be taken as prima facie evidence of an intent to evade this policy and may result in denial of admission.

The following minimum requirements must have been met in order to be considered for admission to a major:

1. 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 non-business and non-departmental electives. Some majors may have differing average requirements.

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 FROM OTHER INSTITUTIONS

1. A student shall be able to transfer from an out-of-state community college or any four year institution, and shall be admitted to the College of Business Administration, only if his/her cumulative GPA is 3.00 or higher. If this standard is not met, the student shall be denied admission to the College.

2. A student shall be able to transfer from an in-state community college, and shall be admitted to the College of Business Administration, only if his/her cumulative GPA is 2.75 or higher. If this standard is not met, the student shall be denied admission to the College.

3. If a transfer applicant to the UT College of Business is denied upon transfer, he/she may reapply for admission to the College and to a major if he/she receives a 2.75 average (3.0 for an Accounting applicant) in his/her first 12 semester hours, or first semester in residence at UT (whichever is more in hours), over the courses specifically required in the lower division of the business curriculum, excluding non-business and non-departmental electives.

The success of the application will be based on the entire student record. The application must be made prior to the end of mandatory advising during the student's second semester at UT (or the semester following 12 hours attempted).

APPEALS

The College has established a Progression Appeals Committee to which those students who have been denied progression may address an appeal. Information on the appeals process may be obtained by calling the Undergraduate Advising Center, 874-5096, or contacting an advisor in that office.

BUSINESS MINOR FOR NON-BUSINESS STUDENTS

Students not enrolled in the College of Business who wish to obtain a minor in Business Administration must successfully complete one of the following sequences:

OPTION 1

Accounting 201, 202, Economics 201, and Statistics 201.

12 hours of upper-division business electives except that no more than three upper-division hours of accounting, economics, or statistics may be used for this minor.

OPTION 2 College of Engineering Students

Accounting 201, 202, Economics 201

Three of the following: Business Law 301, Finance 301, Management 301, Marketing 301.

Two of the following: Chemical Engineering 426, Industrial Engineering 300, 301, 302, 304, 405, 406, Mechanical Engineering 553.

All upper division course work must be taken at UT Knoxville. Students are responsible for meeting listed prerequisites of any upper division courses taken. Minors in other colleges are available to College of Business Administration students.

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 this maximum may be granted by the Director of the Undergraduate Advising Center in Business Administration.

SATISFACTORY/NO CREDIT

A maximum of 20 credit hours of satisfactory/no credit (S/NC) courses 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 "business or non-business electives", plus any business courses specifically designated as being available for S/NC grading.

BUSINESS CORE REQUIREMENTS

The following core courses are required in all business curricula: Computer Science 102, Economics 201, Statistics 201, Accounting 201-202, Marketing 301, Finance 301, Business Law 301, Management 301-303, 401. 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 department.

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 Knoxville students with approval may enroll for credit. Assistance in identification of and registration in such programs may be obtained through the 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 kinds of work experiences, community involvements, 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.

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. Students should register for credit under the Independent Study number BA 493, or the appropriate number in the department. Credit will be awarded only after completion of all agreed upon requirements.

CURRICULA

FRESHMAN AND SOPHOMORE CURRICULA (except Statistics)

The following courses are prerequisite to all majors in the College of Business Administration except for the Statistics major which is present in the departmental listing.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Political Science</td>
<td>3</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Math, Natural Science</td>
<td>3</td>
</tr>
<tr>
<td>Accounting 201, 202</td>
<td>6</td>
</tr>
<tr>
<td>Statistics 201</td>
<td>3</td>
</tr>
<tr>
<td>Economics 201</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
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</table>

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
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<tr>
<td>Math, Natural Science</td>
<td>3</td>
</tr>
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<td>Accounting 201, 202</td>
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<td>Statistics 201</td>
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<tr>
<td>Economics 201</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
</tr>
</tbody>
</table>
ACCOUNTING AND BUSINESS LAW

Professors: K.G. Stanga (Head and Arthur Andersen Professor of Accounting), Ph.D. Louisiana State, CPA; J.S. Costa (Emeritus), S.J.D. George Washington University; D.M. Trifirò (Emeritus), Ph.D. Ohio State, CPA; B.D. Fisher, L.L.M. George Washington; H.C. Herring, III, Ph.D. Alabama, CPA; J.E. Kiger (Warren L. Slagle Professor of Accounting), Ph.D. Missouri, CPA; W.H. Read (Emeritus), MBA Northwestern, CPA; J.M. Rehman (Professor of Accounting), Ph.D. Oklahoma State, CPA; H.P. Roth, Ph.D. Virginia Polytechnic Institute, CPA, CMA; M.L. Townsend (Emeritus), J.D. Tennessee; J.R. Williams (Ernst & Young Professor), Ph.D. Arkansas, CPA.

Associate Professors: K.E. Anderson, Ph.D. Indiana, CPA; A.F. Borthick, DBA Tennessee, CPA, CMA, CIA, CDP; C.D. Izard, Ph.D. Mississippi, CPA; C.S. Massingale, MBA Tennessee, J.D.; I.A. Posey, M.S. Tennessee, CPA, CMA; W.L. Slagle (Emeritus), M.S. Tennessee, CPA; R.L. Townsend, Ph.D. Texas, CPA.

Assistant Professors: D.D. Bentley, J.D., Vanderbilt; J.V. Carcello, Ph.D, Georgia State, CPA, CMA, CIA; A.W. Gatton, Ph.D., Virginia Polytechnic Institute; K.B. Hetchox, Ph.D. Oklahoma; M.C. Letersig (Emeritus), M.S. Tennessee, CPA; D.P. Murphy, Ph.D. North Carolina, CPA; M.D. Slabaugh, ABD Indiana, CPA.

Distinguished Lecturer: S.B. Wolfe (Emeritus), B.S. Virginia Polytechnic.


The undergraduate program is designed to provide a basic educational experience for students interested in accounting. The first two years emphasize general education, while the last two emphasize business education and general accounting education.

Most major accounting organizations and the faculty of the Department of Accounting and Business Law endorse postbaccalaureate education for those who aspire to leadership positions in professional accounting. Beginning in 1993, the State of Tennessee requires a minimum of 150 semester hours of education to sit for the CPA exam. Other professional certification programs in accounting, such as Certified Management Accountant, Certified Information Systems Auditor, and Certified Internal Auditor, also endorse postbaccalaureate education.

A graduate program, comprised of 30 semester hours and leading to a degree of Master of Accountancy, is available to qualified graduates of baccalaureate programs. The general requirements for the Master of Accountancy degree are summarized in the Graduate Catalog.

<table>
<thead>
<tr>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Junior</td>
</tr>
<tr>
<td>Marketing 301 ..............................................3</td>
</tr>
<tr>
<td>Accounting 312 ..............................................3</td>
</tr>
<tr>
<td>Accounting 341 ..............................................3</td>
</tr>
<tr>
<td>Business Law 301 ............................................3</td>
</tr>
<tr>
<td>Accounting 321, 311 ........................................6</td>
</tr>
<tr>
<td>Written Communications ...............................3</td>
</tr>
</tbody>
</table>

| Senior |
| Management 401 .............................................3 |
| Accounting 431 ..............................................3 |
| Accounting 411 ..............................................3 |
| Political Science 101, 102 or 107 ......................3 |
| Economics 311 or 313 ........................................3 |
| International Business ....................................3 |
| Arts Elective .................................................3 |
| Elective .........................................................9 |

Total: 126 hours

1Written Communications - One course from: English 283, 295, 355, 455, 461.
2International 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, or Economics 321.
3Arts - One course from the courses listed below: Art 172, 173, 176, 183, 191; Classics 232, 233; English 263; Music 100, 110, 120, 130; Speech 280, 380; Theatre 100, 210, 211, 220, 221, 260; Women's Studies 330.

ECONOMICS

Professors: W.F. Fox (Head), Ph.D. Ohio State; R.A. Bohm, Ph.D. Washington (St. Louis); R.L. Bowby, 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, Ph.D. Texas; P. Davidson (J. Fred Holly Professor of Political Economy), Ph.D. Pennsylvania; G.R. Feiwel (Emeritus), Ph.D. McGill; C.B. Garrison, Ph.D. Kentucky; H.W. Herzog, Jr., Ph.D. Montana; H.E. Jensen (Emeritus), Ph.D. Texas; F.Y. Lee, Ph.D. Michigan State; A.M. Mayhew, Ph.D. Texas; J.R. Moore (Emeritus, Alumni Distinguished Service Professor), Ph.D. Cornell; W.C. Neals (Emeritus), Ph.D. London School of Economics; K.E. Quinby (Emeritus), Ph.D. Kentucky; M. Russell, Ph.D. Oklahoma; A.M. Scholtmann, Ph.D. Washington (St. Louis); G.A. Spiva, Jr. (Emeritus), Ph.D. Texas.

Associate Professors: J.A. Gauger, Ph.D. Iowa State; E. Giustof, Ph.D. Stanford; J.A. Kahn, Ph.D. Maryland; J.W. Mayo, Ph.D. Washington (Seattle); D.M. Mandy, Ph.D. Illinois; M.N. Murray, Ph.D. Syracuse; K.E. Phillips, Ph.D. Washington (Seattle).

Assistant Professors: A.F. Curry, Ph.D. Duke; J. Rubin, Ph.D. University of California (Davis).

The first two years of general education and the last two which emphasize business education and a choice of courses in Economics prepare students for a wide variety of jobs, for postgraduate studies or in an MBA program.

Departmental advisors will assist students in selecting appropriate elective courses. Majors in Economics who wish to pursue graduate work in Economics or to seek work in the public sector should consult departmental faculty early in their careers for program advice.

| Hours Credit | Senior |
|--------------|
| Management 401 .............................................3 |
| Business Law 301 ............................................3 |
| Economics 311, 313 .........................................6 |
| Social Science ................................................3 |
| Elective .........................................................3 |
| Written Communications ...............................3 |

Total: 126 hours

1Social Science - One course from the courses listed below: Anthropology 110, 120, 130, 320; Geography 101, 102, 141, 150, 333; Political Science 101, 102,
FINANCE

Students who complete this major are generalists in business administration. The General Business major permits students the greatest flexibility of college majors in selecting courses beyond the core of business courses.

**FINANCE**

**Professors:**
- H.A. Black (Head and James F. Smith Finance Professor), Ph.D. Ohio State; T.P. Boethm, Ph.D. Washington (St. Louis); W.W. Dorrerweich (Emeritus), Ph.D. Pennsylvania; G.C. Philippatos (Distinguished Chair Professor of Banking and Finance), Ph.D. New York; R.E. Schriever (William Voight Scholar), Ph.D. California (Los Angeles); J.W. Wansley (Clyton Chair of Excellence), Ph.D. South Carolina.

**Associate Professors:**
- A.L. Auxier, Ph.D. Iowa; M.C. Ehrhardt, Ph.D. Georgia Tech; J.M. Wachowicz, Jr., Ph.D. Illinois.

**Assistant Professors:**
- M.C. Collins, Ph.D. Georgia; P.R. Dave, Ph.D. North Carolina; R.P. DeGennaro, Ph.D. Ohio State; D. Gunther, Ph.D. Florida; M.B. Stern, Ph.D. Virginia.

Students may direct their studies in finance toward one of several functional areas: corporate financial management, financial markets and institutions, insurance and financial planning, investment management, and real estate finance and investment analysis. Students who wish to know more about a specific career area should consult a faculty member who teaches in that particular area.

**General Business**

Students who complete this major are generalists in business administration. The General Business major permits students the greatest flexibility of college majors in selecting courses beyond the core of business courses.

**General Business Electives:**
- Six courses beyond those required of all majors from a minimum of four of the following areas: Accounting, Business Administration, Economics, Finance, Logistics and Transportation, Management, Marketing, Statistics.
- **Arts and Social Science:** One course from the courses listed below: Anthropology 110, 120, 130, 320; Geography 101, 102, 141, 320, 323; Political Science 101, 102, 103; Psychology 110, 117, 220, 310, 360, 395, 399; Sociology 110, 117, 220, 310, 340, 370, 415, 459.
- **Written Communications:** One course from: English 263, 295, 355, 455, 461.
- **International Business:**
  - One course from the courses listed below: Anthropology 110, 120, 130, 320; Geography 101, 102, 141, 320, 323; Political Science 101, 102, 103; Psychology 110, 117, 220, 310, 360, 395, 399; Sociology 110, 117, 220, 310, 340, 370, 415, 459.
- **Arts Elective:**
  - Any two upper division Management courses approved by faculty advisor.
  - Any two upper division Management courses approved by faculty advisor.
  - Management Elective - Students should choose electives based on whether they want to focus on general management, human resources management, international management, or operations management. Students must complete four courses in one of the following areas: General Management, Management 431 and any three upper division Management courses approved by faculty advisor; Human Resources Management - Management 431, 432 and any two upper division Management courses approved by faculty advisor; International Management - Management 471, Economics 321, Logistics and Transportation 441, and any upper division management course approved by advisor; Operations Management - Management 431, 441, Statistics 365, and either Industrial Engineering 305 or Management Science 310.
  - **Total:** 126 hours

**MANAGEMENT**

**Professors:**
- O.S. Fowler (Head), Management Science, Ph.D. Stanford; H.D. Dewhurst, Ph.D. Texas; L.R. James, Ph.D. Utah; A.H. Kealy (Emeritus), M.B.A. Pennsylvania; J.M. Larsen, Jr., (Emeritus), Ph.D. Purdue; C.W. Neel (Dean), Ph.D. Alabama; D. Reese (Emeritus), Ph.D. Iowa; M.C. Rusk (Chair, Industrial-Organizational Psychology Program), Ph.D. Akron; M.J. Stahl, Ph.D. Renzelester; S.C. Vance, William B. Stokely Professor of Management (Emeritus), Ph.D. Pennsylvania; G.A. Wagner (Emeritus), M.S. Indiana; G.H. Whillock (Emeritus and Alumni Distinguished Service Professor), Ph.D. Tennessee.

**Associate Professors:**

**Assistant Professors:**
- M.R. Bowers (Management Science), Ph.D. Clemson; T.J. Dean, Ph.D. Colorado; C.P. Edirisinghe (Management Science), Ph.D. British Columbia; T.G. Greenwood (Management Science), Ph.D. Tennessee; W.Q. Judge, Ph.D. North Carolina.

**Instructor:**
- J.I. Clelland, Ph.D. Southern California.

Students may direct their studies in management toward operations management, international management, or general management depending on their interests or career objectives. Students should consult with management department faculty during the freshman year to make best use of electives prior to admission to the major.

**MANAGEMENT**

**Professors:**
- O.S. Fowler (Head), Management Science, Ph.D. Stanford; H.D. Dewhurst, Ph.D. Texas; L.R. James, Ph.D. Utah; A.H. Kealy (Emeritus), M.B.A. Pennsylvania; J.M. Larsen, Jr., (Emeritus), Ph.D. Purdue; C.W. Neel (Dean), Ph.D. Alabama; D. Reese (Emeritus), Ph.D. Iowa; M.C. Rusk (Chair, Industrial-Organizational Psychology Program), Ph.D. Akron; M.J. Stahl, Ph.D. Renzelester; S.C. Vance, William B. Stokely Professor of Management (Emeritus), Ph.D. Pennsylvania; G.A. Wagner (Emeritus), M.S. Indiana; G.H. Whillock (Emeritus and Alumni Distinguished Service Professor), Ph.D. Tennessee.

**Associate Professors:**

**Assistant Professors:**
- M.R. Bowers (Management Science), Ph.D. Clemson; T.J. Dean, Ph.D. Colorado; C.P. Edirisinghe (Management Science), Ph.D. British Columbia; T.G. Greenwood (Management Science), Ph.D. Tennessee; W.Q. Judge, Ph.D. North Carolina.

**Instructor:**
- J.I. Clelland, Ph.D. Southern California.

Students may direct their studies in management toward operations management, international management, or general management depending on their interests or career objectives. Students should consult with management department faculty during the freshman year to make best use of electives prior to admission to the major.

**MANAGEMENT**

**Professors:**
- O.S. Fowler (Head), Management Science, Ph.D. Stanford; H.D. Dewhurst, Ph.D. Texas; L.R. James, Ph.D. Utah; A.H. Kealy (Emeritus), M.B.A. Pennsylvania; J.M. Larsen, Jr., (Emeritus), Ph.D. Purdue; C.W. Neel (Dean), Ph.D. Alabama; D. Reese (Emeritus), Ph.D. Iowa; M.C. Rusk (Chair, Industrial-Organizational Psychology Program), Ph.D. Akron; M.J. Stahl, Ph.D. Renzelester; S.C. Vance, William B. Stokely Professor of Management (Emeritus), Ph.D. Pennsylvania; G.A. Wagner (Emeritus), M.S. Indiana; G.H. Whillock (Emeritus and Alumni Distinguished Service Professor), Ph.D. Tennessee.

**Associate Professors:**

**Assistant Professors:**
- M.R. Bowers (Management Science), Ph.D. Clemson; T.J. Dean, Ph.D. Colorado; C.P. Edirisinghe (Management Science), Ph.D. British Columbia; T.G. Greenwood (Management Science), Ph.D. Tennessee; W.Q. Judge, Ph.D. North Carolina.

**Instructor:**
- J.I. Clelland, Ph.D. Southern California.

Students may direct their studies in management toward operations management, international management, or general management depending on their interests or career objectives. Students should consult with management department faculty during the freshman year to make best use of electives prior to admission to the major.
course in a concentration area such as Management 471, Logistics and Transportation 441, or Economics 321. Students focusing on International Management must complete Business Administration 311.

- Arts: One course from the courses listed below: Art 172, 173, 176, 183, 191; Classics 223, 233; English 263; Music 100, 110, 120, 130; Speech 280, 380; Theatre 100, 210, 211, 220, 221, 260; Women's Studies 330.

**MANAGEMENT SCIENCE PROGRAMS**

**Associate Professors:**

**Assistant Professors:**
- M.R. Bowars, Ph.D. Clemson; C.P. Edirisinghe, Ph.D. British Columbia; T.G. Greenwood, Ph.D. Tennessee.

**GRADUATE**
Consult the Graduate Catalog for information on graduate programs.

**MARKETING, LOGISTICS, AND TRANSPORTATION**

**LOGISTICS AND TRANSPORTATION**

**Professors:**

**Associate Professor:**
- J.H. Foggin, Ph.D. Indiana.

**Assistant Professor:**
- M.C. Holcomb, Ph.D. Tennessee.

Defined as "the management of product and information flows from original source to final consumer," logistics represents a key bundle of resources which can create value for the customers. Effective management in areas such as warehousing, transportation, inventory, packaging, and information flow can be essential ingredients of customer satisfaction. Even though the transportation industry has changed dramatically in recent years, the University of Tennessee's continuing reputation for excellence in this area is widely known.

**MARKETING**

**Professors:**

**Associate Professors:**
- S.F. Gardial, Ph.D. Houston; J.R. McMillan, Ph.D. Ohio State; R.C. Reizenstein, Ph.D. Cornell; J.O. Rentz, Ph.D. Georgia; D.W. Schumann (Head), Ph.D. Missouri (Columbia).

**Assistant Professors:**
- P.A. Dabholkar, Ph.D. Georgia State; T.C. Johnston, Ph.D. California (Berkeley); X.M. Song, Ph.D. Virginia.

**Instructor:**
- M.A. Moon, Ph.D. North Carolina (Chapel Hill); the handling of goods and services and their presentation to the market is critical for the success of any business. Marketing involves researching consumer and industry wants and needs, developing and services to fulfill those needs, creating a desire for the goods and services, and bringing them to the public.

To understand this complex field, the student takes courses in economics, accounting, business law, computer science, finance, management, statistics, and logistics and transportation as well as the major courses in marketing. In addition, a knowledge of the sociological and psychological forces underlying consumer behavior is critical. Perhaps more than any other area of business, marketing requires a full understanding of all facets of the business enterprise. Marketing majors at the University of Tennessee, Knoxville fall a prescribed but broad curriculum of business study before they begin their marketing courses in their junior year.

**Public Administration**

**Public Administration College of Business Administration**

The program in public administration is a joint effort sponsored by the Departments of Economics and Political Sciences. It is designed for students interested in public 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 dealing with the operation of government. In consultation with an advisor, students are encouraged to select electives in a manner that focuses their expertise.

**Public Administration**

- 200, 310, 346, 370, 415, 459.
- 200, 310, 346, 370, 415, 459.
- 200, 310, 346, 370, 415, 459.
**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Marketing 301</td>
<td>3</td>
</tr>
<tr>
<td>Finance 301</td>
<td>3</td>
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<td>Management 301</td>
<td>3</td>
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<tr>
<td>Management 303</td>
<td>3</td>
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<tr>
<td>Business Law 301</td>
<td>3</td>
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<tr>
<td>Economics 311</td>
<td>3</td>
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</table>

**Electives**

- Economics or Political Science Electives: 6 hours
- Political Science 441: 3 hours
- Written Communications 442: 3 hours

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Management 401</td>
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<tr>
<td>Economics 471, 472</td>
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<td>Political Science 441</td>
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<td>Social Science</td>
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<tr>
<td>International Business</td>
<td>3</td>
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<tr>
<td>Arts Elective</td>
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<tr>
<td>Electives</td>
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</tr>
</tbody>
</table>

**Total:** 126 hours

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**STATISTICS**

**Professors:**
- William C. Farr (Head), Ph.D. Southern Methodist
- Robert A. McLean (Emeritus), Ph.D.
- JOHN W. PHILLIPS, Ph.D. Virginia Polytechnic
- Richard D. Sanders, Ph.D. Texas
- David L. Sylvestre, Ph.D. Stanford
- Charles C. Thigpen (Emeritus), Ph.D. Virginia Polytechnic

**Associate Professors:**
- H. Bozdag, Ph.D. Illinois
- Esteban Walker, Ph.D. Virginia Polytechnic
- Frank M. Guess, Ph.D.
- Mary L. Lettenkruger, Ph.D.
- kuntucky
- Ramon V. Leon, Ph.D. Florida State
- Dennis K. C. Lin, Ph.D. Wisconsin
- Robert W. Mee, Ph.D.

**Instructors:**
- Sharon Donnelly, M.S. Miami, Ohio
- Charles M. Cevick, M.S. Tennessee
- Saul W. Wright, M.S. Tennessee

**Lecturer:**
- James L. Schmidhammer, Ph.D. Pittsburgh

**Adjunct:**
- Daryl J. Downing, Ph.D. Florida
- Stephen A. McGuire, Ph.D. Kansas
- Giselle B. Ranney, Ph.D. North Carolina State
- William L. Sanders, Ph.D. Tennessee
- Tommy Wright, Ph.D. Ohio State

**Instructor:**
- Sharon Donnelly, M.S. Tennessee

---

The statistics major is designed for students interested in the application of statistics in business, government, and industry. All majors complete a set of courses designed to provide a general understanding of statistical methodology and also complete one of the two concentrations: Statistics or Marketing. Students interested in pursuing a graduate degree in statistics or other fields requiring a strong background in statistics should consider completing a concentration in the field.

**Freshman**

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<th>Course</th>
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<td>Mathematics 141, 142</td>
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<td>Humanities</td>
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<tr>
<td>History</td>
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**Sophomore**

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<tr>
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<tr>
<td>Economics 201</td>
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<tr>
<td>Oral Communication</td>
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<td>Social Science</td>
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<tr>
<td>Statistics 251 (or Statistics 201 and Math 323), 252, 256</td>
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<tr>
<td>Math 241</td>
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<tr>
<td>Statistics 301</td>
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**Junior**

<table>
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<th>Course</th>
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<td>Marketing 301</td>
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<td>Mathematics 303</td>
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<td>Management 301</td>
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<tr>
<td>Finance 301</td>
<td>3</td>
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<tr>
<td>Economics 311 or 313</td>
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<tr>
<td>Logistics and Transportation</td>
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<tr>
<td>Written Communication</td>
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**STATISTICS CONCENTRATION**

<table>
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<td>Statistics 461, 462</td>
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**INDUSTRIAL STATISTICS CONCENTRATION**

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<td>Statistics 221, 365</td>
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<tr>
<td>Senior Management</td>
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<td>Management 401</td>
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<tr>
<td>International Business</td>
<td>6</td>
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<tr>
<td>Arts Elective</td>
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<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Business Law 301</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total:** 126 hours

---

**Economics or Political Science Electives:** 6 hours
- Political Science 441: 3 hours
- Written Communications 442: 3 hours

---

**CENTER FOR BUSINESS AND ECONOMIC RESEARCH**

**STAFF**

- A. D. Haake (Director), Research Professor, Ph.D. Tennessee
- K.E. Quindry (Emeritus), Professor, Ph.D. Kentucky
- W.F. Fox, Associate Director, Research Professor, Ph.D. Ohio State
- J.W. Mayo, Research Associate Professor, Ph.D. Washington (St. Louis)
- D.M. Mandy, Research Assistant Professor, Ph.D. Illinois (Urbana)
- M.N. Murray, Research Assistant Professor, Ph.D. Syracuse
- M.J. Cornelius, Research Associate, M.S. Tennessee
- P.M. Gilmores, Research Associate, B.A. Tennessee
- P.J. Snodgrass, Research Associate, B.S. Tusculum College
- P.A. Price, Research Associate, B.S. Tennessee
- B.B. Vickers, Research Associate, B.A. Mary Washington
- V.C. Cunningham, Research Assistant, B.A. Tennessee
- M.A. Kirby, Research Assistant, B.S. Texas A&M
- L.C. Polk, Research Assistant, M.L.S. Tennessee
- J.P. McDonald, Managing Editor, B.A. William & Mary
- J.M. Snodery, Associate Editor, B.A. Tennessee
- S.J. Knuckles, Assistant to the Director, Associate in Business
Communications media are a vital force in today's complex society. As a result, programs in the College of Communications acquaint students with the communications process and prepare them for professional work in many fields.

The College includes the School of Journalism and the Departments of Advertising and Broadcasting. The three academic divisions have a common core curriculum. This permits specialization at the junior and senior level.

The advertising, broadcasting, news-editorial, public relations and master's programs are accredited by the Accrediting Council on Education in Journalism and Mass Communications.

An exchange program with Central Netherlands Polytechnic, Utrecht, offers students a European Semester called "Europe in the World." Tennessee students study in European journalism in the Netherlands, but maintain their enrollment at UTK and pay only room, board and transportation costs.

The College is a member of the Association of Schools of Journalism and Mass Communication and of the Broadcast Education Association.

### REQUIREMENTS FOR ALL CURRICULA

#### CORE COURSES
All students in the College take the following core courses:
- Communications 100 - Introduction to Mass Communications
- Communications 200 - Writing for Mass Communications
- Communications 300 - Mass Communications Research Methods
  or
- Advertising 340 - Advertising Research Methods
- Communications 400 - Mass Communications Law and Ethics

#### SATISFACTORY/NO CREDIT OPTION
This option applies only to general elective courses. No course that is a 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, humanities and speech electives required by the various departments cannot be taken as 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 and Journalism.

A minor in Broadcasting consists of 18 hours as follows: Communications 100, 200, Broadcasting 275 and Broadcasting electives (any three courses).

A minor in Journalism consists of 18 hours from the following: Communications 200, 400, plus 12 hours in journalism approved by the School of Journalism minor advisor.

### REQUIREMENTS FOR GRADUATION

The Bachelor of Science in Communications is awarded to majors who complete a program of 128 hours prescribed under departmental requirements listed below. At least 90 of those hours must be taken in courses other than the major or related communications fields. At least 18 of the hours in the major must be taken at The University of Tennessee, Knoxville. Normally no more than 14 transfer credits in the major will be applied to the 128 hours.

### PROGRESSION REQUIREMENTS

Entering freshmen and transfer students are first associated with the college as Pre-Majors. They may progress to a major in the School of Journalism or the Departments of Advertising or Broadcasting after the completion of at least 30 hours of prescribed course work with a 2.3 cumulative GPA.

Until they progress to a major, students may not enroll in courses in the College numbered 300 or above without approval.

Students who do not progress to a major by the time they have accumulated 80 credit hours will be dismissed from the College. Students must achieve a cumulative grade point average of at least 2.0 in all College of Communications courses used to fulfill graduation requirements.

During their last 32 hours prior to graduation, all students must have been accepted as majors in the College.

### TRANSFER STUDENTS

Students from other colleges within the University are eligible to progress to a major in the College of Communications as soon as they complete at least 30 hours of prescribed coursework with a 2.3 cumulative GPA and complete Communications 100 (Introduction to Mass Communications) with at least a "C" grade and make application to the appropriate Department or School.
### Communications

**Professors:**
- Paul G. Ashdown, Ph.D. Bowling Green
- Dorothy A. Bowles, Ph.D. Wisconsin (Madison)
- James A. Crook, Ph.D. Iowa State
- George A. Everett, Ph.D. Iowa
- Herbert H. Howard, Ph.D. Ohio
- Mark Miller, Ph.D.
- Michigan State: Michael W. Singletary, Ph.D.
- Southern Illinois: Norman R. Swan, Jr., Ph.D.
- Ronald E. Taylor, Ph.D. Illinois
- Dwight L. Teeter, Jr., Ph.D. Wisconsin (Madison)

**Associate Professors:**
- Edward Caudill, Ph.D. North Carolina
- Roxanne Hovland, Ph.D. Illinois
- S.M. Lucarelli, Ph.D. Tennessee
- Barbara A. Moore, Ph.D. Ohio
- Michael J. Stankey, Ph.D. Illinois
- Dhyana Ziegler, Ph.D. Southern Illinois

**Graduate:**
Consult the Graduate Catalog for listing of graduate level courses.

### Advertising

**Professor:**
- Ronald E. Taylor (Head), Ph.D. Illinois

**Associate Professors:**
- DeForrest Jackson, M.S. Tennessee
- Roxanne Hovland, Ph.D., Illinois
- Michael J. Stankey, Ph.D. Illinois

**Assistant Professor:**
- Marla G. Hoy, Ph.D., Oklahoma State
- J. Eric Haley, Ph.D. Georgia

**Emeritus Professor:**
- Richard Joel, M.A., Wisconsin

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Courses</th>
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<tbody>
<tr>
<td>Freshman</td>
<td>English 101, 102</td>
</tr>
<tr>
<td></td>
<td>Mathematics 119</td>
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<tr>
<td></td>
<td>History 151-152</td>
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<tr>
<td>Sophomore</td>
<td>English Literature</td>
</tr>
<tr>
<td></td>
<td>Political Science 101</td>
</tr>
<tr>
<td></td>
<td>Advertising 230</td>
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<tr>
<td></td>
<td>Statistics 203</td>
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<td></td>
<td>Mathematics 121</td>
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<td>Communications 200</td>
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<td></td>
<td>Economics 201</td>
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<td></td>
<td>Anthropology 130</td>
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<td>Junior</td>
<td>Marketing 301</td>
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<td>Advertising 340, 350</td>
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<td>Psychology 110, 360</td>
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<td>Advertising 360</td>
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<td>Social Science Elective</td>
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<td>Speech 240</td>
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<td>General Elective</td>
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<td>Advertising 369</td>
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<td>Senior</td>
<td>Advertising 450, 470, 490</td>
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<td></td>
<td>Communications 440</td>
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<td>Communications Elective</td>
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<td></td>
<td>Management 301</td>
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<td></td>
<td>Business Elective</td>
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<td></td>
<td>Journalism 390</td>
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<tr>
<td></td>
<td>Computer Science 102</td>
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<tr>
<td></td>
<td>General Elective</td>
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Total: 128 hours

### Broadcasting

**Professors:**
- Herbert H. Howard, Ph.D. Ohio
- Norman R. Swan, Jr., Ph.D. Missouri

**Adjunct Professor:**
- Lindsey Nelson, B.A. Tennessee

**Associate Professors:**
- Barbara A. Moore (Acting Head), Ph.D. Ohio
- Dhyana Ziegler, Ph.D. Southern Illinois

**Assistant Professors:**
- Evelyn Miller, Ph.D. Ohio State
- Jeffrey S. Wilkinson, Ph.D. Georgia

**Emeritus Professor:**
- Darrell W. Holt, Ph.D. Northwestern

<table>
<thead>
<tr>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Freshman</td>
<td>English 101, 102</td>
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<tr>
<td></td>
<td>History 151-152</td>
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<td>General Elective</td>
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<td>Broadcast Elective</td>
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<tr>
<td></td>
<td>General Elective</td>
</tr>
</tbody>
</table>

Total: 128 hours

### Journalism

**Professors:**
- Paul G. Ashdown, Ph.D. Bowling Green
- Dorothy A. Bowles, Ph.D. Wisconsin (Madison)
- James A. Crook (Director), Ph.D.
- Iowa State
- George A. Everett, Ph.D. Iowa
- Mark Littman (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:**
- Edward Caudill, Ph.D. North Carolina
- Robert B. Heller, M.S. Syracuse
- Susan M. Lucarelli, Ph.D. Tennessee
- Jerry L. Morrow, Ph.D. Toledo
- Sammie Lynn Puetz, M.S. Tennessee

**Assistant Professor:**
- Daniel Foley, M.S.J. Northwestern

**Instructor:**
- Bonnie L. Hufford, M.Ed. Bowling Green

**Emeritus Professors:**
- June N. Adamson, M.S. Tennessee
- Dozier C. Cade, Ph.D. Iowa
- Jack B. Haskins, Ph.D. Minnesota
- John L. Lain, M.A. Iowa
- B. Kelly Leiter, Ph.D. Southern Illinois
- Frank B. Thornburg, M.S. Florida
- Willis C. Tucker, M.S. Kentucky

### News-Editorial Concentration

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<td>Sophomore</td>
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<td>Psychology 110</td>
</tr>
<tr>
<td></td>
<td>Speech 210</td>
</tr>
<tr>
<td></td>
<td>Philosophy 135 or Mathematics Elective</td>
</tr>
<tr>
<td></td>
<td>Foreign Language</td>
</tr>
<tr>
<td>Junior</td>
<td>Journalism 290 or 390</td>
</tr>
<tr>
<td></td>
<td>Communications 300</td>
</tr>
<tr>
<td></td>
<td>Journalism 360</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
</tr>
<tr>
<td></td>
<td>Political Science Elective</td>
</tr>
<tr>
<td></td>
<td>English Literature</td>
</tr>
<tr>
<td></td>
<td>Communications Elective</td>
</tr>
<tr>
<td></td>
<td>General Elective</td>
</tr>
<tr>
<td></td>
<td>Mathematics Elective</td>
</tr>
<tr>
<td>Senior</td>
<td>Journalism 420, 430, 460, 492</td>
</tr>
<tr>
<td></td>
<td>Communications 400</td>
</tr>
<tr>
<td></td>
<td>Social Science Electives</td>
</tr>
<tr>
<td></td>
<td>General Elective</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
</tr>
</tbody>
</table>

Total: 128 hours
## PUBLIC RELATIONS CONCENTRATION

<table>
<thead>
<tr>
<th>Level</th>
<th>Course Details</th>
<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>English 101, 102; Natural Science; Foreign Language; Mathematics Elective; Communications 100</td>
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<tr>
<td></td>
<td>'Natural Science Electives are: Astronomy 151-152 or 161-162; Biology 110-120; Chemistry 100-110 or 120-130; Geography 131-132; Geology 101-102 or 101-103.</td>
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<tr>
<td></td>
<td>Six hours at the 200 level or above of the same language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathematics or Philosophy electives: Mathematics elective, Philosophy 135; or Statistics 201.</td>
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<tr>
<td></td>
<td>Journalism electives: Journalism 310, 412, 414, 433, 450, 451, 490.</td>
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</tr>
<tr>
<td></td>
<td>English Language electives: English 201, 202, 221, 231, 232, 233, 251, 252, 253.</td>
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<td></td>
<td>Political Science electives: Political Science 315, 320, 321.</td>
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<tr>
<td></td>
<td>Business Administration electives: Marketing 301; Economics 325.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communications electives: Must be approved by advisor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Electives - Art, Classics, Drama, English, Music, Philosophy, Religious Studies.</td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td>Communications 200; Journalism 203; Speech 240; Journalism 270; Economics 201; Accounting 201; Humanities Elective; Foreign Language; Philosophy or Mathematics Elective</td>
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</tr>
<tr>
<td></td>
<td>Humanities Electives</td>
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</tr>
<tr>
<td></td>
<td>Mathematics Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Journalism Elective</td>
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<tr>
<td></td>
<td>Marketing 301</td>
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<tr>
<td></td>
<td>English Language</td>
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<td></td>
<td>Political Science Elective</td>
<td>3</td>
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<tr>
<td></td>
<td>Humanities Electives</td>
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</tr>
<tr>
<td></td>
<td>Business Administration Elective</td>
<td>3</td>
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<tr>
<td></td>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>Junior</td>
<td>Journalism 290, 360; Communications 300; Journalism Elective; Economics 201; Accounting 201; Humanities Electives; Business Administration Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Communications Elective</td>
<td>3</td>
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<tr>
<td></td>
<td>Social Science Electives</td>
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<td></td>
<td>Humanities Electives</td>
<td>6</td>
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<tr>
<td></td>
<td>General Elective</td>
<td>3</td>
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<tr>
<td>Senior</td>
<td>Journalism 390, 470, 492; Communications 400; Communications Elective; Humanities Electives; General Elective</td>
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<td>3</td>
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<tr>
<td></td>
<td>Total: 128 hours</td>
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</tr>
</tbody>
</table>
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 teaching 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 100 faculty reside in 12 academic units. The College’s Office of Teacher Education 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: Community Health Education, Exercise Science, Human Services, Recreation and Leisure Studies, and Sport Management.

The College of Education holds membership in the American Association of Colleges for Teacher Education. 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 preparing non-school based professionals are accredited by the Southern Association of Colleges and Schools and the Recreation and Leisure major is accredited by the National Recreation and Park Association/the American Association for Leisure and Recreation Council on Accreditation.

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 Education Building, Claxton Addition, and Health, Physical Education, and Recreation Building are modern, 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 Teacher Simulation Laboratory, the Bureau of Educational Research and Service, as well as a number of interest centers and special projects.

**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 degrees from 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.


**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.
Knoxville, whether the student enters as a freshman, or transfer student.°

**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 2.5 undergraduate cumulative GPA. GPA computations, which include transfer grades, will be made at the time other requirements, listed below, are completed but not before the completion of at least 75 hours of academic work for the following teaching fields: Business/Marketing Education, English Education, Foreign Language Education, Mathematics Education, Social Science Education, or Science Education, 60 semester hours for Elementary Education, and 45 semester hours for all other fields. Any professional education course, taken either before or after admission, must be passed with a minimum letter grade of "C" otherwise such a course must be repeated. If this standard is not met: The applicant will improve his/her academic record by adding or repeating courses.

2. PRAXIS I: Pre-Professional Skills Test (PSST): 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:
   a. Applicants who have attained an ACT 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 520 on the SAT shall be exempt from the PSST.
   b. Applicants who have earned a bachelor's degree from an accredited institution and who have been admitted to a graduate degree program which requires a minimum passing score on a standardized admission test.
   c. Applicants who qualify for a waiver based on other standardized test scores must contact the Office of the Associate Dean for Undergraduate Studies.

If this standard is not met: The applicant will retake the PRAXIS I: PSST until passed. Applicants who fail the same subtest twice should consult the Office of the Associate Dean for Undergraduate Studies to determine their eligibility for a waiver based on their performance in specific general education courses. Note that it is not necessary to repeat subtests which were previously passed.

3. Hearing and Speech Evaluations: The applicant will perform within normal limits on hearing and speech evaluations.

If this standard is not met: The applicant will participate in therapy, as specified by and provided through the University's Hearing and Speech Center.

4. Conduct Record: Each applicant will be screened by the University's Conduct Office. Applicants who have established records of inappropriate conduct will be evaluated by the College's Teacher Education Standards Committee.

If this standard is not met: The applicant's disposition will be determined by the Teacher Education Standards Committee.

**BOARDS OF ADMISSION**

Applicants who successfully complete the minimal requirements will be interviewed by a board of admissions. Boards of admission will base admissions decisions on applicants' academic qualifications, aptitude test scores, oral expression, written communication, and expressed interest in teaching.

**ADMISSION DECISIONS**

The College is committed to recruiting and preparing the strongest possible candidates for the teaching profession. The admissions criteria summarized above are minimal requirements. Applicants should be aware that admission decisions are made by boards of admission and that selection is competitive, based upon available faculty resources and field placements. Posts GPA and basic skills test scores are minimums which are necessary to interview with boards of admission and do not ensure admittance into programs. Applicants are encouraged to achieve the highest GPA and test scores possible, and to confer regularly with the College's Advising Center regarding admissions requirements.

Applicants who are denied admission to the specific teaching field of their choice are eligible to seek admission to other teaching fields. Some applicants may be encouraged to interview with the same board following remediation. Applicants who are admitted, thus, become eligible to enroll in upper division Professional Education courses.

**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 function as guidelines during the period between admission to the Teacher Education Program and enrollment in student teaching or internship:
   a. 2.5 GPA in general education and specific teaching fields (major) courses.
   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 who progress 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 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.

Student teaching or internship applications are completed in group sessions. Two application sessions are conducted during the summer. Schedules of the application sessions are available in the Office of Field Studies, 216 Claxton Addition.

Making application to enroll in student teaching or 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 student teaching or internship regardless of their status in the Teacher Education Program.

The following are the general prerequisites for student teaching or internship. Prerequisites for specific program areas (e.g., Art Education, Elementary Education) are available in the Office of Field Studies 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. 2.5 graduate cumulative GPA.
   b. 2.5 GPA in major.
   c. 2.8 GPA in professional education courses.

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.

Student teaching or internship is evaluated on a satisfactory/no credit basis and the hours are included in the University policy requiring a 2.0 in the last 30 hours of coursework.

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.

**STEP IV: LICENSURE**

Students must attain the following minimum requirements to qualify for the College's recommendation for licensure:

1. Academic achievement: Only those students who perform satisfactorily in student teaching or internship will be recommended for licensure. Students who perform unsatisfactorily may be required to repeat and/or attend the next level of preparation.

Such students may be required to participate in remedial courses and/or activities prior to

°Community college students who anticipate transferring to the College should arrange to complete the admission to Teacher Education process prior to matriculating at UT, Knoxville. Students should contact the Education Advising Center, 214 Claxton Addition.

°Students seeking admission to the following program areas, in addition, must complete specific courses before being granted a board review:
   a. Mathematics Education - Mathematics 141-142 and at least 6 additional hours of 200 level or above math;
   b. Science Education - Science 190 for at least 6 semester hours of any laboratory natural science;
   c. Music Education: at least one semester of applied study of music at the 200 level and Music Theory 210;
   d. English Education: freshman composition and one sophomore level course.

°Deficient applicants 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 Associate Dean for Undergraduate Studies, 202 Claxton Addition, of their intentions.
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) National Teachers Examinations (NTE):
All candidates for licensure are required to attain the minimum scores, as determined by the State Board, on the NTE: Core Battery (General Knowledge, Communications Skills, and Professional Knowledge) and the appropriate NTE Specialty Area Test (or equivalent).

Complete details regarding the NTE are available in the Education Advising Center, 214 Claxon Addition.

Applications for teacher licensure should be completed early in the final semester before graduation. Application forms may be obtained in the Registrar's Office, 215 Student Services Building, and in the Education Advising Center, 214 Claxon Addition.

It is important to note that Tennessee regulations stipulate that applicants for initial teacher licensure must be recommended by an approved teacher education institution.

MINORS
Students who are earning a baccalaureate degree in the College of Liberal Arts and who are also seeking teacher licensure in Elementary Education, English 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. The intention to complete a minor must be declared to the time of application for a degree, if the minor is to appear on the final transcript. (Degree applications are available in the Registrar's Office.) Course requirements for minors in Elementary Education and Secondary Education appear in the College of Education's Curricula section of this catalog. Information relative to minors in Health Education and Driver and Traffic Safety is available in the Health, Leisure, and Safety Sciences Unit which is located in Room 387 of the Health, Physical Education, and Recreation Building.

PROGRESSION TOWARD DEGREE COMPLETION IN NON-TEACHING FIELDS

EXERCISE SCIENCE
ADMISSION
Admission to the Exercise Science Major requires a minimum undergraduate cumulative GPA of 2.5 after a minimum of 45 hours of coursework.

PROGRESSION
1. Any professional course, taken before or after admission, must be passed with a minimum letter grade of "C", otherwise such a course must be repeated. Professional courses are:

   - HPSS 322 Fitness Activities (Exercise Physiology/Fitness option only), 332 Applied Anatomy, 411 Adapted Physical Education (Kinesiology option only), 414 Physical Testing and Exercise Prescription, 416 Advanced Kinesiology, and 480 Exercise Physiology.

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, HPSS 493 Independent Study.

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 a service profession. Students who wish to pursue a major in Human Services must maintain 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 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 practicum 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 practicum work will not be retained in the major. (Note that any decision affecting progression or retention may be appealed to the leader of the Cultural Studies in Education Unit.) Requests for information about the program, an appointment with the Board of Review, and an application for the field practicum should be directed to the program secretary in 127 Claxon Addition.

SPORT MANAGEMENT
ADMISSION/PROGRESSION
Progression toward degree completion in the Sport Management Major requires admission to the Sport and Physical Activity and Health, Leisure and Safety Sciences units requires acceptance to the Sport Management Program by the Board of Admissions. Applicants must request an interview (see advisor) with the Board of Admissions upon completion of the following minimum criteria:

1. application to the Sport Management Major
2. 45 semester hours
3. 2.5 cumulative GPA
4. Passing scores on the PRAXIS I examination (check with College of Education Advising Center for details). The PRAXIS I examination is waived for students with a 22 ACT (E) composite score or 920 SAT total score.
5. hearing and speech screening
6. conduct record: Each applicant will be screened by the University's Conduct Office and expected to have established a satisfactory record of appropriate conduct.

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, aptitude test scores, 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 Board of Admissions and that selection is competitive, based upon available faculty resources, and field placements.

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/N credit may not be used in required courses or in controlled electives, except where the course is offered only on a S/N basis (such as testing 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 Coordinator of Undergraduate Student Services, 214 Claxon Addition. A normal semester course load in the College is 16-19 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,
CULTURAL STUDIES IN EDUCATION

Professors: Joan Paul (Leader), E.D., Alabama; Clifton B. Allison, Ph.D., Oklahoma; Theodore W. Hippel, Ph.D., Illinois; Robert F. Kronick, Ph.D., Tennessee; Anand Mallik, Ed.D., Columbia; B.J. Mead, Ph.D. Purdue; W.J. Morgan, Ph.D., Minnesota; C.A. Wrisberg, Ph.D. Michigan; Richard Wisniewski, Ed.D., Wayne State.

Associate Professors: Patricia A. Beitel, Ed.D., North Carolina (Greensboro); J.T. DaSensi, Ed.D., North Carolina (Greensboro); K.P. Bennett demarraila, Ed.D., Cincinnati.

Assistant Professor: J.D. McLean, Ph.D., Chicago.

EDUCATION IN THE SCIENCES, MATHEMATICS, RESEARCH, AND TECHNOLOGY


Associate Professors: A.D. Grant, Ph.D., Wisconsin.

Assistant Professors: Laura M. Barden, Ph.D., Maryland.

Instructors: Judith Boser, Ph.D., Tennessee; Michael Smith, Ph.D., Tennessee.

EXERCISE SCIENCE

Professors: E.T. Howley (Leader), Ph.D. Wisconsin; A.J. Kozar (University Professor), Ph.D. Michigan; W.P. Lemoeh, Ph.D. Iowa; R.F. Rockett, Ph.D. Brown; H. Welch (Emeritus), Ph.D. Florida.

Associate Professor: T.C. Namey, M.D. Washington (St. Louis).


HEALTH, LEISURE, AND SAFETY SCIENCES

Professors: Charles B. Hamilton (Leader), Dr. P.H. Oklahoma; June Gorski, Dr. P.H. California (Los Angeles); Gene A. Hayes, Ph.D. North Texas State; Robert H. Kirk, H.S.D. Indiana; James J. Neutens (Adjunct), Ph.D. Illinois; Bill C. Wallace, Ed.D. Colorado State.

Associate Professors: Ken L. Krick, Re.D. Indiana; Robert J. Pursley, Ph.D. Iowa.


Instructor: Rosa Emory Thomas (Adjunct) MPH, North Carolina.

HOLISTIC TEACHING/LEARNING


Assistant Professor: Dorothy A. Hendricks, Ph.D. Alabama.

Instructor: Jennifer Butterworth, Ph.D. Vanderbilt.

INCLUSIVE EARLY CHILDHOOD EDUCATION

Professors: Susan M. Benner (Leader), Ed.D. Columbia; Kermit J. Blank, Ph.D. Ohio State; Laurence J. Coleman, Ph.D. Kent State.

Associate Professors: Lynn C. Cagle, Ed.D. Georgia; Amos J. Hatch, Ph.D. Florida.

LANGUAGE, COMMUNICATION, AND HUMANITIES EDUCATION

Professors: P. Davis-Wiley (Leader), Ed.D. Houston; M.A. Christiansen, Ph.D. Kansas; H.N. Hull, Ed.S. George Peabody.


PSYCHOEDUCATIONAL STUDIES


Associate Professors: Katherine H. Greenberg, Ph.D. George Peabody of Vanderbilt; L.M. Kindall, Ed.D. Tennessee, Knoxville.

REHABILITATION AND DEAFNESS


Assistant Professor: M.K. Warden, Ph.D. Tennessee.

Instructors: D.L. Ashmore, M.S. Tennessee; W.W. Barnes, Jr., M.Ed. Georgia; M. Kolviz-Fallert, M.S. Illinois; M. Griffin, M.S. Tennessee; C.C. LaCava, M.S. Tennessee; R.A. Sandefur, M.S. South Carolina.

Lecturer: W.H. Byrd, Jr., M.S. Tennessee.

SPORT AND PHYSICAL ACTIVITY

Professor: N.E. Lay, Ph.D. Florida State.

Associate Professors: D.R. Kelley (Leader), Ph.D. Georgia State; R.E. Jones, Ph.D. Toledo.

Assistant Professors: P.C. Boroviak, M.S. Tennessee; M.G. McCutchen, Ed.D. North Carolina (Greensboro).

CURRICULA

ART EDUCATION

Students seeking licensure to teach art in the schools pursue the Bachelor of Fine Arts Degree in Studio Art in the College of Liberal Arts and will complete a major in Art Education at the undergraduate level. The undergraduate major in Art Education includes the following:

<table>
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<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Art Education 301</td>
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<td>Art Education 400</td>
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<td>Art Education 390</td>
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T.C. Namey, M.D. Washington (St. Louis).
College of Education/Elementary Education

Education 400 ...................................................... 2
Education 401 ...................................................... 3
Education 403 ...................................................... 2
Educational and Counseling Psychology 210 ................. 3
Educational Curriculum and Instruction 304 .................. 1

Undergraduate Total: 24 hours

The following courses are taken during the post baccalaureate, Professional Year:

Professional Year
Education 574 ...................................................... 2
Education 575 ...................................................... 12
Education 591 ...................................................... 3
Art Education 500 .................................................. 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.

ELEMENTARY EDUCATION

Students interested in becoming Elementary school teachers (K-Gr.8) earn a BA or BS degree in the College of Liberal Arts (see Pre-Teaching Programs for Prospective K-8 Teachers). While completing requirements for the baccalaureate degree, students are encouraged to take a minor in Elementary Education:

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<thead>
<tr>
<th>Hours Credit</th>
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<tr>
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</tr>
<tr>
<td>3</td>
<td>Educational Curriculum and Instruction 351</td>
</tr>
<tr>
<td>3</td>
<td>Educational Curriculum and Instruction 356</td>
</tr>
<tr>
<td>6</td>
<td>Educational Curriculum and Instruction 422</td>
</tr>
<tr>
<td>3</td>
<td>Library and Information Science 300</td>
</tr>
<tr>
<td>3</td>
<td>Art Education, Music Education, Health Education, or Physical Education Methods (Choose two or more areas)</td>
</tr>
<tr>
<td>3</td>
<td>Educational and Counseling Psychology 210</td>
</tr>
<tr>
<td>2</td>
<td>Education 400</td>
</tr>
<tr>
<td>3</td>
<td>Education 401</td>
</tr>
<tr>
<td>2</td>
<td>Education 403</td>
</tr>
</tbody>
</table>

Undergraduate Total: 28 hours

The following courses are taken during the post baccalaureate, Professional Year:

Professional Year
Education 574 ...................................................... 2
Education 575 ...................................................... 12
Education 591 ...................................................... 3
Educational Curriculum and Instruction 505 ................. 6

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.

HEALTH EDUCATION: COMMUNITY HEALTH EDUCATION

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Freshman English 101, 102</td>
</tr>
<tr>
<td>6</td>
<td>Mathematics 110, 115</td>
</tr>
<tr>
<td>6</td>
<td>Chemistry 100, 110</td>
</tr>
<tr>
<td>3</td>
<td>Nutrition elective</td>
</tr>
<tr>
<td>3</td>
<td>Psychology 110</td>
</tr>
<tr>
<td>3</td>
<td>Foreign Language, Multicultural, or Integrative elective</td>
</tr>
</tbody>
</table>

Sophomore
Zoology 230, 240 .................................................. 8
Microbiology 210 ................................................... 3
Economics 201 ...................................................... 3
Sociology 100 ...................................................... 3
Sociology or Psychology elective ............................ 3

HUMAN PERFORMANCE AND SPORT STUDIES: EXERCISE SCIENCE CONCENTRATION (EXERCISE PHYSIOLOGY/FITNESS OPTION)

Freshman
Mathematics 101, 102 .............................................. 6
Mathematics or Computer Science 101, 102 .................. 6
Chemistry 120, 130 .................................................. 3

Junior
Chemistry 120, 130 .................................................. 3

Senior
History 310 ............................................................ 3

Total: 138-141 hours

HUMAN SERVICES

Freshman
English 101, 102, or 103 .......................................... 6
Mathematics or Computer Science 101, 102 .................. 6

Sophomore
Human Services 220 .................................................. 3
Economics 201 ...................................................... 3

Junior
Psychology 110 ...................................................... 3

Total: 122 hours

*Consult advisor for specific course requirements.
SECONDARY EDUCATION

Students interested in becoming Secondary school teachers earn a BA or BS degree in the College of Liberal Arts (e.g., English, mathematics, etc.). While completing requirements for the baccalaureate degree, students are encouraged to take a minor in Secondary Education:

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Curriculum and Instruction 352</td>
</tr>
<tr>
<td>Educational Curriculum and Instruction 355</td>
</tr>
<tr>
<td>Education 400</td>
</tr>
<tr>
<td>Education 401</td>
</tr>
<tr>
<td>Education 403</td>
</tr>
<tr>
<td>Educational and Counseling Psychology 210</td>
</tr>
<tr>
<td>Educational Curriculum and Instruction 304</td>
</tr>
</tbody>
</table>

Undergraduate Total: 15 hours

The following courses are taken during the post baccalaureate, Professional Year:

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 574</td>
</tr>
<tr>
<td>Education 575</td>
</tr>
<tr>
<td>Education 591</td>
</tr>
<tr>
<td>Special Education 528, 529</td>
</tr>
</tbody>
</table>

Graduate Total: 24 hours

SPECIAL EDUCATION: MODIFIED AND COMPREHENSIVE CONCENTRATION

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101, 102</td>
</tr>
<tr>
<td>Art, Music, or Theatre elective</td>
</tr>
<tr>
<td>Anthropology 130 or 230</td>
</tr>
<tr>
<td>Foreign Language, Multicultural, or Integrative electives</td>
</tr>
<tr>
<td>Physical Science elective</td>
</tr>
<tr>
<td>Sociology elective</td>
</tr>
<tr>
<td>Physical Education Activity or Recreation Therapy elective</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td>Philosophy/Religious Studies 345</td>
</tr>
<tr>
<td>Political Science or Economics elective</td>
</tr>
<tr>
<td>History 355, 357</td>
</tr>
<tr>
<td>Special Education 310, 320, or 330</td>
</tr>
<tr>
<td>Special Education 419, 421, 422, or 423</td>
</tr>
<tr>
<td>Special Curriculum and Instruction 304, 422</td>
</tr>
</tbody>
</table>

Undergraduate Total: 125-129 hours

The following courses are taken during the post baccalaureate, Professional Year:

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 574</td>
</tr>
<tr>
<td>Education 575</td>
</tr>
<tr>
<td>Education 591</td>
</tr>
<tr>
<td>Special Education 528, 529</td>
</tr>
</tbody>
</table>

Graduate Total: 24 hours

SPORT MANAGEMENT

The Sport Management major is an interdisciplinary major sponsored by the Departments of Health, Leisure, and Safety and Human Performance and Sport Studies. This program is designed for students interested in working in the sport industry. The program combines Leisure Studies and Sport Studies, with a minor in Business Administration and includes a semester-long internship experience.
<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English 101, 102 .................................................................................. 6</td>
</tr>
<tr>
<td></td>
<td>Communications 100 or Journalism 201 .................................................. 3</td>
</tr>
<tr>
<td></td>
<td>Foreign Language, Multi-cultural, or Integrative Electives .................... 6</td>
</tr>
<tr>
<td></td>
<td>History Electives .................................................................................. 6</td>
</tr>
<tr>
<td></td>
<td>HPSS 100 or Recreation 110 ...................................................................... 2-3</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective ................................................................................ 3</td>
</tr>
<tr>
<td></td>
<td>Mathematics 121, 122 or 141, 142 ....................................................... 6</td>
</tr>
<tr>
<td></td>
<td>Recreation 210 ..................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
</tr>
<tr>
<td></td>
<td>Accounting 201, 202 ............................................................................. 6</td>
</tr>
<tr>
<td></td>
<td>Advertising 250 ................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Economics 201 ...................................................................................... 4</td>
</tr>
<tr>
<td></td>
<td>Natural Science Electives .................................................................... 8</td>
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<tr>
<td></td>
<td>Sociology 201 ...................................................................................... 3</td>
</tr>
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<td></td>
<td>Speech 210 ........................................................................................... 3</td>
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<tr>
<td></td>
<td>Sport Management 250 .......................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Statistics 201 ..................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Sport Management 290 .......................................................................... 2-3</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
</tr>
<tr>
<td></td>
<td>*Business Electives ............................................................................. 6</td>
</tr>
<tr>
<td></td>
<td>General Elective .................................................................................. 3</td>
</tr>
<tr>
<td></td>
<td>HPSS 276 .............................................................................................. 2</td>
</tr>
<tr>
<td></td>
<td>HPSS 321 .............................................................................................. 3</td>
</tr>
<tr>
<td></td>
<td>Marketing 301 ...................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Recreation 310 .................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Recreation 430 .................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Sport Management 350 .......................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Sport Management 360 .......................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Sport Management 370 .......................................................................... 1-3</td>
</tr>
<tr>
<td></td>
<td>Technological and Adult Education 355 or Journalism 390 .................... 3</td>
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<tr>
<td></td>
<td>Senior</td>
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<tr>
<td></td>
<td>Business Elective .................................................................................. 3</td>
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<tr>
<td></td>
<td>Humanities Elective ............................................................................. 3</td>
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<tr>
<td></td>
<td>Human Performance and Sport Studies 372 ........................................... 3</td>
</tr>
<tr>
<td></td>
<td>Recreation 410 .................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Recreation 440 .................................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Sport Management 415 .......................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Sport Management 490 .......................................................................... 12</td>
</tr>
</tbody>
</table>

Total: 133-137 hours

*Practicum courses in Sport Management are required prior to enrolling in internship.

*Select 12 hours of upper division business electives.


*A 2.5 GPA is required for internship.
College of Engineering

The College of Engineering offers a wide range of programs in engineering, material science and engineering, engineering science, industrial engineering, aerospace engineering, chemical engineering, and engineering physics.

Agricultural engineering is based in the College of Agriculture with facilities located on the Agricultural Campus. The agricultural 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.

The purpose of the College of Engineering to educate men and women to the high levels of technical competence and social understanding that will enable them to fulfill their responsibilities as professional engineers. Graduates of the B.S. curricula offered by the college may enter directly into a position in engineering physics, offering an opportunity to apply engineering principles to the solution of practical and high technology problems, and who can view the solutions in their overall social perspective so that the actions that they recommend will have long term benefits. It is the purpose of the College of Engineering to educate men and women to the high levels of technical competence and social understanding that will enable them to fulfill their responsibilities as professional engineers.

Graduates of the B.S. curricula offered by the college may enter directly into a position in industry, government, or private practice, or may pursue advanced study in graduate school. Their professional activities include research, development, design, operations analysis, construction, production supervision, and technical sales. Many practice their profession in Tennessee; but engineering knows no geographical bounds, and graduates of the college serve throughout the nation and in other countries as well.

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 black engineering graduates. The college has ten major undergraduate curricula in which a student may specialize: aerospace engineering, chemical engineering, civil engineering, electrical and computer engineering, engineering science, industrial engineering, materials science and engineering, mechanical engineering, nuclear engineering, and engineering physics.

Agricultural engineering is based in the College of Agriculture with facilities located on the Agricultural Campus. The agricultural 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 Engineering Science are in Perkins Hall (#67); Electrical and Computer Engineering is in Ferris Hall (#33); Industrial Engineering is in the Alumni Memorial Building (#2); Nuclear Engineering is in the Pasqua Engineering Building (#63); Mechanical and Aerospace, Chemical, and Materials Science are in Dougherty Hall (#28); and the Freshman Engineering Advising Center and the Co-op Office are in Perkins Hall. The Minority Engineering Scholarship Program office is in Estabrook Hall (#30). The Engineering Physics program is administered through the UT Knoxville Physics Department in the Nielsen Physics Building (#70).

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.

COOPERATIVE ENGINEERING PROGRAM

The five-year Cooperative Engineering Program is offered in order to provide an augmented engineering education that includes significant experience in industry as well as superior academic preparation. The Cooperative Engineering Program was established in 1926. The University of Tennessee was one of the early pioneers in this valuable type of education.

Cooperative 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. Some of the experience is at a subprofessional level not available to an engineer after graduation, yet is of great significance in achieving a complete education and early effectiveness.

Participation in the Cooperative Engineering Program usually begins with application during the freshman year, and placement with a co-op employer during the sophomore year, after the student has met academic progress and grade qualification requirements of employers and the Co-op Program. An exceptionally well-qualified candidate might begin a field assignment at the end of the freshman year.

A schedule of courses is taught by each engineering department specifically to meet the needs of co-op students, and applicants must be able to fit into that schedule in order to participate. Candidates must be able to project a minimum of twelve months of co-op experience prior to the senior year, within the regular alternating sequence, to qualify for placement. Those planning to transfer to the College of Engineering from other disciplines or schools should begin working as early as possible with an advisor in their department to plan to enter in order to enter the co-op schedule at an optimum time. Second-degree students, students re-entering college, and other non-traditional students should consult with the College of Engineering as early as possible.
students often find the Co-op Program a viable form of education and positions are available for such students in most instances.

Brochures with further details, current employer list, and policies and procedures may be obtained from the Cooperative Engineering Program, 117 Perkins Hall, University of Tennessee, Knoxville, TN 37996-2012.

INTERNATIONAL PROGRAM
Since 1982 the College of Engineering has had a unique student exchange program with the Fachhochschule Rheinland-Pfalz, Abteilung Koblenz (FH Koblenz). Under this program, seniors and graduate students in all disciplines of the College may apply for a 3 to 6 month educational and practical internship with German industry. In addition to the potential of receiving credit for engineering coursework, those selected for the program will receive a stipend from German Industry adequate to cover basic living expenses while in Germany. Those interested in applying should begin making plans during the freshman year by contacting the Program Coordinator. Language preparation should start immediately. Formal application should be made at the beginning of the junior year. Following a selection committee interview, the applications of successful candidates will be forwarded to FH Koblenz, where a final selection will be made. The selection process will take into consideration language preparation, academic achievement, ability to locate a suitable industrial sponsor in Germany, and personal maturity.

GRADUATE PROGRAM
Graduate programs leading to the degree of Master of Science are offered in all areas of study, and the degree of Doctor of Philosophy is offered in nine major subjects: aerospace engineering, chemical engineering, civil engineering, electrical and computer engineering, engineering science, mechanical engineering, metallurgical engineering, nuclear engineering, and polymer engineering. Information concerning graduate programs is given in the Graduate Catalog.

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). Currently accredited engineering programs at UT Knoxville include aerospace, agricultural, chemical, civil, electrical, engineering science, industrial, mechanical, materials science, and nuclear. Co-op programs in the above areas are also ABET accredited.

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. Only one minor may be declared and officially designated.
2. The minor must be one officially approved and described in the UT Knoxville catalog. No unofficial minors will be recognized. Minors exist in Architecture and Business Administration, and in numerous departments in Agriculture and Liberal Arts.

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 some courses which cannot be used to satisfy the minimum requirement for an engineering degree.

A student should notify his or her advisor and major department office when beginning work on a minor. The intention to complete a major 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 Knoxville Records Office.

ADVISING
New freshman students are assigned to the Freshman Engineering Advising Center (FEAC) for academic advising and career counseling until they have completed their freshman curriculum. Freshman students admitted to the College of Engineering are not required to designate their field of study until the end of the freshman year. At that time, students select the program of their choice. As sophomores, students are assigned a faculty advisor in their selected department.

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 Knoxville.

LATE DROP REQUESTS
Late drop requests, which may be approved for reasons other than academic difficulties, are handled by the Office of Academic Affairs. For other procedures refer to "Changes in Registration" in the general section of this catalog.

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.

Transfer Students. Transfer students, including internal UTK 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 in all 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 seriousness of purpose. An excessive number of withdrawals, incompletes, repeated courses, or failure may result in denial.

Any UTK student desiring admission to any 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 designee is held, with the major items of consideration being the same as for external transfer students. If admission 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) to 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 humanities-social science electives on a Satisfactory/No Credit (S/N/C) grading basis. No other courses specified as part of the minimum degree requirements may utilize S/N/C grading, unless a course is offered only on that grading basis. Students are encouraged to take courses of interest which are not part of the minimum degree requirements, and to fully utilize the S/N/C 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.

Humanities and Social Science 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. Studies in the humanities and social sciences serve to meet the vital need for awareness and knowledge of these influences on the engineering profession; to meet the objectives of a general education; and, as a prerequisite, to satisfy ABET accreditation requirements. In order to be included as part of the minimum H/SS degree requirement in any engineering curriculum, such coursework should meet the generally accepted definitions that (1) humanities are the broad intellectual programs concerned with human culture and, (2) social sciences are the studies of individual relationships in and to society. Subject areas in the humanities include history, English, philosophy, foreign languages, classics, and the history of music, art, and literature. Subject areas included 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 under this category include: (1) a language course in a student's native language; (2) performance or skill development courses, including those in written or oral communication; (3) military science courses unless officially equivalent to a course in the humanities or social sciences in another department; (4) courses whose basic content is science or mathematics; (5) non-technical programs in engineering economy; and (6) professional courses in other fields - business, communications, etc. Language courses generally must include some cultural aspects, and not be limited
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 so approved, unless a suitable UTK equivalent course number has been assigned as part of the admissions process.

The courses selected to meet the minimum hour requirement in this category must provide both breadth and depth of coverage, and must not be limited to a selection of unrelated introductory courses. A student is urged to seek guidance from his or her advisor if necessary in choosing these electives, since this is an important part of the learning experience in preparation for engineering practice. Choices should be made on the basis of personal interest and likely value in engineering practice. Up to 9 hours in this category can be taken on an S/NC grading basis.

These requirements are not intended to inhibit in any way the selection of courses to be taken by a student while attending UTK. There are non-technical courses which are a required part of the engineering degree requirements which do not fall in this category, such as courses designed to develop written and oral communication. There may be courses of interest to a student which do not meet these H/SS requirements, but which should be a part of the student’s educational experience at UTK.

The requirements for the humanities-social science elective portion of all engineering curricula are as follows:

1. The minimum number of semester credit hours of acceptable courses is 18.
2. No more than two freshman-level courses (100 number) may be taken. The second semester of a freshman-level foreign language course does not count in this total.
3. To ensure depth of coverage, a student must take either: a. Two courses in the same subject, one of which is the explicit prerequisite (listed in the catalog) of the other; or b. Two related courses in the same subject, at least one of which is numbered 300 or above.
4. To obtain breadth of coverage, a student must take courses in at least two different subjects. For this purpose, all foreign languages are considered to be a single subject.
5. For a foreign language to be used to satisfy minimum H/SS requirements, (1) at least two courses in the same language must be taken and (2) the language cannot be the native language of the student.

### APPROVED HUMANITIES/SOCIAL SCIENCE ELECTIVES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>480, 483</td>
<td>American Studies 310, 334, 410, 440</td>
</tr>
<tr>
<td>Architecture 211, 212, 405, 415</td>
<td>Art 171, 172, 173, 176, 183, 371, 372, 374</td>
</tr>
<tr>
<td>301, 302, 305, 309-310, 311, 312, 313, 316, 319, 320, 360, 361, 373, 410, 412, 413, 463, 495, 499</td>
<td>Chemical Engineering/College of Engineering</td>
</tr>
</tbody>
</table>

#### 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 251 and 252, 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 curricular 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 his or her program with an advisor or the status of the program of study no later than the beginning of the second semester prior to anticipated graduation. Any necessary additions 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.

### AGRICULTURAL ENGINEERING

(See College of Agriculture)

Associate Professors: Osmar A. Basaran (Adjunct), Ph.D. Minnesota; D.J. Bowman, Ph.D. Houston; H.D. Cochran (Adjunct), Ph.D. MIT; B.H. Davison (Adjunct), Ph.D. California Inst. of Tech.; T.L. Donaldson (Adjunct), Ph.D. Pennsylvania; Timothy C. Scott (Adjunct), Ph.D. Wisconsin; T.W. Wang, Ph.D. Massachusetts Institute of Technology; F.E. Weber, Ph.D. Minnesota.

BACHELOR OF SCIENCE PROGRAM

Chemical engineering is a discipline dedicated to the development, design, operation and management of plants and processes for economical conversion of chemical raw materials to useful products. It is a broadly based discipline, with heavy emphasis on chemistry and mathematics, also including physics, materials and the humanities. Graduates of the program are quite versatile, with careers in fields such as food and pharmaceutical processing, biochemical engineering, fuels production and conversion, pulp and paper, polymers and plastics, process control and instrumentation.

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. A minimum grade point average of 2.0 for all departmental courses is required for graduation.

A minimum of 18 semester hours of humanities-social science courses are required, which are to be selected from the list under "Curriculums in Engineering".

PROGRESSION TO UPPER-DIVISION

Progression of chemical engineering students to departmental Upper-Division courses is competitive and is 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 50 semester hours of Lower-Division engineering curriculum course work with an overall GPA of at least 2.4. This must include Chemical Engineering 200.

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 abilities to perform satisfactorily in upper-division courses by attaining a minimum GPA of 2.0 in at least 9 hours of 200 and 300 level required courses specified by the department. Further progression to upper-division courses is dependent upon this minimum level of performance.

Any student with an overall GPA below 2.0 will be dropped from upper-division Chemical Engineering courses. Students who have not been admitted to an Upper-Division Status will be dropped from departmental class 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

Professors: G.D. Reed (Head), Ph.D. Arkansas; E.G. Burdette (Fred N. Pebbles Professor), Ph.D. Illinois; A. Chatterjee, Ph.D. North Carolina State; W.T. Davis, Ph.D. Tennessee; D.W. Goodpasture, Ph.D. Illinois, P.E.; Mitiganka Ghosh, (Goodrich Chair of Excellence), P.E., Ph.D. Illinois; W.L. Grecco (Emeritus), Ph.D. Michigan State; K.W. Heathington (Emeritus), Ph.D. Northwestern; J.B. Humphreys, Ph.D. Tennessee; M.L. Johnson, Ph.D. Tennessee; J.A. Kout, Ph.D. Pennsylvania; W.A. Miller (Granger Professor), Ph.D. Georgia Institute of Technology; R.B. Robinson (Fisher Professor), Ph.D. Iowa State; B.A. Tschartz (Condra Professor), ScD New Mexico State; C.R. Walker (Emeritus) M.S. Massachusetts Institute of Technology; J. Wegmann, Ph.D. Northwestern.


Assistant Professor: C.D. Cox, Ph.D. Penn State; L.D. Han, Ph.D. California (Berkeley); M. Mauldon, Ph.D. California (Berkeley); K.G. Robinson, Ph.D. VPI.

BACHELOR OF SCIENCE PROGRAM

The curriculum in civil engineering is designed to provide training in fundamental engineering sciences and in certain basic subjects in various civil engineering fields to serve as a basis for entrance into civil engineering practice and/or for graduate study. By use of technical electives a student can emphasize areas of study in construction, environmental engineering, geotechnical/materials, structures, transportation, or water resources.

Students are required to maintain a cumulative grade point average of at least 2.0 in all civil engineering and environmental engineering courses taken at The University of Tennessee, see, Knoxville, and used to satisfy the graduation requirements.

ELECTIVES

Electives are chosen to meet student career objectives and program accreditation requirements. Students must consult with their advisor and have their selections approved.

MASTERS 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 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: R.C. Gonzales (Head), Ph.D. Florida; J.M. Goode (Head), Ph.D. Georgia Institute of Technology, P.E.; I. Alevizoff, Ph.D. Wisconsin, P.E.; J.M. Bailey, Ph.D. Georgia Institute of Technology, P.E.; J.D. Birdwell, Ph.D. Massachusetts Institute of Technology; A.O. Bishop, Jr., Ph.D. Clemson; T.V. Blair, Ph.D. Tennessee; R.E. Bodenheimer (John Fisher Professor), Ph.D. Northwestern; B.K. Bose (Condra Chair of Excellence), Ph.D. California (Berkeley); D.W. Bouldin, Ph.D. Vanderbilt, P.E.; J.M. Goode (Emeritus), Ph.D. Georgia Institute of Technology; W.L. Green, Ph.D. Texas A&M; G.W. Hoffman, Ph.D. Harvard; J.C. Hung (Benwood Professor, Distinguished Professor), Ph.D. New York, P.E.; E.J. Kennedy, Ph.D. Tennessee, P.E.; J.S. Lawler, Ph.D. Michigan State; W.O. Leffell (Emeritus), M.S. Tennessee; H.P. Neff, Jr., Ph.D. Auburn, P.E.; M.O. Pace, Ph.D. Georgia Institute of Technology, P.E.; J.F. Pierce (Distinguished Professor, Emeritus), Ph.D. Maryland; M.J. Roberts, Ph.D. Tennessee; R.W. Rochelle (Emeritus), Ph.D. Maryland; J.R. Roth, Ph.D. Cornell; B. Smith, Jr. (Emeritus), M.S. Illinois, P.E.; F.W. Symonds, Ph.D. Nottingham (UK); J.D. Tillman (Emeritus), Ph.D. Auburn; M.M. Trivedi, Ph.D. Utah State; C.H. Weaver (Emeritus), Ph.D. Wisconsin, P.E.

Associate Professors: M. Abidi, Ph.D. Tennessee; P.B. Crilly, Ph.D. New Mexico State; D. Brzakovic, Ph.D. Florida; D.B. Koch, Ph.D. Missouri-Rolla; D. Rosenberg, Ph.D. New York; J.M. Rochelle, Ph.D. Tennessee; J.W. Waller, Ph.D. Tennessee.

BACHELOR OF SCIENCE PROGRAM

The course of study for the degree of Bachelor of Science in Electrical Engineering is structured to provide a foundation in both the basic sciences and the specialized areas of electrical and computer engineering. The program also has technical content to enhance the cultural growth of the students and develop professionals with a strong social awareness. The faculty seeks to keep classes small enough to allow effective interaction with students.

The Electrical and Computer Engineering department maintains a number of laboratory facilities to support the undergraduate teaching program. These laboratories are devoted specifically to circuits, communications, digital systems, electronics, electro-optics, image processing, machinery, microwaves, plasma, and power electronics and drives. Microcomputer, minicomputer, and personal computer facilities are also provided within the department.

Students in the senior year have the freedom to choose from a wide spectrum of courses covering all aspects of electrical and computer engineering. Students can select a program with a focus in one or two subjects, or they can take a number of different courses to obtain a broader technical exposure. It is required that the design content of these senior level ECE courses total at least 8 hours. Students are encouraged to discuss an appropriate senior program with their advisors. The selection of Humanities/Social Science electives is left to each individual student but must be made in accordance with established College of Engineering guidelines.

Generally all sophomore and junior level courses of the department are offered every term. Senior level courses will normally be offered in either the Fall or the Spring semester. This arrangement allows flexibility, since the student may elect the normal four year schedule, may choose an accelerated schedule, or may participate in the Cooperative Engineering Program. Where the senior course is a prerequisite for another, the first course of the sequence will be offered in the Fall semester. In all courses where prerequisites are indicated, they must be strictly followed.

Progression in the Electrical Engineering program is based on timely completion of all required freshman courses. In order to be properly enrolled in ECE 201 students must have completed all courses listed in the freshman year of the engineering curriculum. Students must make application for enrollment in 201 in the ECE department during the semester prior to anticipated enrollment. The application should be submitted in sufficient time to permit proper and complete evaluation.

To be eligible for the Bachelor of Science degree in Electrical Engineering a student must achieve a cumulative grade point average of at least 2.00 in all ECE courses taken at the University of Tennessee, Knoxville. At least 30 hours of upper division Electrical and Computer Engineering courses, including at least 8 hours of design credit in senior level courses, must be earned at The University of Tennessee, Knoxville.

GRADUATE

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 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.

ENGINEERING PHYSICS

Professor W.M. Bugg (Head); Professor Edward L. Hart, Coordinator.

The curriculum 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 are concerned with fundamental courses in engineering, sciences, and mathematics. In the upper division, the curriculum allows some choice of courses in engineering and in physics depending upon the interests 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.

ENGINEERING SCIENCE AND MECHANICS


Research Professors: J. Fan, Ph.D. Cincinnati; T.F. Moriarty, Ph.D. Illinois, P.E.

Associate Professors: J.A.M. Boulet, Ph.D. Stanford; W.A. Lydaj, Jr. (Emeritus), M.S. Tennessee; A. Mathews, Ph.D. Illinois, P.E.; G.H. Parham, Jr. (Emeritus), B.S. Cincinnati.

Assistant Professors: J.L. Cezeaux, Ph.D. Reno; S.V. Iannelli, Ph.D. Tennessee; M.S. Madhukar, Ph.D. Drexel; C.D. Piontek, Ph.D. Georgia Tech P.E.; N. Yu, Ph.D. University of California (San Diego).

BACHELOR OF SCIENCE PROGRAM

The engineering science degree program is a flexible course of study with elective options available to satisfy individual interests and career objectives. The program provides students an opportunity for an education with breadth in engineering science, mathematics, and physical or biological science. The curriculum is rigorous, non-traditional and interdisciplinary. In addition to their selected area of specialization, students receive a solid foundation in mathematics, the engineering sciences, and modern computer techniques. Thus they are prepared to go directly into engineering practice at the baccalaureate level or to continue formal engineering education in a Master's or Ph.D. program.

The first two years of study are similar to other engineering disciplines which require students to take fundamental courses in the basic sciences, engineering science, and mathematics. At the junior and senior level, the engineering science program contains the required courses necessary for the modern practice of engineering. In addition, selected groups of technical electives provide the opportunity to develop special interests that cannot be accommodated in other traditional engineering disciplines. Examples of special interest elective groups are available in engineering mechanics, biomedical engineering, computational mechanics, and engineering materials. Other elective groups may be developed upon request.

The engineering mechanics elective group focuses on analytical methods used to investigate practical engineering problems. It is designed especially to develop engineers who are capable of functioning in an industrial environment or research laboratory. Because such preparation involves emphasis on the link between the basic sciences and engineering fundamentals, the engineering mechanics elective group provides an excellent background for students wishing to pursue engineering graduate studies.

The biomedical engineering elective group provides the basic background for an engineer to contribute to the fields of biology and medicine in such technical areas as the design of prostheses, development of artificial organs, and the application of the engineering sciences to further the basic understanding of biological systems. Qualified students may choose to use this program as a background for graduate study in engineering or the life sciences. The program can include courses required for entrance into medical schools, including The University of Tennessee Center for the Health Sciences in Memphis.

Engineering materials play a primary role in all structures such as buildings and bridges, more modern types like airplanes and automobiles, or structures of the future such as space stations and artificial organs. All of these structures must be both safe and economical. The engineer designing these structures must be familiar with materials ranging from classical metals like steels to the newer materials such as ceramics, polymers and composites.

The undergraduate program in engineering materials gives the student a mechanics oriented program in the use of materials for the design of engineering structures. The student can learn to analyze structures for such phenomena as fracture, fatigue and adverse operating environments. By choosing the
Technology, J.C. Hungerford, Ph.D. Ohio State; K.E. Kirby, Ph.D. Tennessee; E.L. Parkinson (UTSI), Ph.D. University of South Florida.

Assistant Professors:
D.F. Jackson, Ph.D. Tennessee; R.S. Sawhney, Ph.D. S. Chatterjee, Ph.D. VPI, P.E.

Lecturers:
W.B. Fortney, M.S. Purdue.

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.

This curriculum, which is built upon a strong background in mathematics and statistics, includes fundamental course work in all of the engineering sciences, introductory economics and management, and at least one course in fundamental human factors which influence engineering design, the economic analysis of alternative design choices, quality control techniques, manufacturing processes and materials, production and inventory system design and control, material handling systems and facilities design, the mathematical modeling and simulation of complex systems, and the design and installation of information acquisition and control systems. The technical and non-technical electives further allow the student to specialize in an area(s) which meets particular needs.

The solid, broad base in engineering, combined with training 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, aerospace systems, research groups, and government as well as in the traditional area of manufacturing.

GRADUATE STUDY PROGRAMS

The Department of Industrial Engineering offers graduate programs leading to the Master of Science degree with major in Industrial Engineering, concentrations in traditional industrial engineering and engineering management. The M.S. 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 or engineering management. Admission is open to graduates of ABET-accredited undergraduate curricula in engineering, or to graduates of graduates of other technical curricula who satisfy prerequisites depending on their academic backgrounds and industrial experiences. The prerequisite requirements will be determined by the industrial engineering faculty.

INDUSTRIAL ENGINEERING

Under the industrial engineering concentration, students may select either the thesis or non-thesis option. The thesis option requires 24 hours of coursework plus a 1-hour thesis. The non-thesis option requires 30 hours of coursework 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, manufacturing systems, human factors engineering, quality engineering, or general industrial engineering. It is also possible 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 coursework plus a 3-hour capstone project.

NOTE: Any 400-level course required in the Bachelor of Science in Industrial Engineering program at UT Knoxville may not be used for graduate credit in the M.S. degree program.

MATERIALS SCIENCE AND ENGINEERING

Professors:
J.E. Spruill (Head), Ph.D. Tennessee; D.C. Bogue, Ph.D. Delaware; B.S. Borle (Part-time), Ph.D. Massachusetts Institute of Technology; C.R. Brooks, Ph.D. Tennessee; R.A. Buchanan, Ph.D. Vanderbilt; E.S. Clark, Ph.D. California (Berkeley); D.A. Canonico (Adjunct Status), Ph.D. Lehigh; J.F. Fellers, Ph.D. Akron; P.K. Liaw, Ph.D. Northwestern; J.S. Lin (Adjunct Status), Ph.D. Kansas; D.H. Lownson (Part-time), Ph.D. Colorado; C.D. Lundin, Ph.D. Rensselaer Polytechnic Institute; C.J. McHargue (Part-time), Ph.D. Kentucky; B.F. Oliver, Ph.D. Pennsylvania State; A.J. Pedraza, Ph.D. National University (Argentina); P.J. Phillips, Ph.D. Liverpool (England); E.E. Stansbury (Emeritus), Ph.D. Cincinnati.

Associate Professors:
W.T. Becker, Ph.D. Illinois; Roberto S. Benson, Ph.D. Florida State University; C.T. Liu (Adjunct Status), Ph.D. Brown University; T.T. Meek, Ph.D. Ohio State.

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 provide education and training in the fundamental and engineering sciences with special attention given to the production, development and utilization of materials. Emphasis is placed on developing the expertise needed to participate in selection, development and production of materials for major engineering systems. The program strives to develop in its graduates the ability to specify materials requirements, select from existing materials,
conceive and characterize new materials and applications, develop the data base required for use of materials (including an understanding of failure modes and phenomena), and develop processes for improvement of materials and/or materials systems. It is anticipated that some of the program's graduates will continue their education in graduate school; hence it is important that the program prepare those students for advanced studies.

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 humanities-social science courses must be taken from the approved list of courses.

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 6 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.

**GRADUATE STUDY PROGRAMS**

Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy with a major in metallurgical engineering or polymer engineering are offered.

**MECHANICAL AND AEROSPACE ENGINEERING**

**Professors:**

**Associate Professors:**
S.E. Becker, Ph.D. North Carolina State, P.E.; R.V. Dube, Ph.D. Clemson; J.I. Frankel, Ph.D. Virginia Polytechnic Institute and State University; W.R. Hamel (Collaborating Scientist), Ph.D. Tennessee, M. Keyhani, Ph.D. Ohio State; K. Nguyen, Ph.D. Colorado.

**Assistant Professors:**
G. Kawiecki, Ph.D. West Virginia; J. E. Lyna, M.D., Ph.D. North Carolina State.

**BACHELOR OF SCIENCE PROGRAM**

Separate curricula are offered in aerospace engineering and mechanical engineering; however, the first two years of these curricula are identical. During the first two years, the curriculum provides for training and study in the basic sciences of physics, mathematics, chemistry, and engineering common to these fields. The third year of both programs continues with the development of the particular engineering sciences of the aerospace and mechanical engineering fields. In the senior year an opportunity is provided for the student to apply this fundamental knowledge to mechanical and aerospace engineering problems. Both curricula are arranged in the upper division years to prepare the student for graduate study or technical employment.

Aerospace engineering has scientific foundations close to those of mechanical engineering. The aerospace engineer, however, devotes attention particularly to the research, development, design, testing, and production of aerospace vehicles - aircraft, spacecraft, missiles; auxiliary systems - heating, cooling, guidance, control; and propulsion systems - piston engines, turbo-jets, ramjets, rockets. Emphasis in the senior year is directed towards these topics and the program culminates in a major aerospace design project.

Mechanical and Aerospace Engineering is competitive and is based on departmental 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. A minimum cumulative grade point average of 2.0 for all departmental courses taken at UT Knoxville is required for graduation.

**FULL STATUS:** A Lower Division student in the department may apply for progression to Upper Division Programs after completing 49 semester hours of Lower Division engineering curriculum course work with an overall GPA of at least 2.4.

**PROVISIONAL STATUS:** Students who have completed 49 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 abilities to perform satisfactorily in Upper Division courses by obtaining a minimum GPA of 2.0 in at least 11 semester hours of 300 level required engineering courses (including 8 specified hours in the department). Further progression to upper division courses is dependent upon this minimum level of performance.

Any student with an overall GPA below 2.0 will not be admitted to mechanical or aerospace engineering courses. Students who have not been progressed to an Upper Division Program will be dropped from departmental class rolls.

**TRANSFER STUDENTS:** At the Upper Division level students are admitted on a Provisional Status basis only. Any student presenting more than 28 semester is considered a Transfer Student.

**LOSS OF FULL STATUS:** Students who progress to Upper Division Programs are expected to maintain an overall GPA of at least 2.0 and a concurrent GPA of at least 2.0 in departmental courses. Failure to maintain these minimum levels of performance will result in a review of the overall progress of the student through the
prescribed curriculum and probable loss of Full Status.

**GRADUATE STUDY PROGRAMS**

Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy with specialization in mechanical engineering or aerospace engineering are available to graduates of recognized undergraduate curricula in mechanical or aerospace engineering and to graduates of the curricula who satisfy the necessary prerequisite courses. The general requirements for advanced degrees are summarized in the Graduate Catalog.

**NUCLEAR ENGINEERING**

Professors:
- T.W. Kerlin (Head), Ph.D. Tennessee; H.L. Dodds, Ph.D. Tennessee, P.E.; J.T. Mihalcez (Part-time), Ph.D. Tennessee; L.F. Miller, Ph.D. Texas A&M, P.E.; R.B. Perez, Ph.D. Madrid
- J.E. Turner (Part-time), Ph.D., (Vanderbilt), P.E.; N. Ucan (Part-time), Ph.D. Michigan, R.E. Uhrig (Distinguished Professor), Ph.D. Iowa State, P.E.; B.R. Upadhyaya, Ph.D. California, P.E.

Associate Professors:
- P.G. Groar, Ph.D. Vienna (Austria); E.M. Katz, Ph.D. Tennessee, P.E.; T.H. Scott, Ph.D. Florida, P.E.

Assistant Professor:
- A.E. Ruggles, Ph.D. Rensselaer.

**BACHELOR OF SCIENCE PROGRAM**

The curriculum is designed to provide a thorough educational experience for students interested in careers in nuclear engineering. The first two years are concerned with the fundamental courses needed as preparation for upper division courses. In the last two years students take scientific and engineering courses which equip them for entry into industry, research, or graduate studies.

**MASTER OF SCIENCE PROGRAM**

A graduate program leading to a degree of Master of Science is available to graduates of recognized undergraduate curricula in engineering and physics. 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 southern states for sharing academic programs allows legal residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. The undergraduate program in Nuclear Engineering is available on an in-state basis to students from Alabama, Arkansas, 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 take 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 freshman year is common to all engineering programs, except for engineering physics. (See curriculum display which follows.)

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<th>Course</th>
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<td>English 101, 102</td>
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<td>Chemistry 120, 130</td>
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<td>Mathematics 141, 142</td>
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<td>Basic Engineering 100</td>
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**AEROSPACE ENGINEERING**

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<td>Mathematics 200</td>
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<td>Physics 231, 232</td>
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<td>Engineering Science and Mechanics 231, 321</td>
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<tr>
<td>Material Science and Engineering 201</td>
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<tr>
<td>Mechanical Engineering 331, 332</td>
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<tr>
<td>'Humanities/Social Sciences Elective</td>
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<tr>
<td>Junior Aerospace Engineering 362, 363</td>
<td>6</td>
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<td>Mechanical Engineering 332, 341, 391</td>
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<td>Aerospace Engineering 345, 351, 370</td>
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<td>Electrical and Computer Engineering 301, 302</td>
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<td>'Humanities/Social Sciences Electives</td>
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<td>Senior Mechanical Engineering 344, 451</td>
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<td>Aerospace Engineering 431, 449</td>
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**TECHNICAL ELECTIVE**

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**CHEMICAL ENGINEERING**

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<td>Physics 231, 232</td>
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<td>Basic Engineering 201</td>
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<td>Civil Engineering 210, 251, 281</td>
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<td>Junior Chemical Engineering 330, 340, 310,</td>
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<tr>
<td>360, 381, 401</td>
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**CIVIL ENGINEERING**

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<th>Course</th>
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<tr>
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<tr>
<td>Physics 231, 232</td>
<td>3</td>
</tr>
<tr>
<td>Basic Engineering 201</td>
<td>2</td>
</tr>
<tr>
<td>Engineering Science and Mechanics 231</td>
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<td>Civil Engineering 210, 251, 281</td>
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<td>Mechanical Engineering 331, 332</td>
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<tr>
<td>Junior Civil Engineering 361, 352, 360, 305</td>
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<td>Civil Engineering 321, 380, 330, 395</td>
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<td>Senior Civil Engineering 440, 471, 480, 400, 435, 442</td>
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<td>Civil Engineering Electives</td>
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<td>'Humanities/Social Science Elective</td>
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**ELECTRICAL AND COMPUTER ENGINEERING**

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<tr>
<td>Physics 231, 232</td>
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<td>Electrical and Computer Engineering 201, 202, 205, 251</td>
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<td>Material Science and Engineering 201</td>
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<td>'Humanities/Social Sciences Elective</td>
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<tr>
<td>Junior Electrical and Computer Engineering 311, 312</td>
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<td>Electrical and Computer Engineering 331, 332</td>
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<td>Electrical and Computer Engineering 341, 342</td>
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<td>'Humanities/Social Sciences Elective</td>
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<tr>
<td>Senior Electrical and Computer Engineering</td>
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<tr>
<td>'Humanities/Social Sciences Elective</td>
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<td>Total:136 hours</td>
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*See College list of approved courses.*
ENGINEERING SCIENCE AND MECHANICS

**Sophomore**
- Mathematics 241, 231, 200 ....................... 8
- Physics 231, 232 ......................................... 7
- Materials Science and Engineering 201 ........ 3
- Course Electives ........................................ 9

**Junior**
- Electrical and Computer Engineering 301 .... 6
- Course Electives ........................................ 9

**Senior**
- Mechanical Engineering 344 ..................... 3
- Course Electives ........................................ 9

Total: 134 hours

*All electives must be approved by the student's faculty advisor and the department head. Technical electives may include courses in mathematics, statistics, computer science, and natural science, as well as courses in engineering.*

**ENGINEERING SCIENCE:**

**BIOMEDICAL ENGINEERING CONCENTRATION**

**Sophomore**
- Mathematics 241, 231, 200 ....................... 8
- Physics 231, 232 ......................................... 7
- Engineering Science and Mechanics 321 ........ 3
- Course Electives ........................................ 9

**Junior**
- Electrical and Computer Engineering 301 .... 6
- Engineering Science and Mechanics 321 ........ 3
- Course Electives ........................................ 9

**Senior**
- Course Electives ........................................ 9

Total: 136 hours

*All electives must be approved by the student's faculty advisor and the department head. Technical electives may include courses in mathematics, engineering, math, other physical sciences, or astronomy. Non-technical electives are to be taken in the College of Liberal Arts from departments not included in the technical electives, with at least 10 hours taken in the humanities.*

**INDUSTRIAL ENGINEERING**

**Sophomore**
- English Electives .................................... 6
- Mathematics 241, 231, 200 ....................... 8
- Physics 231, 232 ......................................... 7
- Course Electives ........................................ 9

**Junior**
- Course Electives ........................................ 9

**Senior**
- Course Electives ........................................ 9

Total: 140 hours

**MATERIALS SCIENCE AND ENGINEERING**

**Sophomore**
- Basic Engineering 201 ................................ 2
- Materials Science and Engineering 201 ........ 3
- Course Electives ........................................ 9

**Junior**
- Course Electives ........................................ 9

**Senior**
- Course Electives ........................................ 9

Total: 135 hours

*Electives may include courses in mathematics, statistics, computer science, and natural science, as well as courses in engineering.*

**MECHANICAL ENGINEERING**

**Sophomore**
- Mathematics 241, 231, 200 ....................... 8
- Physics 231, 232 ......................................... 7
- Course Electives ........................................ 9

**Junior**
- Course Electives ........................................ 9

**Senior**
- Course Electives ........................................ 9

Total: 135 hours

*Electives may include courses in mathematics, statistics, computer science, and natural science, as well as courses in engineering.*

**NUCLEAR ENGINEERING**

**Sophomore**
- Mathematics 241, 231, 200 ....................... 8
- Physics 231, 232 ......................................... 7
- Course Electives ........................................ 9

**Junior**
- Course Electives ........................................ 9

**Senior**
- Course Electives ........................................ 9

Total: 135 hours

*Electives may include courses in mathematics, statistics, computer science, and natural science, as well as courses in engineering.*
College of Human Ecology

Jacquelyn DeJonge, Dean
Jacquelyn Morton, Associate Dean, Academic Administration
James Moran, III, Associate Dean, Graduate Studies, Research and Business Administration

The College of Human Ecology helps students bring together information from the social and natural sciences to address issues faced by individuals and families throughout the lifespan in a global society. While studying in any of the specialized program areas available, students use an interdisciplinary and integrated approach to help individuals and families function effectively in a changing world with the abilities to integrate sensitivity for human needs and cultural diversity with their technical skills. In this way students are well prepared to enter the professional areas of retailing, interior design, hospitality management, early childhood education, dietetics, nutrition, home economics teacher education, or family life education with the knowledge and skills pertinent to some of the most relevant human problems in today's society. All undergraduate programs of the College are accredited by the American Home Economics Association; the Interior Design program is accredited by the Foundation for Interior Design Education Research (FIDER); the Teacher Education program is NCATE approved; and the dietetics program is approved by the American Dietetic Association.

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 for nutrition research; a quantity foods demonstration facility for hotel, 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.

Fifty-full time faculty staff three departments in Child and Family Studies; Nutrition; and Textiles, Retailing and Interior Design. Curricula lead to Bachelor of Science degrees in Human Ecology, in Hotel and Restaurant Administration, and in Interior Design.

UNDERGRADUATE STUDY IN HUMAN ECOLOGY

Curricula in the following majors lead to a Bachelor of Science degree in Human Ecology:

- Child Development;
- Family Studies;
- Nutrition;
- Retailing and Consumer Sciences;
- Interior Design leads to a Bachelor of Science in Interior Design; and
- Hotel and Restaurant Administration leads to a Bachelor of Science in Hotel Restaurant Administration.

COLLEGE POLICIES

Students working toward degrees must complete the last 30 hours of work (two semesters) at UT Knoxville, in a program within the College of Human Ecology. Forty-eight hours must be earned in 300-400 level courses. Usual course loads of College majors are 15-16 hours; course loads over 19 hours must be approved by the Dean's Office at the time of registration. Prospective transfer students are advised to plan a total college program before starting any college-level work to achieve maximum use of credit and sequence of course work.

Students wishing to transfer to the College must have at least a 2.0 grade point average on a 4.0 scale. Progression requirements for each program must also be met. All freshmen are advised in the College Advising Center; other students are assigned an advisor in the specific program areas. New transfer students are advised initially by the College Advising Center and then are assigned departmental program advisors. Students meet with academic advisors each semester. These conferences are designed to help students define choices to achieve academic success; identify career choices available; attain a balance between general education and professional studies; and, identify problems and potential solutions early in the academic program.

REQUIREMENTS FOR ALL CURRICULA

All students take CFS 210 - Human Development; NTR 100 - Introductory Nutrition; RCS 350 - Consumers in the Market; and CFS 300 - Family 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.

PROGRESSION REQUIREMENTS

Most programs in the College have specific requirements for progression.

CHILD DEVELOPMENT MAJOR

For progression into the child development major, 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 30 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 2.3/4.0 (transfer hours included); cumulative GPA of 2.5/4.0 required for admission to Teacher Education for students interested in Early Childhood Education licensure.
4. Apply for review by the Early Childhood Education Review Panel or the Board of Admissions in the College of Education.
5. 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.) Students are expected to exhibit 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 and/or the University’s Writing Center. Some students may be encouraged to reapply to the program following remediation.

6. Each applicant will be screened by the University’s Conduct Office. Applicants who have established records of inappropriate conduct will be evaluated by the Early Childhood Education Review Panel. The applicant’s disposition will be determined by this review panel.

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 90 hours (senior standing).
4. Complete an application to student teach (during CFS 350).
5. Obtain written permission from academic advisor.
6. Attain a cumulative GPA of at least 2.3/4.0; cumulative GPA of 2.5/4.0 required for students in Early Childhood Education licensure.
7. Complete a self-report form concerning conduct and background information prior to the participation experiences in CFS 350 and 351; negative responses to the self-report form and/or failure to report accurate information on this form will be evaluated by the Early Childhood Education Review Panel. The student’s disposition will be determined by this review panel.
8. Complete the self-disclosure form which allows the university’s personnel office to conduct a background check; a negative report on the background check will be evaluated by the Early Childhood Education Review Panel. The student’s disposition will be determined by this review panel.

FAMILY STUDIES MAJOR
For progression into the Family Studies major, students must meet the following criteria:
1. Complete at least 15 semester hours at UTK, including CFS 205.
2. Attain a minimum grade of "C" in all required CFS and HE courses.
3. Complete at least 3 credits in CFS 345 or CFS 360.
4. Submit a self-report form concerning conduct and background information prior to the participation experiences in CFS 350 and 351; negative responses to the self-report form and/or failure to report accurate information on this form will be evaluated by the Early Childhood Education Review Panel. The student’s disposition will be determined by this review panel.
5. Complete a self-disclosure form which allows the university’s personnel office to conduct a background check; a negative report on the background check will be evaluated by the Early Childhood Education Review Panel. The student’s disposition will be determined by this review panel.
6. Complete an application to student teach (during CFS 350).
7. Obtain written permission from academic advisor.
8. Attain a cumulative GPA of at least 2.3/4.0; cumulative GPA of 2.5/4.0 required for students in Early Childhood Education licensure.
9. Complete a self-report form concerning conduct and background information prior to the participation experiences in CFS 350 or CFS 360; negative responses to the self-report form and/or failure to report accurate information on this form will be evaluated by the Family Studies Review Panel. The student’s disposition will be determined by this review panel.
10. Complete the self-disclosure form which allows the university’s personnel office to conduct a background check; a negative report on the background check will be evaluated by the Family Studies Review Panel. The student’s disposition will be determined by this review panel.

HOME ECONOMICS TEACHER EDUCATION CONCENTRATION
Potential teachers must meet teacher education requirements of the College of Education and apply to be admitted to Teacher Education. (See College of Education pages 66, 67 and 68.)

HOTEL AND RESTAURANT ADMINISTRATION
For progression into the program, 1. 30 semester hours completed.
2. Cumulative GPA of 2.5 or greater
3. Grade of "C" or better in the following courses: English 101, 102, Math 119, 121 and/or 122; NTR 100, 101; HRA 120, 220.
4. For progression through and retention in the program, students must:
   1. Maintain a grade of "C" or better in all HRA courses.
   2. Meet all course prerequisites.

NUTRITION MAJORS
Students should apply for progression after completing NTR 201 with a grade of "C" or better and before NTR 313.

1. Progress into the major.
2. Complete courses in Family Studies Core.
3. Complete at least 90 hours (senior standing).
4. Complete an application to intern (during CFS 345 or CFS 360).
5. Complete CFS 405.
6. Obtain written permission from academic advisor.
7. Attain a minimum of "C" in all CFS required courses and HE courses.
8. Earn and maintain a cumulative GPA of at least 2.3/4.0; cumulative GPA of 2.5/4.0 required for students in Home Economics Education licensure.
9. Complete a self-report form concerning conduct and background information prior to the participation experiences in CFS 345 or CFS 360; negative responses to the self-report form and/or failure to report accurate information on this form will be evaluated by the Family Studies Review Panel. The student’s disposition will be determined by this review panel.
10. Complete the self-disclosure form which allows the university’s personnel office to conduct a background check; a negative report on the background check will be evaluated by the Family Studies Review Panel. The student’s disposition will be determined by this review panel.

RETAIL AND CONSUMER SCIENCES MAJOR
Upon admission to the University of Tennessee, Knoxville, students may begin the Retail and Consumer Sciences Major. To remain a student in good standing in the major, all students must:

1. Maintain a cumulative grade point average 2.0 or greater
2. Earn a grade of "C" or better in all required RCS courses.

INTERIOR DESIGN MAJORS
Upon admission to UT Knoxville students may begin the ID major. Progression into third year occurs after completion of ID 250. For progression into third year, students must meet the following criteria:
1. Cumulative grade point average 2.3 or greater
2. Portfolio review
3. Interview following completion of ID 250

For retention, students must meet the following criteria:
1. Grade of "C" or better in each required ID prefix course
2. Grade of "I" must be removed before registration for next ID course

3. Course GPA and competency deficiencies must be removed before 85 hours are completed.

OPTIONAL MINORS
With the approval of their advisor and the Dean, students may earn a minor in one or more areas in this College or another college. To earn a minor, students must satisfy the requirements prescribed by the department offering the minor (see below). In addition, at least one-half of the hours required must be completed at UT Knoxville and all courses must be taken for a letter grade unless otherwise specified. It is assumed that prerequisite courses will be taken and will not apply toward the minor. A student seeking a minor in the College must declare this intention to the Dean’s Office by completion of the Declaration of a Minor Form prior to completion of more than one-half of the total hours required. The intention to receive a minor in the College of Human Ecology is declared upon application for graduation. Minors are recorded on the student's transcript without regard to overlap between major and minor course requirements.

Child and Family Studies:
A minor in Child and Family Studies consists of 18 credit hours: 210 Human Development (3); 220 Marriage and Family: Roles and Relationships (3); 320 Parent Education (3); 352 Family, School, and Community Relations (3); 360 Family Stress (3); and 3 credit hours selected from: 211 Development in Infancy and Early Childhood (3); 240 Human Sexuality (3); 312 Adulthood and Aging (3); 345 Family Resource Management (3); 420 Families: Ethnicity, Race, Class, and Culture (3).

A minor in Child Development consists of 18 credit hours: 210 Human Development (3); 211 Development in Infancy and Early Childhood (3); 213 Development in Middle Childhood and Adolescence (3); 320 Parent Education (3); 352 Family, School, and Community Relations (3); 354 Family Resource Management (3); 380 Family Finance (3); 420 Families: Ethnicity, Race, Class and Culture (3).
Nutrition:
A minor in Nutrition consists of 18 credit hours: 300 Fundamentals of Nutrition (3) or 313 Advanced Nutrition (4); 312 Science of Food (4); and 10-11 hours from: 411 Nutrition in Disease (4); 412 Food and Nutrition Resources Management (3); 413 Experimental Food Science (3); 414 Nutrient-Drug Interactions (2); 450 Special Topics: Nutrition and Food Sciences (1-3); 493 Directed Study: Nutrition and Food Sciences (1-3).

Retail and Consumer Sciences:
A minor in Retail and Consumer Sciences consists of 19 credit hours: 210 The Retail Environment (3); 310 Retail Buying (3); 410 Retail Management (3); and three of the following: 321 Cultural Diversity in the Marketplace (3), 350 Consumers in the Market (3), 411 Entrepreneurship and Small Business Management (3), 412 Direct Retail Selling (3), 415 Retail Promotion (3), 421 International Retail Environments (3) or 450 Economics of Consumer Choice (3).

CHIL D AND FAMILY STUDIES

Professors:

Associate Professors:
J.E. Allen, Ph.D. Purdue; C.A. Buehler, Ph.D. Minnesota; J.H. McInnis, Ph.D. Florida State; D. Tegano, Ph.D. Virginia Tech.

Assistant Professors:
C. Catron, Ed.D. Vanderbilt; M. Groves, Ph.D. Virginia Tech; J. Malia, Ph.D. Minnesota; L. Morris, Ph.D. Tennessee; D. Smith, Ph.D. Oklahoma State.

The Department of Child and Family Studies has a dual mission for preparing both competent professionals and effective family members through an emphasis on the psychosocial aspects of challenges facing children and families in today's complex society. Through a combination of classroom instruction and field-based experience, the department prepares undergraduate students for entry-level positions in diverse occupations and for advanced education. The department offers two majors that could lead to teacher licensure or other careers focused on children and/or families. The largest career specialization is work in day care centers as teachers or directors. Students also are prepared as family life educators in community agencies and as professional home economics educators in schools, Cooperative Extension Service and business.

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

Students interested in meeting the requirements for Early Childhood Education licensure (PreK-3) in the State of Tennessee can complete the first four years of requirements by following the Child Development major with the appropriate modifications noted in footnote #1 below. Students 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 special needs, hospital programs directed to the particular needs of young children, and similar fields that recognize distinct developmental needs of children. This concentration is a good foundation for graduate study in the child area.

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<th>Hours Credit</th>
<th>Freshman</th>
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<th>Child and Family Studies 210</th>
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<td>Sophomore</td>
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<td>History Electives</td>
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<td>Nutrition 100</td>
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<td>Social Science Electives</td>
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<td>Senior</td>
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<td>Child and Family Studies Specialization Electives</td>
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<td>Electives</td>
<td>4-6</td>
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Total: 125 hours

*One semester of American History and one semester of another history are to be chosen. The evolution of artifacts will not satisfy this requirement.
*Selected at least 3 hours from either political science, economics, psychology, sociology, geography or anthropology. Additional courses can be taken from applied fields such as nursing, social work, human services, and health.
*At least 48 hours in 300-400 level courses are required.

CFS Specialization: Students must select one of the following specializations each requiring 9 semester hours: Early Childhood Education, Early Childhood Special Education, Early Childhood Education Administration, Child Life, Research. See advisor or Advising Center for list of recommended electives.

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.

A pod 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, Instructional Programs, Life Management, Mass Media, Mediation/Conflict Resolution, Multicultural, Professional Development, Public Policy, Research, Teacher Education, Women and Families.

It is recommended that students who want to seek licensure to teach Vocational Home Economics in grades 5-12 major in Family Studies, plus a fifth-year professional internship. Prerequisite course work to enter this fifth-year is specified and is available in the Human Ecology Advising Center.

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<tr>
<th>Hours Credit</th>
<th>Freshman</th>
<th>English 101, 102</th>
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<td>Electives</td>
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<td>Sophomore</td>
<td>Child and Family Studies 208, 320, 340, 400</td>
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<td>Natural or Physical Sciences</td>
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<td>History or 'Humanities Electives</td>
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<td>Electives</td>
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</tbody>
</table>
A teacher education program for secondary vocational home economics teachers is available within the College. Undergraduate students should follow the Family Studies curriculum in the Department of Child and Family Studies and the restricted electives designated for teacher licensure. 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. 15 additional hours may be taken to complete the Master's Degree. For details, see the Graduate Catalog.

Individuals interested in Home Economics Extension Education should also follow the Family Studies major in the Department of Child and Family Studies.

The following courses are taken during the post-baccalaureate, Professional Year:

**Occupational Endorsements**

The following endorsements may be added to the Vocational Home Economics Teaching Certificate. They are not part of the requirements for graduation.

- **Care and Guidance of Children**
- **Child and Family Studies**
- **Home Economics Education**
- **Culinary Management and Production and Services**
- **Food Management, Production, and Services**
- **Hospitality Management and Production and Services**
- **Retail and Consumer Sciences**

**Human Resource Development (Formerly Technological and Adult Education)**

**Professors:**

- W.A. Cameron, Ph.D. Ohio State
- C.P. Campbell, Ed.D. Maryland
- G.D. Cheek, Ph.D. Kansas State
- C.B. Cuckley, Ph.D. Wisconsin
- D.G. Craig, Ed.D. Cornell
- R.W. Haskell (Coordinator, Industrial Education)
- Ph.D. Purdue, J.L. Mathematics (Emeritus), Ph.D. Arizona State
- J.L. Reed (Emeritus), M.S. Oklahoma State
- G.A. Wagoner (Emeritus), M.S. Indiana

**Associate Professors:**

- E. Brewer, Ed.D. Tennessee
- R. Hanson, Ph.D. Purdue
- B.J. Ladford, Ed.D. Tennessee
- E.C. Mann, Ed.D. Penn State
- G.C. Petty (Acting Head), Ph.D. Missouri
- B.J. Radcliff (Coordinator, Business and Marketing Education), M.S. West Virginia.

**Assistant Professors:**

- R. Pierce, Ph.D. Ohio State
- T.L. Powell, M.S. Oklahoma State.

**BUSINESS/MARKETING EDUCATION TEACHING CONCENTRATION**

**Hours Credit**

- Freshman
  - English 101, 102: 6
  - Mathematics 121, math elective: 6
  - Natural Science electives: 6
  - Physical Education elective: 2
  - Computer Science elective: 2
  - Computer Science elective: 3
  - Speech elective: 3
  - Speech elective: 3
  - Foreign Language, Multicultural, or Integrative elective: 3

- **Sophomore**
  - English Literature elective: 3
  - Accounting 101, Accounting 202: 6
  - Economics 201, Economics elective: 3
  - Humanities electives: 6
  - Statistics elective: 3
  - Educational and Counseling Psychology 210: 3
  - Physical Education Activities elective: 1
  - Educational and Counseling Psychology 210: 3

- **Junior**
  - Health 300 (Integrative): 3
  - History Electives: 6
  - Marketing 301: 3
  - Finance 301: 3
  - Business Law 301: 3
  - Business Electives: 6
  - Educational and Counseling Psychology 210, 340, 360: 7
  - Educational Curriculum and Instruction 475: 3
  - Senior
  - Education 400, 401, 403: 7
  - Educational and Counseling Psychology 415, 432: 6
  - Educational and Counseling Psychology 434 or 439: 3
  - Educational and Counseling Psychology 446, 440: 6

- **Business electives**: 9

**Undergraduate Total:** 126 hours

**BUSINESS/MARKETING EDUCATION TRAINING CONCENTRATION**

**Hours Credit**

- Freshman
  - English 101, 102: 6
  - Mathematics 121, math elective: 6
  - Natural Science electives: 6
  - Foreign Language, Multicultural, or Integrative elective: 3
  - Health Electives: 3
  - Computer Science elective: 3
  - Speech elective: 3
  - Speech elective: 3

- **Sophomore**
  - English Literature elective: 3
  - Accounting 101, Accounting 202: 6
  - Economics 201, Economics elective: 3
  - Humanities electives: 6
  - Statistics elective: 3
  - Educational Elective: 3
  - Computer Science elective: 3
  - Speech elective: 3
  - Speech elective: 3
  - History Electives: 3
  - Accounting 201, Accounting 202: 6

- **Economics 201, Economics elective**: 7

**HUMAN ECONOMICS EDUCATION**

**Professors:**

- I. Brown (Emerita), Ph.D. Ohio State
- N.P. Logan (Emerita), Ed.D. Tennessee

**Associate Professor:**

- J.H. McInnis, Ph.D. Florida State.
INDUSTRIAL EDUCATION: TECHNOLOGY EDUCATION CONCENTRATION

**Freshman**
- English 101, 102: 6
- Mathematics electives: 6
- Natural Science electives: 6
- Technological and Adult Education 151, 165, 261, 265: 12

**Sophomore**
- Humanities electives: 3
- Speech elective: 3
- Foreign Language, Multicultural, or Integrative electives: 3
- Art or Music elective: 3
- Technological and Adult Education 163, 166, 201, 206: 10
- Social Science elective: 3
- Educational and Counseling Psychology 210: 3

**Junior**
- Humanities electives: 6
- History electives: 3
- Health elective: 3
- Technological and Adult Education 201, 263, 361, 363, 366: 13
- Social Science elective: 3

**Senior**
- Education 400, 401, 403: 7
- Technological and Adult Education 355, 464, 465, 369: 12
- Technical electives: 6
- General electives: 6

*Undergraduate Total: 125 hours*

The following courses are taken during the post baccalaureate, Professional Year:
- Professional Year
  - Education 674: 2
  - Education 575: 12
  - Education 591: 4
  - Technological and Adult Education 553, 555: 6

*Graduate Total: 24 hours*

**INDUSTRIAL EDUCATION: INDUSTRIAL TRAINING CONCENTRATION**

**Freshman**
- English 101, 102: 6
- Natural Science electives: 6

**Sophomore**
- Related Technical Course Work: 12
- Mathematics electives: 6
- Social Science electives: 6
- Humanities/Arts electives: 6
- Related Technical Course Work: 18

**Junior**
- Humanities/Arts electives: 6
- History elective: 3
- Interdisciplinary/Multi-Cultural/University Studies elective: 6
- Related Technical Course Work: 36
- Technological and Adult Education 350, 351: 12
- Interdisciplinary/Multi-Cultural/University Studies elective: 6

*Total: 126 hours*

**NUTRITION**

Profs. and Professors:
- R.E. Beauchene, Ph.D. (Emeritus), Kansas State; B.R. Carruth, Ph.D. Missouri; D.S. Sachan, Ph.D. Illinois; J.T. Smith (Emeritus), Ph.D. Missouri; J.D. Skinner, Ph.D. Oregon State; M.B. Zamel (Head), Ph.D. Wisconsin.

**Associate Professors:**
- Y. Allam, Ph.D. Tennessee; J.W. Bailey, Ph.D. Iowa State; M.D. Brooks (Memphis), M.S. Alabama; C. Costello, Ph.D. Tennessee; B. Haughton, Ed. D. Columbia; P.J. Stevens, Ph.D. Michigan State.

Assistant Professors:
- J. Chencherick (Memphis) M.S. Maryland; M. McGrath, Ed.D. Tennessee; N. Moustaid, Ph.D. University of Paris, France; J.A. Powell (Memphis), M.D. North Carolina; J. Whelan, Ph.D. Penn State; P. Zemel, Ph.D. Wayne State.

**Instructors:**
- K. Jones, MBA East Texas State.

The Department of Nutrition promotes an understanding of nutrition and hospitality management for the enrichment of the physiological, social or economic well-being of individuals, families, and organizations across the lifespan through teaching, research and service. Students learn about nutritional needs from the smallest unit of the cell to the individual's needs throughout the lifecycle; the ways that attitudes, and beliefs influence food patterns; the management of resources in food service and lodging systems and the properties of foods. Thus, Departmental programs service society through graduates who are able to interpret and contribute to social needs in regard to nutrition and wellness, lodging, foodservice and the related management areas, both as professionals and as responsible citizens.

The professional disciplines of Nutrition and Hotel and Restaurant Administration are rooted firmly in general education and provide a clearly defined base of professional knowledge. The foundation for the Nutrition major includes basic sciences, i.e., chemistry, microbiology, physiology, psychology and sociology. The natural sciences provide a base for understanding nutrient functions in the body and the social sciences to better understand cultural aspects of food and food related consumer needs. The study of basic business and management tools enables students in Hotel and Restaurant Administration to understand managerial, marketing, technological and computer principles appropriate to the diversity of positions available to graduates entering the marketplace.

In addition, students with a strong research interest may prepare for research-oriented careers in laboratories or as graduate students in nutrition. Also, the Hotel and Restaurant Administration program provides a good background for Master's programs emphasizing foodservice and lodging administration.

**HOTEL AND RESTAURANT ADMINISTRATION**

The Hotel and Restaurant Administration major focuses 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. Students who want more emphasis in business may complete a business minor by taking courses established by the College of Business Administration.

The two specializations are foodservice administration and lodging systems. The foodservice area emphasizes quantity food service in a variety of settings, including sanitation, all phases of food quality, and cost control theory and practice. The lodging area emphasizes lodging administration, marketing of hospitality services, personnel management and lodging law. Both specializations incorporate knowl-
edge about basic nutrition and the public's concern with wellness.

Both specializations offer extensive field experience in food and lodging properties in Tennessee and in the Southeast. The curriculum provides a strong base in management, foodservice administration, computation, social sciences, and nutrition. The general education electives help students to sharpen their analytical, conceptual and communication abilities.

Graduates of these specializations may start as management trainees in large hotels, and in lodging and restaurant programs with subsequent upward mobility into property management, personnel or executive positions. The field experience in the senior year provides a combination of classroom instruction and field based experiences, which give a graduate a competitive edge in attaining career positions.

**Freshman**

**Hours Credit**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
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<tbody>
<tr>
<td>English 101, 102</td>
<td>3</td>
</tr>
<tr>
<td>Hotel and Restaurant Administration 120</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 119, 121 and/or 122</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science Electives</td>
<td>3</td>
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<tr>
<td>Nutrition 100 or 107</td>
<td>3</td>
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<tr>
<td>History Elective</td>
<td>3</td>
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<tr>
<td>Electives</td>
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</table>

**Sophomore**

**Hours Credit**

<table>
<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>Accounting 201, 202</td>
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</tr>
<tr>
<td>Economics 201</td>
<td>3</td>
</tr>
<tr>
<td>Hotel and Restaurant Administration 220, 320</td>
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</tr>
<tr>
<td>Hotel and Restaurant Administration 321 or 322</td>
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<tr>
<td>Humanities Elective</td>
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<tr>
<td>Public Health 310</td>
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<tr>
<td>Speech 240</td>
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<tr>
<td>Statistics 201</td>
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</tr>
<tr>
<td>Business Law 301</td>
<td>3</td>
</tr>
<tr>
<td>Child and Family Studies 210</td>
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<td>Child and Family Studies 300</td>
<td>3</td>
</tr>
<tr>
<td>Hotel and Restaurant Administration 324</td>
<td>3</td>
</tr>
<tr>
<td>Human Ecology 210</td>
<td>3</td>
</tr>
<tr>
<td>Marketing 301</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 110</td>
<td>3</td>
</tr>
<tr>
<td>Retail and Consumer Sciences 350</td>
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<tr>
<td>Electives</td>
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</table>

**Junior**

**Hours Credit**

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<th>Course</th>
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<tbody>
<tr>
<td>History Elective</td>
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<tr>
<td>Hotel and Restaurant Administration 326</td>
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</tr>
<tr>
<td>Hotel and Restaurant Administration 420</td>
<td>3</td>
</tr>
<tr>
<td>Hotel and Restaurant Administration 422, 425</td>
<td>3</td>
</tr>
<tr>
<td>Interior Design 315</td>
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</tr>
<tr>
<td>Electives</td>
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</table>

**Senior**

**Hours Credit**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Accounting 201, 202</td>
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<tr>
<td>Chemistry 120, 130</td>
<td>3</td>
</tr>
<tr>
<td>English 101, 102</td>
<td>3</td>
</tr>
<tr>
<td>History Elective</td>
<td>3</td>
</tr>
<tr>
<td>Hotel Restaurant Administration 220</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 119 and 121 or 122</td>
<td>3</td>
</tr>
<tr>
<td>Microbiology 210</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 110</td>
<td>3</td>
</tr>
<tr>
<td>Nutrition 100</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total: 128 hours**

**NUTRITION**

This major is designed for students interested in basic and applied sciences. Students are expected to acquire advanced knowledge in chemistry, biology, food science, and behavioral sciences. The Nutrition major is a course of study approved by The American Dietetic Association to meet Minimum Academic Requirements (Diadatic Program in Dietetics). 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 internships or Approved Pre-Professional Practice Programs (AP4) with a generalist emphasis. An internship or an approved pre-professional practice 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.

**TEXTILES, RETAILING AND INTERIOR DESIGN**

**Professors:**


**Associate Professors:**


**Assistant Professors:**

G. Bhat, Ph.D. Georgia Tech; M. Gupta, Ph.D. Missouri; T.L. Houser, M.S. Tennessee; J. Lee, Ph.D. Ohio State.

**Research Assistant Professors:**

M. Dever, Ph.D. Kansas State; C. Hassenboehler, Ph.D. Tennessee; X.C. Huang, Ph.D. Leeds; A. Khan, Ph.D. Tennessee; W.C. Ko, Ph.D. Tennessee; S. Malkan, Ph.D. Tennessee; P. Tsai, Ph.D. Tennessee.

**Lecturer:**

K. Wekes, M.S. Tennessee.

The mission of the Department of Textiles, Retailing and Interior Design is to provide national and internationally recognized interdisciplinary programs that focus on the delivery of goods and services in a global marketplace; the development of textile products for the betterment of society; and the creation of designed environments appropriate for the full range of life-experiences. These programs serve organizations in the public and private sectors through research, technology transfer, and the preparation of professionals having both innovative technical skills and a sensitivity for consumer and societal needs.

Through a combination of classroom instruction and field based experiences, students prepare for entry level positions in diverse occupations and for advanced education. The largest career concentration in the department is Retail and Consumer Sciences, which is one of the largest programs of this type in the Southeast. Retailing is one of the fastest growing segments of our economy, and opportunities for employment will be excellent through the 1990’s.

The Interior Design program is accredited by the Foundation for Interior Design Education Research (FIDER), and is the only five year accredited Interior Design program in the State of Tennessee. Career opportunities are excellent wherever living and working spaces are being planned.
These programs offer opportunities for field study experiences where students are guided by faculty in the selection of locations for on-the-job experiences related to their career area as a part of their educational program. Professional contacts made in field study experiences often lead to opportunities for career placement upon graduation.

**INTERIOR DESIGN**

This five-year major is designed for students whose career plans are focused on designing interior environments for living and work spaces. Through coursework 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 and mechanical systems as they plan spaces for both residential and commercial settings. The program emphasizes human well-being and the behavioral aspects of people in their environments. Students will gain experience in a state-of-the-art computer aided design laboratory, as well as in interior design studios. Graduates can expect careers as interior designers for architectural firms or as space planners for hotels or retail chains, in addition to opportunities as product representatives for contract furniture manufacturers or in private practice handling residential or commercial design needs.

<table>
<thead>
<tr>
<th>First Year</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Architecture</strong> 101, 102, 171, 172</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td><strong>English</strong> 101, 102</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Interior Design</strong> 140, 150, 200</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><strong>Mathematics</strong> 202</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Social Science Elective</strong></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Art</strong> 172, 173, 205</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><strong>Interior Design</strong> 240, 250, 260, 280</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td><strong>Physics</strong> 121, 122</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Retail and Consumer Sciences</strong> 120</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Third Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Child and Family Studies</strong> 210</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Economics</strong> 201</td>
<td></td>
<td>4</td>
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<tr>
<td><strong>Interior Design</strong> 340, 350, 360, 370</td>
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<td>17</td>
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<tr>
<td><strong>Interior Design</strong> 430, 440, 450, 460</td>
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<tr>
<td><strong>Interior Design</strong> 470</td>
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<tr>
<td><strong>Fourth Year</strong></td>
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<tr>
<td><strong>History Elective</strong></td>
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<tr>
<td><strong>Interior Design</strong> 400, 440, 450, 460</td>
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<td>16</td>
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<tr>
<td><strong>Literature Elective</strong></td>
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<td>3</td>
</tr>
<tr>
<td><strong>Nutrition 100</strong></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Retail and Consumer Sciences</strong> 350</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Summer before Fifth Year</strong></td>
<td></td>
<td>12</td>
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<tr>
<td><strong>Interior Design</strong> 420</td>
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<td>5</td>
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<tr>
<td><strong>Fifth Year</strong></td>
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<td></td>
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<tr>
<td><strong>Child and Family Studies</strong> 300</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Interior Design</strong> 485</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
<td>5-12</td>
</tr>
<tr>
<td><strong>Total: 158 hours</strong></td>
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<td></td>
</tr>
</tbody>
</table>

1. Select 3 hours from Psychology, Sociology, or Anthropology.
2. Courses used to meet this requirement must focus on fundamental historical processes and the roles of individuals in them or the connections and interactions between different aspects of the human experience through political, social, economic, intellectual, and cultural experiences. Courses tracing the evolution of artifacts will not satisfy this requirement.

**RETAIL AND CONSUMER SCIENCES**

The field of Retail and Consumer Sciences provides students with knowledge of the retailing industry and the principles and theories involved in managing personnel and merchandising goods for the consumer. This program is one of the largest of its type in the Southeast. It is designed to respond to and influence a growing but constantly changing retail sector in our economy. A business minor is built into the degree requirements. The progressive direction that this program takes provides graduates with excellent management opportunities in the retail sector.

<table>
<thead>
<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
</tr>
<tr>
<td><strong>English</strong> 101, 102 ........................................</td>
</tr>
<tr>
<td><strong>Human Ecology</strong> 210 ......................................</td>
</tr>
<tr>
<td><strong>Mathematics</strong> 119, 121 and/or 122 ....................</td>
</tr>
<tr>
<td><strong>Psychology 110</strong> ..........................................</td>
</tr>
<tr>
<td><strong>Retail and Consumer Sciences</strong> 120 ...................</td>
</tr>
<tr>
<td><strong>Sociology</strong> 100 .............................................</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td><strong>Accounting</strong> 201, 202 ....................................</td>
</tr>
<tr>
<td><strong>Child and Family Studies</strong> 210 ........................</td>
</tr>
<tr>
<td><strong>Economics</strong> 201 ............................................</td>
</tr>
<tr>
<td><strong>Natural Science Electives</strong> ............................</td>
</tr>
<tr>
<td><strong>Nutrition 100</strong> ............................................</td>
</tr>
<tr>
<td><strong>Retail and Consumer Sciences</strong> 210 ..................</td>
</tr>
<tr>
<td><strong>Statistics</strong> 201 ..........................................</td>
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<tr>
<td><strong>Electives</strong> ..................................................</td>
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<table>
<thead>
<tr>
<th>Hours Credit</th>
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<tbody>
<tr>
<td><strong>Junior</strong></td>
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<tr>
<td><strong>Business Elective</strong> .......................................</td>
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<tr>
<td><strong>Child and Family Studies</strong> 300 ........................</td>
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<tr>
<td><strong>Humanities Electives</strong> ...................................</td>
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<tr>
<td><strong>Marketing</strong> 301, 310 ......................................</td>
</tr>
<tr>
<td><strong>Retail and Consumer Sciences</strong> 310, 350 ............</td>
</tr>
<tr>
<td><strong>Speech</strong> 210 or 240 .......................................</td>
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<tr>
<td><strong>Electives</strong> ..................................................</td>
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<table>
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<th>Hours Credit</th>
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<tbody>
<tr>
<td><strong>Senior</strong></td>
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<tr>
<td><strong>Retail and Consumer Sciences</strong> 410, 412, 450, 421</td>
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<tr>
<td><strong>Retail and Consumer Sciences Electives</strong> ............</td>
</tr>
<tr>
<td><strong>Business Elective</strong> .......................................</td>
</tr>
<tr>
<td><strong>Electives</strong> ..................................................</td>
</tr>
</tbody>
</table>

| Total: 125 hours |

1. History electives: Courses must focus on fundamental historical processes and roles of people in political, social, economic, intellectual and cultural developments. Courses on evolution of artifacts do not meet requirement.
2. Earn a grade of "C" or better in all required RCS courses.
3. CFS 210, RCS 350, and NTR 100 prerequisite to RCS 300.
4. One of the following sequences is to be chosen: Astronomy 151-152, Biology 110-120, Botany 110-120, Chemistry 100-110, Chemistry 120-130, Geography 131-132, Physics 121-122, Zoology 210-220.
5. A minimum of 48 upper division hours is required for graduation. Eight hours of electives must be upper division.
6. Students wishing to complete RCS 390 and 492 may use these courses to fulfill upper division elective hours, not RCS electives.
7. Select any 6 upper division credits from courses offered by the College of Business Administration.
8. Select six hours from art history/appreciation, foreign language, philosophy, music appreciation/history, religious studies.
9. RCS Electives: Students must select 6 hours from the following courses: 351, 345, 411, 415, 493, 495, 497 and 498.
The College of Liberal Arts is home to a wide array of academic disciplines and interdisciplinary programs. Such diverse areas of study as Computer Science and Classics, Anthropology and Zoology, 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, Knoxville. 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.

Liberal Arts 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, scholarship, and teaching, a liberal education provides an invaluable foundation. For the individual who enters business, industry, the professions, or government service, it furnishes a broadly useful and well-rounded educational background. For all, it offers the opportunity to share in a rich intellectual heritage, in the adventures of the mind, and in the life of the educated imagination. A liberally educated person is identified not so much by specific knowledge as by quality of mind and by creative response to the challenges of the times.

The great universities of the world are so labeled because their faculties have earned the reputation of being renowned scholars. The University of Tennessee, Knoxville has earned such a reputation because of the quality of the research and creative activity of its faculty. The student who studies in the College of Liberal Arts has joined a community of scholars. To study with such a talented faculty is to experience the best education possible.

The faculty of the College of Liberal Arts provide to all students a general education and to thousands of students a year a more specialized education in any one of twenty-six 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 Liberal Arts 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.

**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 interdisciplinary 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 3+2 program in business and liberal arts or the elementary and secondary pre-teaching programs. Students in the 3+2 business and liberal arts program take three years of coursework leading to a B.A. in Liberal Arts, 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+2 curricula in the health sciences (medicine, dentistry, veterinary medicine, law).
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 liberal arts study and complete the first year of professional study in lieu of 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 Department of Art.)

(4) BACHELOR OF MUSIC
(See Department of Music.)

**REQUIREMENTS FOR DEGREES**

Bachelor of Arts and Bachelor of Science Basic Programs

Each student seeking a Bachelor of Arts or Bachelor of Science degree must develop a program which includes the following:

1. All University degree requirements as stated in the front section of the Undergraduate Catalog;
2. A minimum of 124 credit hours;
3. At least 40 credit hours in courses numbered 300 or above;
4. Appropriate work to satisfy basic skills and distribution requirements, counting no course in more than one area (not required in the College Scholar Program);
5. Completion of at least one major (24-40 credits at 200 level or above for B.S. majors and 24-37 credits at 200 level or above for B.A. majors) up to 8 hours in the major may also be used, where listed, to satisfy basic skills or distribution requirements;
6. Students may choose to develop one or more minors (minimum 15 hours at the 200 level and above); and
7. Students may take up to 20 hours of courses graded Satisfactory/No Credit in any 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**

**English Composition**

**Purpose:***
1. To gain and improve the skills necessary to write English expository prose coherently and convincingly.
2. To improve reading skills.
3. To enhance critical and analytical abilities as applied to key issues and texts.

**Requirement:**
Students may meet this requirement in one of the following four ways: (0-6 credits)

1. By completing six credits in English writing courses in one of the following series:
   a) English 101 and 102 (English Composition).
   b) English 118 (Honors: English Composition) and English 102 (English Composition). Students who obtain a grade of A or B in 118 will complete their freshman requirement by choosing 102, a sophomore literature course in the English Department, or English 355 Advanced Expository Writing. If the sophomore literature course appears on the list for Humanities distribution requirements, it may also be counted toward those requirements. (c) English 131 and 132 (Composition for Non-Native Speakers of English).
2. By earning a score of 4 or 5 on the College Board Advanced Placement Test in English.
3. By obtaining CLEP credit for English composition.

**Placement:**
Student eligibility for English 118 (Honors: English Composition) will be determined on the basis of 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 200 level (or above) English courses.

**Foreign Language**

**Purpose:**
1. To learn the basic grammar, syntax, and vocabulary of a foreign language.
2. To be able to use a foreign language independently as a tool for oral communication and reading.
3. To acquire techniques of language learning.
4. To develop insight into the phenomenon of language.
5. To complement the study of certain aspects of a foreign culture or civilization.

**Requirement:**
Completion of the intermediate level sequence of a foreign language or demonstration of competence on a waiver or proficiency examination. All students wishing to enroll in a French, German, Latin or Spanish course, who had the same language in high school and who have not yet had a college course in it, must take a UTK placement examination before enrolling. This rule does not apply to students who receive AP credit in the language. Placement in the appropriate course will be determined by the score on the examination. Ordinarily a student will not be allowed to enroll in a course at a level above that determined by the score on the examination. Normally a student will not be allowed to enroll in a course at a level above that determined by the score on the examination. Occasionally a student will not be allowed to enroll in a course at a level above that determined by the score on the examination. Occasionally a student will not be allowed to enroll in a course at a level above that determined by the score on the examination. Occasionally a student will not be allowed to enroll in a course at a level above that determined by the score on the examination. Occasionally a student will not be allowed to enroll in a course at a level above that determined by the score on the examination.
ternal students may fulfill this requirement with a United States History sequence. The following sequences satisfy this requirement:

- **Latin American Studies 251-252: Introduction to Latin American Studies.**
- **Medieval Studies 201-202: Medieval Civilization.**

**b. Natural Science**

**Purpose:**
- a. To know and understand the basic vocabulary of at least one scientific discipline.
- b. To learn the basic discoveries and their importance in one scientific discipline.
- c. To be able to use the tools (i.e., mathematics, laboratory equipment, computers, etc.) of one scientific discipline.
- d. To understand how to devise hypotheses and how to devise and perform experiments to test them.
- e. To learn to apply the methods of at least one scientific discipline in a "hands on" laboratory experience.
- f. To be able to analyze a situation on a college level from one particular scientific perspective.

**Requirement:**
- a. Part I: A two-course physical or biological science sequence that includes laboratory work. The following sequences satisfy Part I of this requirement:
  - **Biology 110-120: General Biology.** Biology 110-120: General Botany, 118-128: Honors: General Botany.
  - **Chemistry 101 Principles of Chemistry:** 110 Introduction to Organic and Biochemistry, and 120-130: General Chemistry, 121-131: General Chemistry for Chemistry majors, 128-138: Honors: General Chemistry.
  - **Geography and Geology of the Natural Environment.**

- b. Part II: A two-course package in science, mathematics, and/or computer science. The following course packages or any sequence stated in Part I will satisfy this requirement:
  - **Anthropology 110: Human Origins (package with 210): 210 Principles of Biological Anthropology (package with 110).**
  - **Astronomy 151-152: Introductory Astronomy (non-lab).**
  - **Audiology and Speech Pathology 306:** Speech Science II: Anatomy and Physiology, 371 Audiology I.
  - **Botany 306 Genetics and Society (package with 309): (Same as Anthropology 306): 309 Biology of Human Affairs (package with 306): 310-320: An Evolutionary Survey I, II; 330 Field Botany (can be taken as a package with 310 or 320).**
  - **Computer Science 102: Introduction to Computer Science:** and either 111: Computer Organization or 112: Data Structure.
  - **Geology 201: Darwin, Dinosaurs, and Extinctions:** An Introduction to Evolution: 202 Earth as an Ecosystem: Modern Problems and Solutions: 203 Geology of the National Parks (package of any two courses).
  - **Microbiology 210 General Microbiology (package with Zoology 230).**
  - **Physics 121-122: Introductory Physics: 141-142: Nature of the Physical World.**
  - **Statistics 201 Introduction to Statistics (package with Mathematics 121).**
  - **Zoology 210-220: Human Biology:** 230 Human Physiology (package with Micro 210).

- **c. Social Science**

**Purpose:**
- a. To promote understanding of society and individual relationships.
- b. To develop a critical understanding of one or more approaches, perspectives, or methodologies used in the social sciences.
- c. To develop analytical skills relevant to current social, economic, or political problems, their origins in society and individuals, and possible perspectives for their resolution.

**Requirement:**
- a. Bachelor of Arts students must complete a minimum of 6 credits from at least two departments or programmatic areas indicated below.
- b. Bachelor of Science students must complete a minimum of 6 credits from at least two departments or programmatic areas indicated below.
- **African and African-American Studies**
  - **Anthropology 120: Prehistoric Archaeology:** 130 Cultural Anthropology, 362 Principles of Archeology.
  - **Audiology and Speech Pathology 320:** Speech and Language Development.
  - **Botany 306: Socio-Economic Impact of Plants.**
  - **Economics 101 Survey of Economic Ideas:** 201 Introductory Economics: A Survey Course, 207 Honors: Introductory Economics.
  - **Educational and Counseling Psychology 210 Psycho-educational Issues in Human Development.**
  - **Geography and Geology of the Natural Environment.**
  - **History 110: Development of Western Civilization:** 121-131: General History, 128-138: Honors: General History.
  - **Psychology 110: General Psychology.** 117 Honors: General Psychology: 220: Behavior and Experience: Human Psychology.
  - **Speech Communication 100 Introduction to Speech Communication:** 220 Interpersonal Communication, 260 Communication and Society, 300: Nonverbal Communication, 330 Group Communication.
  - **Women's Studies 220: Women in Society:** 375 Gender in Society (Same as Sociology 375).

- **d. Humanities**

**Purpose:**
- a. To learn to appreciate and interpret significant literary, philosophical, or religious texts by study and application of selected methods or traditions of thought.
- b. To develop further abilities to reason critically, to construct arguments, to think creatively, to analyze objectively, to assess evidence, to perceive assumptions, and to respond to and appreciate values.
- c. To develop further writing skills.
- d. To learn to manipulate symbols (i.e., words, sounds, images, body movements) in a variety of ways and to employ these symbols critically, affectively, analytically, and effectively.
- e. To develop abilities to participate as an enlightened observer or as an artist in a discipline within the visual, spatial, musical, theatrical, rhetorical, or written arts.

**Requirement:**
- a. Bachelor of Arts students:
  1. Part I: Literature or Philosophical Perspectives. A two-semester course package in either literature or a philosophical perspective. Writing Emphasis Courses.
  2. Part II: Arts, Literature or Philosophical Perspectives. Either one course or course in one discipline. A two-semester course package in one discipline. Writing Emphasis Courses, except for hands-on practice of the arts courses. Part I and Part II will be satisfied by selecting packages/courses from the following list in accordance with the instructions above.
- b. Bachelor of Science students must complete a minimum of 6 credits from the courses listed below; more than 3 credits may be taken in the Arts.

1. The following course packages are designated literature packages:
   - **Asian Languages 311-312 Chinese Literature.**
   - **Classics 253-254 Greek and Roman Literature.**
   - **Comparative Literature 202-203 Cross-cultural Perspectives in World Literature.**

*Writing Emphasis Courses require at least 2,000 words, normally comprising one sustained essay or report of at least 1,000 words plus additional writing assignments such as in-class essay exams, journals, book reviews, etc. The purpose of the requirement is to help students a) learn course materials through writing, b) develop critical thinking skills; c) demonstrate the ability to sustain an argument; and d) strengthen existing writing skills.*
(two of three) 251 Introduction to Poetry; 252 Introduction to Drama; 253 Introduction to Fiction.

French 291-292 French Literature in English Translation.

Art and Information Science 330 Books and Related Materials for Children.

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 221-222 Russian Literature in English Translation; 321 Works of Dostoevsky in English Translation; 322 Works of Tolstoy in English Translation; 325 Modern German Novel in English Translation; 326 German Drama in English Translation.

Spanish 291 Spanish Literature in English Translation; 292 Spanish American Literature in English Translation.


2. The following course packages are designated philosophical perspectives packages.

Classics 221 Early Greek Mythology; 222 Classical Greek and Roman Mythology.

Philosophy 110 The Human Condition: Value and Reality; 111 The Human Condition: Knowledge and Reality; 240 Ethics; plus one of the following: 342 Business Ethics; 344 Professional Responsibility; 345 Medical Ethics, 349 War and Morality; 380 The Concept of Woman (Same as Women's Studies 380); 382 Philosophy of Feminism (Same as Women's Studies 382).


3. The following courses are designated study or practice of the Arts courses.

Architecture 111 Architecture and the Built Environment.

Art 191 Introduction to Studio Art: Various Media.

English 263 Introduction to Creative Writing. German 323 German Film.

Music 100 Fundamentals of Music; 130 Music Performance.

Speech Communication 280 Introduction to Oral Interpretation; 380 Interpretation of Prose Literature; 385 Oral Interpretation of Poetry.

Theatre 220-221 Acting; 245 Basic Stage Costuming; 250 Introduction to Scenery Technology; 260 Fundamentals of Lighting and Sound Production; 323 Period Movement and Dance.

4. The following courses are designated Study of the Arts courses.

Art 172 Western Art I; 173 Western Art II; 183 Asian Art.

Classics 232 Archaeology and Art of Ancient Greece; 233 Archaeology and Art of Athens and Rome.

Music General 110 Music Appreciation; 120 History of Rock.

Philosophy 350 Aesthetics; 353 Philosophy and Literature.

Theatre 100 Introduction to Theatre. Women's Studies 330 Women in Music.

2. Upper Level Distribution

Bachelors of Arts students must complete a minimum of 6 credits in one of the three areas indicated below and 3 credits from one of the remaining two areas.1 Writing Emphasis Courses

Bachelors of Science students must complete a minimum of 6 credits in two of the three areas indicated below (total 6 credits for this requirement).

Writing Emphasis Courses:

a. United States Studies

Purpose:

a. To develop an appreciation and knowledge of United States culture and civilization.

b. To provide a basis from which to compare foreign cultures and civilizations.

c. To develop a critical understanding of the sources of values and traditions that constitute contemporary United States civilization.

d. To develop an understanding of the relationship between individual and societal behavior.

e. To further develop writing skills.

The following courses are designated

United States Studies courses:

African and African-American Studies 364 Contemporary Issues in African-American Education (Same as Ed, C&I 364); 429 History and Philosophy of African-American Education (Same as Ed. C&I 429); 480 Black Communities in Urban America; 483 African-American Women in American Society (Same as Women's Studies 483).

Anthropology 310 Introduction to American Studies.

Anthropology 310 North American Indians; 315 African-American Anthropology (Same as African and African-American Studies 315); 320 American Cultures; 360 North American Prehistory.

Audiology and Speech Pathology 465 Speech and Language of the Culturally Different Child.

Economics 413 Macroeconomic Fluctuations; 462 Economics of Resource and Environmental Policy; 471 Public Finance; Optimal Government Functions and Expenditure Analysis; 472 Public Finance: Taxation and Intergovernmental Relations.

English 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 and Canada; 363 Geography of the American South; 365 Geography of Appalachia; 425 Historical Geography of the United States.

History 379 American Issues: Individualism and Community; 380 American Issues: War and the Peaceful Ideal; 440 America: Mind, Mood and Society; 448 History of American Culture; 453 Women in American History (Same as Women's Studies 453).

Geography 361 Regional Geography of the United States and Canada; 363 Geography of the American South; 365 Geography of Appalachia; 425 Historical Geography of the United States.

History 379 American Issues: Individualism and Community; 380 American Issues: War and the Peaceful Ideal; 440 America: Mind, Mood and Society; 448 History of American Culture; 453 Women in American History (Same as Women's Studies 453).


Philosophy 390 Philosophical Foundations of Democracy; 425 American Philosophy.

Political Science 311 Contemporary Issues in American Public Policy; 312 Popular Culture and American Politics; 330 Law in American Society; 374 American Political Thought.

Psychology 434 Psychology and Gender (Same as Women's Studies 434).


Sociology 310 American Society; 340 Class Structure; 343 Race and Ethnicity (Same as African-American Studies 343); 455 Society and Law.

Speech Communication 450 Propaganda; 456 Rhetoric of the Women's Rights Movement to 1930 (Same as Women's Studies 456).

2,000 College of Liberal Arts/Distribution Requirements

2. Upper Level Distribution

a. United States Studies

Purpose:

a. To develop an appreciation and knowledge of a foreign culture and civilization.

b. To provide a basis from which a student can analyze her or his own culture.

c. To develop a critical understanding of the sources of values and traditions that constitute a foreign culture and civilization.

d. To develop an understanding of the relationship between individual and societal behavior in a highly interdependent world system.

e. To further develop writing skills.

The following courses are designated

FOREIGN STUDIES courses:

NOTE: If Western Civilization (History 151-152), Medieval Civilization (Medieval Studies 201-202), or Foundations of Western Thought (Philosophy 120-121) is taken to satisfy the non-Western United States History requirement under Divisional Distribution, the European concentration may not be elected here. This option may also be satisfied by literature courses in Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, Sanskrit, or Spanish. (Literature courses in English translation will not meet this requirement.)


Anthropology 314 Peoples and Cultures of Africa (Same as African-American Studies 314); 461 African Prehistory (Same as African-American Studies 461).

Geography 379 Geography of Africa (Same as African-American Studies 379).

History 571-572 African History.

Political Science 462 Black African Politics (Same as African-American Studies 462).

Religious Studies 373 African Religions (Same as African-American Studies 373 and Anthropology 373).

Asia

Art 385 Chinese Art; 386 Japanese Art; 486 Art of Indian Asia.

Economics 424 Political Economy of World Development (when topic is Asian).

History 362-363 History of East Asia; 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.
European
Anthropology 462 Early European Pre-history.
Classics 331 Archaeology of the Aegean Bronze Age and Early Greece; 334 Cities and Sanctuaries of the Ancient Greek World; 361 Greek Civilization; 382 Roman Civilization; 383 Women in the Greek and Roman World (Same as Women's Studies 383).
Economics 325 Economic History of the North Atlantic Community.
Geography 371 Medieval Geography; 375 Geography of Russia and the Commonwealth of Independent States.
German 323 German Film; 363 Modern German Culture.
History 319 Modern Europe, 1750-1914; 320 Contemporary Europe, 1900-present; 432 Women in European History (Same as Women's Studies 432).  
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 the Soviet Union; 469 Soviet Foreign Policy.
Russian 371-372 Background and Main Currents of Russian Culture.
Social Work 432 Urban Community Practice.
Women's Studies 432 Women in Cross-Cultural Perspective.

Capstone Experience
Purpose:
- a. To offer an intensive integrative experience which will substantially broaden the student's comprehension of the major.
- b. To increase significantly an understanding of the ways in which the ideas, methods, and achievements in a major area of study have affected modern society.
- c. To examine a major field of study from a value-oriented perspective.
- d. To enhance students' mastery of prose communication within the professional context of their major.

The following courses are designated Capstone Courses:
- Political Science 499 Senior Colloquium in Political Science.
- Economics 432 Senior Colloquium in Economics.
- Philosophy 460 Senior Seminar in Philosophy.
- History 319 Modern Europe, 1750-1914; 320 Contemporary Europe, 1900-present; 432 Women in European History (Same as Women's Studies 432).
- 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 the Soviet Union; 469 Soviet Foreign Policy.
- Russian 371-372 Background and Main Currents of Russian Culture.
- Social Work 432 Urban Community Practice.
- Women's Studies 432 Women in Cross-Cultural Perspective.

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 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 distribution 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 Knoxville in each major awarded on this campus. Students may elect as many courses as 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, Biochemistry, Biology, Botany, Chemistry, Classics, Computer Science, Economics, English, French, Geography, Geology, German, History, Interdisciplinary Studies, Italian, Mathematics, Microbiology, Music, Philosophy, Physics, Political Science, Psychology, Religious Studies, Spanish, Sociology, Spanish, Speech Communication, Statistics, and Zoology.

(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 their 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 Liberal Arts may also major inside the College of Liberal Arts with the approval of the degree granting unit. These students need complete only the major requirements, not the Basic Skills or Distribution requirements for Liberal Arts degrees. The Liberal Arts 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 Liberal Arts may also minor inside the College of Liberal Arts 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 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 Liberal Arts. At least 6 of the 15 credit hours required for a minor must be completed at The University of Tennessee, Knoxville.

Business Minor for Non-Business Students: Requirements include the following courses: Accounting 201-202, Economics 201, Statistics 201, and 12 hours of upper-division Business electives at UT Knoxville. No more
than 3 upper-division hours of Accounting, Economics, or Statistics may be used for the minor. 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 must 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 students’ 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 difference at which the individualization takes place is in the area of concentration. Although 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), there is no restriction in principle on the choice of courses of which it is composed. 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 purpose, usually implemented through intensive work in two or more departments; an unadorned scattering of courses will not be approved. For further information contact the Liberal Arts Advising Center.

COLLEGE SCHOLARS PROGRAM
A limited number of freshmen, 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 (tutor) 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, which 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 Scholars’ transcripts. 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 the Liberal Arts Advising Center.

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 satisfactory completion of the first year of study at UT-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-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, Knoxville, before entering UT-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. Students in either the three- or four-year program must complete the last 30 hours of credit in residence at The University of Tennessee, Knoxville, before entering UT-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.

PRE-MBA 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 coursework in Liberal Arts, and their last two years in the College of Business Administration. Within their first three years, students will fulfill all general education requirements for the B.A. degree, both upper and lower division, along with a minor offered by one of the Liberal Arts 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 pre-requisite to the M.B.A.

Students interested in the Dual B.A./M.B.A. program are counseled initially in the Liberal Arts Advising Center regarding admission standards and Liberal Arts requirements. At the end of their second year, they will have a conference with the Associate Dean for Graduate Business Programs and be advised of their prospects for formal admission. If the student is a likely candidate, he/she will be advised to...
take the G.M.A.T. in October of the third year and to submit an application to the M.B.A. program. The admission decision will be made by January of the third year. Upon admission, students will begin M.B.A. course work in the fourth year and be awarded a B.A. degree at the end of that year. Upon successful completion of the fifth year the student will receive the M.B.A. degree.

**Freshman**
- Freshman English .............................................. 6
- Foreign Language .............................................. 6
- Humanities Part I ............................................. 3
- Humanities Part II .......................................... 3
- Electives ......................................................... 6

**Sophomore**
- Social Sciences electives .................................... 12
- Humanities Part I ............................................. 3
- Humanities Part II .......................................... 3
- Electives ......................................................... 3
- Upper Division distribution ................................. 12
- Electives ......................................................... 9

**Junior**
- Upper division distribution ................................. 12
- Electives ......................................................... 7

**Total: 101 hours**

Pre-Medical Program

The College offers a three-year program leading to a B.S. degree and a four-year program leading to a Bachelor of Arts or Science degree for students preparing for the study of medicine. Both programs are based on the program outlined below. In the three-year program the student must complete at least 35 credit hours while enrolled in the college, and the B.S. degree is granted upon satisfactory completion of the first year of study at UT-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 outlined below. The requirements for a major are waived for those taking their fourth year at UT-Memphis. Students in either the three- or four-year programs must complete the last 30 hours of credit in residence at the University of Tennessee, Knoxville, before enrolling in the College of Pharmacy.

Pre-Pharmacy Programs

The College offers three programs preparing students for the study of pharmacy at UT-Memphis. The Doctor of Pharmacy (Pharm.D.) degree is conferred by UT-Memphis 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 the Health Professions Office, 220 Ayres Hall. 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 Liberal Arts. Further information may be obtained from the Health Professions Office, 220 Ayres Hall.

The three-year program leading to a B.S. degree and the four-year program leading to either a B.A. or B.S. degree from The University of Tennessee, Knoxville, as well as to the professional degree in pharmacy from UT-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 Liberal Arts, and the B.S. 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 noted above. Although no major is required for a major is waived for those taking their fourth year at UT-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, Knoxville, before enrolling in the College of Pharmacy.
PRE-TEACHING PROGRAMS FOR PROSPECTIVE K-8 TEACHERS

These programs are designed to prepare students for teaching grades K-8. Alternatively, prospective K-8 teachers may complete a Liberal Arts Major in a department, in one of the Interdisciplinary Programs, or, if eligible, in the College Scholars Programs. (Prospective teachers of secondary school must fulfill the requirements of appropriate content majors in Liberal Arts.)

To be licensed for teaching, students must also gain formal admission, normally by the end of the sophomore year, to the Teacher Education Program in the College of Education. This involves completing a series of requirements, including presentation of satisfactory scores on certain tests, completing professional courses in Education, maintenance of a 2.5 or higher GPA and completing a fifth year program that emphasizes practical application. For details, see The College of Education section of the Undergraduate Catalog and contact the Education Advising Center, 214 Claxton Addition.

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 core curriculum stresses the interrelatedness of biological and physical systems. The two tracks beyond the core stress the two major emphases of the ecological sciences—the biological and the chemical-physical. 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 chemical-physical 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 121-115 (3,3) or Mathematics 121-122 (3,3) or Mathematics 141-142 (4,4) or Mathematics 151-152 (3,3)
2. Chemistry 100-110 (4,4) or Chemistry 120-130 (4,4)
3. Biology 110-120 (4,4) or Botany 110-120 (4,4) or Zoology 117-118 (4,4)
4. Chemistry 200-230 (4,4) or Zoology 117-118 (4,4)

Total: 22-24 hours

Core courses: (14-16 hours)
1. Biology 220: General Genetics (4)
2. Botany 230: General Ecology (4)
3. Geology 101-102 (4,4) or Geography 131-132 (4,4) or Physics 141-142 (3,3)

Beyond the core curriculum, the student must choose to follow either a Biological Sciences track (12 hours) or a Physical-Chemical Sciences track (12 hours).

A. Biological Sciences Track (At least 12 hours chosen from the following: Botany 305: Socio-Economic Impact of Plants (3); Botany 310: Plants: Evolutionary Survey I (3); Botany 320: Plants: Evolutionary Survey II (3); Botany 330: Field Botany (4); Botany 346: Introduction to Oceanography (3); Botany 431: Plant Ecology (3); Botany 451: Plant Tissue Culture (3); Ecology 370: Environment and Conservation (2); Forestry, Wildlife and Fisheries: Dendrology, Ecology, Silvics (3); Geography 435: Biogeography (3); Geology 320: Paleobiology (3); Geology 420: Paleobotany and Palynology (3); Microbiology 310-19: Introduction to Microbiology and Lab (3,1); Zoology 300: General Entomology (3); Zoology 450-459: Comparative Animal Behavior and Lab (3,3); Zoology 470: Aquatic Ecology (3); Zoology 473: Herpetology (3); Zoology 474: Ichthyology (3); Zoology 475: Ornithology (3); Zoology 476: Mammalogy (3).

B. Physical-Chemical Sciences Track (At least 12 hours chosen from the following: Biochemistry 310: Introduction to Biochemistry (3); Chemistry 350-360-369: Organic Chemistry and Lab (3,3,2); Ecology 370: Environment and Conservation (2); Geography 334: Meteorology (3); Geography 433: Land Surface System (3); Geography 434: Climatology (3); Geography 456: Water Resources (3); Geology 203: Geology of National Parks (3); Geology 325: Geological History of Land Organisms (3); Geology 450: Process Geomorphology (3); Geology 456: Basic Environmental Geology (3); Geology 485: Principles of Geohydrology (3). Total: 26-28 hours

(2) Science

This concentration should develop the knowledge and understanding of the sciences appropriate to the needs of the teacher in grades K-6. The curricular requirement that the student take courses in both biological science (anthropology, biochemistry, biology, botany, microbiology, psychology, zoology) and in physical science (chemistry, geography, geology, physics) is in addition to the 19 hours in the core curriculum 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 121-115 (3,3) or Mathematics 121-122 (3,3) or Mathematics 141-142 (4,4) or Mathematics 151-152 (3,3)
2. Chemistry 100-110 (4,4) or Chemistry 120-130 (4,4) or Zoology 117-118 (4,4)
3. Biology 110-120 (4,4) or Zoology 117-118 (4,4)

Total: 22-24 hours

Core courses: (14-16 hours)
1. Biology 220: General Genetics (4)
2. Botany 230: General Ecology (4)
3. Geology 101-102 (4,4) or Geography 131-132 (4,4) or Physics 141-142 (3,3)

Beyond the core curriculum, the student must choose to follow either a Biological Sciences track (12 hours) or a Physical-Chemical Sciences track (12 hours).

A. Biological Sciences Track (At least 12 hours chosen from the following: Botany 305: Socio-Economic Impact of Plants (3); Botany 310: Plants: Evolutionary Survey I (3); Botany 320: Plants: Evolutionary Survey II (3); Botany 330: Field Botany (4); Botany 346: Introduction to Oceanography (3); Botany 431: Plant Ecology (3); Botany 451: Plant Tissue Culture (3); Ecology 370: Environment and Conservation (2); Forestry, Wildlife and Fisheries: Dendrology, Ecology, Silvics (3); Geography 435: Biogeography (3); Geology 320: Paleobiology (3); Geology 420: Paleobotany and Palynology (3); Microbiology 310-19: Introduction to Microbiology and Lab (3,1); Zoology 300: General Entomology (3); Zoology 450-459: Comparative Animal Behavior and Lab (3,3); Zoology 470: Aquatic Ecology (3); Zoology 473: Herpetology (3); Zoology 474: Ichthyology (3); Zoology 475: Ornithology (3); Zoology 476: Mammalogy (3).

B. Physical-Chemical Sciences Track (At least 12 hours chosen from the following: Biochemistry 310: Introduction to Biochemistry (3); Chemistry 350-360-369: Organic Chemistry and Lab (3,3,2); Ecology 370: Environment and Conservation (2); Geography 334: Meteorology (3); Geography 433: Land Surface System (3); Geography 434: Climatology (3); Geography 456: Water Resources (3); Geology 203: Geology of National Parks (3); Geology 325: Geological History of Land Organisms (3); Geology 450: Process Geomorphology (3); Geology 456: Basic Environmental Geology (3); Geology 485: Principles of Geohydrology (3). Total: 26-28 hours

(3) Philosophy 360: Introduction to the Philosophy of Science (3)

At least twelve hours must be taken from the courses listed below, but no more than nine hours may be taken from either part b (Biological Sciences) or part c (Physical Sciences).

b. Biological Sciences

+Anthropology 210: Principles of Biological Anthropology (3); +Anthropology 464: Principles of Zoarcheology (3); +Anthropology 490: Human Osteology (3); +Anthropology 495: Primate Evolution (3); +Anthropology 495: Human Paleontology (3); +Anthropology 496: Human Anatomy (3); Biochemistry 310: Introduction to Biochemistry (3); Of the following three courses you may choose only one: Botany 365: Socio-Economic Impact of Plants (3); Botany 366: Genetics and Society (3); Botany 300: Biology of Human Affairs (3); Botany 310: Plants: Evolutionary Survey I (3); Botany 320: Plants: Evolutionary Survey II (3); Botany 321: Introductory Plant Physiology (3); Botany 330: Field Botany (4); Geology 201: Fossils and the Meaning of Evolution (3); Geology 320: Paleobiology (3); Geology 420: Paleoeocology (4); Microbiology 201: General Microbiology (3); Microbiology 310-319: Introduction to Microbiology and Lab (3,1); Psychology 210: Psychological Behavior (3); Psychology 270: Ethology and Sociobiology (3); +Psychology 410: Sensory Processes and Perception (3); +Psychology 461: Physiological Psychology (3); Zoology 230: Human Physiology (3); Zoology 240: Human Anatomy (3); Zoology 330-331: Animal Development and Embryology and Lab (3,2); Zoology 350: Comparative Vertebrate Biology (4); Zoology 360: Comparative Invertebrate Biology (4); Zoology 380: General Entomology (3); Zoology 450-459: Comparative Animal Behavior and Lab (3,3); Zoology 473: Herpetology (3); Zoology 474: Ichthyology (3); Zoology 476: Mammalogy (3).

+Course has prerequisite other than courses prerequisite to this major. See catalog for details.

(4) Physical Sciences

Chemistry 350-360-369: Organic Chemistry and Lab (3,3,2); Geography 334: Meteorology (3); Geography 434: The Land-Surface System (3); Geography 434: Climatology (3); Geography 435: Biogeography (3); Geography 436: Water Resources (3); +Geography 445: Geography of Resources (3); Geology 203: Geology of Natural Parks (3); Geology 313: Mineralogy (3); Geology 319: Igneous and Metamorphic Petrology.
Pre-Teaching Humanities Options: Bachelor of Arts/College of Liberal Arts

(3) Geology 340: Stratigraphy and Sedimentation (4); Geology 346: Introduction to Oceanography (3); Geology 370: Structural Geology (3); Geology 380: Resource Crises-Minerals and Energy (3); Physics 131-132: Fundamentals of Physics (4, 4) or Physics 141-142: Nature of the Physical World (3, 3) or Physics 221-222: Elements of Physics (4, 4).

+Course has a prerequisite other than courses prerequisite to this major. See catalog for details.

Total: (parts b and c) 12 hours

(3) Mathematics

This concentration aims at developing a fundamental understanding of some of the primary avenues of mathematical thought including algebra, calculus, computing, geometry, history of mathematics, probability, and statistics.

Mathematics 115: Statistical Reasoning (3);
Mathematics 130: Precalculus I (3);
Mathematics 141-142: Calculus I and II (4, 4);
Mathematics 221: Discrete Mathematics (3); Mathematics 241: Calculus III (3);
Mathematics 251: Matrix Algebra (3);
Mathematics 323: Probability (3); Mathematics 400: History of Mathematics (3);
Mathematics 401: Math and Microcomputing (3); Mathematics 460: Geometry (3).

Total: 35 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 pursuing this option 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 sequence: Mathematics 151-152: Binoculars I and II (3, 3).

Mathematics (12 hours): Mathematics 221: Discrete Mathematics (3); Mathematics 251: Matrix Algebra (3) Any two of the following:
Mathematics 400: History of Mathematics (3);
Mathematics 401: Microcomputing (3);
Mathematics 460: Geometry (3).

Science (20-24 hours) NB: One of the science sequences listed below may be used to satisfy general education requirements.

Part I (14-16 hours)

A. Biological Sciences (two of the following three courses): Biology 210: Cell Biology (4);
Biology 220: General Genetics (4); Biology 230: General Ecology (4); Zoology 230-240: Human Physiology, Human Anatomy (4, 3). Biolog 110-120 (4, 4) or Zoology 117-118 (4, 4) or Botany 110-120 (4, 4) or two years of high school biology are prerequisite to both Biology 210-220-230 and Zoology 230-240.

B. Chemistry: Either Chemistry 100-110: Principles of Chemistry, Introduction to

Organic and Biochemistry (4, 4) or Chemistry 120-130: General Chemistry I and II (4, 4).

C. Physical Sciences: Either Geology 101-102: General Geology I and II (4, 4); or Geography 131-132: Geography of the Natural Environment I and II (4, 4) or Physics 141-142: Nature of the Physical World I and II (3, 3).

Part II (8-18 hours)

Either another sequence from Part I above or two of the following courses:

Astronomy 161: Introductory Astronomy with Lab (4); Botany 305: Socio-Economic Impact of Plants (3); Botany 309: Biology of Human Affairs (3); Geography 343: Meteorology (3); Geology 201: Fossils and the Meaning of Evolution (3); Geology 203: Geology of National Parks (3); Geology 380: Resource Crises: Minerals and Energy (3).

Total: 32-36 hours

Pre-teaching Humanities Options: Bachelor of Arts

(5) Arts

This concentration should develop the knowledge and understanding of the role of the arts in society and should include experiences with the visual arts, music, dance, and creative dance. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Mathematics 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Mathematics 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses:

Art 172: Western Art I (3) or Art 183: Asian Art (3); Music 110: Music Appreciation (3);
Theatre 100: Introduction to Theatre (3).

9 hours in performance courses from 2 or 3 of the following areas: Studio Art (any course); Dance (any course); Music Performance (any course); Speech Communication 280: Introduction to Oral Interpretation (3); Speech Communication 380: Oral Interpretation of Prose Literature (3); Speech Communication 385: Oral Interpretation of Poetry (3); Speech Communication 480: Ensemble Interpretation (3); Theatre 220: Acting (3); Theatre 221: Acting (3); Theatre 246: Basic Costuming (3); Theatre 250: Introduction to Scene Technology (3); Theatre 260: Fundamentals of Light and Sound (3); Theatre 320: Advanced Acting (3); Theatre 344: Introduction to Costume Design (3); Theatre 355: Introduction to Scene Design (3); Theatre 362: Introduction to Lighting Design (3); Theatre 409: Stage Makeup (3); Theatre 430: Principles of Play Directing (4).

9 hours of non-performance courses from 2 or 3 of the following departments: Art 173: Western Art II (3); Art 232: History of Photography (3); Art 371: Early Christian and Byzantine Art, to 1350 (3); Art 372: Northern European Painting, 1350-1600 (3); Art 374: Art of Northern Europe, 1600-1755 (3); Art 375: History of Modern Sculpture in Europe and America (3); Art 381: Medieval Art of the West, 800-1400 (3); Art 382: The Art of Italy: 1250-1450 (3); Art 383: The Art of Italy: 1475-1757 (3); Art 384: Art of Southern Europe: 1575-1700 (3); Art 385: Chinese Art (3); Art 386: Japanese Art (3); Art 471: History of North American Art (3); Art 472: History of 20th Century Art (3); Art 473: 19th Century American Painting (3); Art 475: History of 19th Century Painting in Europe and America (3); Art 496: Art of Indian Art (3); English 252: Introduction to Drama (3); English 306: Introduction to Shakespeare (3); English 334: Film and American Culture (3); English 404: Shakespeare I: Early Plays (3); English 405: Shakespeare II: Later Plays (3); English 406: Renaissance Drama (3); English 412: British Drama from 1660-1800 (3); English 453: Continental Drama (3); English 491: Foreign Study (1-15); French 430: Theoretical French (2-3); German 373: German Film (3); +German 422: German Drama (3); Music: all courses in Music History and Music Theory; +Spanish 450: 20th Century Hispanic Theatre (3); Theatre 210-221: Survey of World Drama (3, 3); Theatre 310-311: History of the Theatre (3, 3); Theatre 312-313: History of the American Theatre (3); Theatre 410: Dramatic Theory and Criticism (3); 6 additional hours at the 300 level or higher from any of the courses listed above.

Course requires intermediate level in the language.

Total: 33 hours

(at least 15 at 300 level or above)

(6) Language Arts

This concentration should develop knowledge, understandings, and skills for effective communication, appreciation of literature, and competence in use of language.

Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Mathematics 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Mathematics 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.


12 hours in courses from at least two of the following areas: Audiology and Speech Pathology; Comparative Literature; English, Library and Information Science; Linguistics, Speech Communication.

6 hours in expository and/or creative writing courses in the English Department or Theatre 470-471: Playwriting (3, 3).

6 hours from: Audiology and Speech Pathology 305: Speech Science I: Phonetics and History 251-252: History of the United States (3, 3); Anthropology 120: Prehistoric Archaeology (3) or Anthropology 130: Cultural Anthropology (3) or Sociology 100: General Sociology (3).

Total: 24 hours

Core courses: Geography 320: Cultural Geography: Core Concepts (3); History
6 hours in literature courses in Departments of English, Classics, or Foreign Language at 300 level or above

Total: 33 hours (at least 24 at 300 level or above)

(7.) Ideas and Values
This concentration aims at developing an understanding of the variety of ideas and values evolved by different civilizations in their attempts to comprehend and manage the human condition. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses: (15 hours)
Philosophy 110-111: The Human Condition (3,3); Religious Studies 101: World Religions in History (3); Religious Studies 211: Ways of Understanding Religion (3); one of the following: Philosophy 380: The Concept of Woman (3); Philosophy 382: Philosophy of Feminism (3)

At least 9 hours at the 200 level or above from the following or from an option approved by petition: Classics 221: Early Greek Mythology (3); Classics 222: Classical Greek and Roman Mythology (3); Philosophy 320: Ancient Western Philosophy (3); Philosophy 322: Medieval Philosophy (3); Philosophy 324: Seventeenth and Eighteenth Century Philosophy (3); Philosophy 328: Nineteenth and Twentieth Century Philosophy (3); Philosophy 370: Philosophy of Religion (3); Philosophy 390: Philosophical Foundations of Democracy (3); Philosophy 393: Marxism (3); Philosophy 395: Existentialism (3); Philosophy 411: Modern Religious Philosophies (3); Philosophy 425: American Philosophy (3); Philosophy 479: Studies in Recent Continental Philosophy (3); Religious Studies 305: Contemporary Religious Thought (3); Religious Studies 324: Ancient Jewish Thought (3); Religious Traditions (3); Religious Studies 315: Reformation Europe (3); Religious Studies 321: New TestamentOrigins (3); Religious Studies 322: Christian Thought (3); Religious Studies 326: Images of Jesus (3); Religious Studies 331: Judaism (3); Religious Studies 342: Religious Ethics (3); Religious Studies 351: Introduction to U.S. Religious History (3); Religious Studies 352: African-American Religion in the U.S. (3); Religious Studies 355: Religion and Culture in the U.S. (3); Religious Studies 425: Seminar in Western Religions (3)

At least 6 hours in non-Western philosophy and religion to be chosen from the following or from an option approved through petition: Religious Studies 302: Religion of Primitive People (3); Religious Studies 332: Islam (3); Religious Studies 373: African Religions (3); Religious Studies 374: Philosophy and Religion in India (3); Religious Studies 376: Buddhist Philosophy and Religion (3); Religious Studies 379: Religion and Philosophy of Religion (3); Religious Studies 383: Religion in Japan (3); Religious Studies 412: Classical Indian Systems of Philosophy (3); Religious Studies 435: Seminar in Asian Religions (3)

Total: 30 hours (at least 21 at 300 level or above)

PRE-TEACHING SOCIAL SCIENCE OPTIONS: BACHELOR OF ARTS

(8.) United States Culture
The aim of this concentration is to develop both breadth and depth of understanding about American culture, its uniqueness, its strengths, and its origins. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses: (6 hours)
American Studies 310: Introduction to American Culture: Voices of Dissent (3); American Studies 410: Topics in American Culture (3)

6 hours from any U.S. History courses

3 hours in Appalachian Studies selected from: Anthropology 310: Appalachian Art (3); Geography 365: Geography of Appalachia (3); History 449: Tennessee History (3)

6 hours in American Literature at 400 level

9 hours from the following: Anthropology 310: North American Indians (3); Anthropology 315: African-American Anthropology (3); Anthropology 360: North American Prehistory (3); Art 471: History of North American Art (3); Art 472: History of 20th century American Art (3); Art 473: 19th Century American Painting (3); Economics 331: Government and Business (3); Economics 332: Game Theory (3); Economics 335: Economic History of the United States (3); English 332: Women in American Literature (3); English 334: Film and American Culture (3); Geography 361: Regional Geography of the US and Canada (3); Geography 363: Geography of the American South (3); Geography 365: Geography of Appalachia (3); Geography 425: Historical Geography of the United States (3); Geography 441: Urban Geography (3); Geography 443: Rural Geography (3); History 440: America: Mind, Mood and Society (3); History 445: The African-American Experience from the Colonial Period to the Present (3); History 453: Women in American History (3); History 454: Cities and Urbanization in American History (3); Music 350: History of Jazz (3); Music 440: Music of North America (3); Philosophy 425: American Philosophy (3); Political Science 315: Tennessee Government and Politics (3); Political Science 330: Law in American Society (3); Political Science 331: Judicial Process (3); Political Science 347: American Political Thought (3); Political Science 411: The Presidency (3); Political Science 412: Congress (3); Political Science 431: U.S. Constitutional Law: Civil Rights and Liberties (3) Religious Studies 351: Introduction to U.S. Religious History (3); Religious Studies 352: African-American Religion in the U.S. (3); Religious Studies 353: Topics in African-American Religion (3); Sociology 405: Sociology of Sport (3); Sociology 415: Sociology of Aging (3); Sociology 455: Society and Law (3); all 300 level courses except Sociology 321, 331, 336, 344, 351, and 370; Theatre 312-313: History of the American Theatre (3,3)

Total: 30 hours

(9.) Multicultural Studies
This concentration should develop a greater sensitivity, appreciation, and knowledge regarding other cultures both nationally and internationally. It should also increase understanding of issues of race and ethnicity. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses: (9 hours)
Geography 101-102: World Geography (3,3); Anthropology 130: Cultural Anthropology (3)

3 hours from: Sociology 340: Class Structure (3); Sociology 343: Race and Ethnicity (3); Sociology 344: Power and Society (3)

3 hours Sociology 446: The Modern World System (3)

3 hours Curriculum and Instruction 451: Education in Cultural Perspective (3)

18 hours selected from Geography, African-American Studies, Anthropology, Economics, History, Latin-American Studies, Religious Studies, Sociology with a multicultural/inter-national emphasis or in a given geographic area (such as Africa, Asia, Latin America)

Total: 36 hours (at least 18 at 300 level or above)

(10.) Social Studies
This concentration should develop perception and the broad field of social science and broaden the historical and geographic knowledge base. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Prerequisite courses: History 151-152: Development of Western Civilization (3,3) or History 161-162: History of World Civilization (3,3); Geography 101-102 (3); Political Science 101: United States Government and Politics (3) or Political Science 102: Government and Politics (3); History 251-252: History of the United States (3,3); Anthropology 120: Prehistoric Archaeology (3) or Anthropology 130: Cultural Anthropology (3) or Sociology 100: General Sociology (3)

Total: 24 hours
PRE-VETERINARY MEDICINE PROGRAM

The following program is designed for students who wish to pursue a Liberal Arts 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 Liberal Arts, must satisfy the Basic Skills and Distribution requirements, and must complete the last 30 hours in residence at UT Knoxville. A departmental major is required. Upon successful completion of the first year (two semesters) of the pre-veterinary medicine curriculum, the Bachelor of Science degree will be conferred by the College of Liberal Arts.

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
- English 101-102 ......................................................6
- Chemistry 120-130 .....................................................6
- Biology 110-120 or Zoology 117-127 .........................6
- Basic Skills (B) Foreign Language (Intermediate Level Sequence) ....6
- Mathematics ..................................................................6-8

Sophomore
- Biology 210, 220 ..........................................................8
- Chemistry 350, 360, 369 .................................................8
- Physics 221-232 ..............................................................8
- Divisional Distribution (A) Non-U.S. History .....................6
- Divisional Distribution (C) Social Sciences ......................3

Junior
- Biochemistry 410 ...........................................................4
- Divisional Distribution (C) Social Science ......................3
- Divisional Distribution (D) Humanities Part I & II ..............6
- Upper Level Distribution (A) U.S. Studies .........................6
- Upper Level Distribution (B) Foreign Studies ....................6
- Capstone Experience .....................................................6
- Electives ......................................................................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

Or equivalent honors courses.

Students who have had considerable background in biology and two years of biology or an unusual good one-year course and have completed general chemistry may be eligible to go directly into Biology 210. This program requires completion of 12 credits from at least two areas. B.S. students must complete a minimum of 6 credits from at least two areas during the program of study.

This requirement assumes a student has had enough language background in high school to begin an intermediate language sequence at UT Knoxville. Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements. A calculus course is a prerequisite for Calculus (3, 3) or a calculus course is a prerequisite for Physics (3). A math placement is available in the Liberal Arts Advising Center. All students must complete both the Basic Skills requirement and the Social Science requirements.

Or equivalent honors courses.

This requirement assumes a student has had enough language background in high school to begin an intermediate language sequence at UT Knoxville. Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements. A calculus course is a prerequisite for Calculus (3, 3) or a calculus course is a prerequisite for Physics (3). A math placement is available in the Liberal Arts Advising Center. All students must complete both the Basic Skills requirement and the Social Science 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 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 colleges on a full-semester or summer term basis. A second is through group programs conducted abroad by other academic institutions in which UT Knoxville students with approval may enroll for credit. Assistance in identification of and registration in such programs may be obtained through the Overseas Study Information Service located in the University’s Division of International Education. A third opportunity is through individualized programs under the foreign study number 491. The nature of this work as well as credit for it should be negotiated by students prior to departure with the appropriate liberal arts 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.

AFRICAN AND AFRICAN-AMERICAN STUDIES
See Interdisciplinary Programs.

AMERICAN STUDIES
See Interdisciplinary Programs.

ANCIENT MEDITERRANEAN CIVILIZATIONS
See Interdisciplinary Programs.

ANTHROPOLOGY
Professors:
W.M. Bass (Alumni Distinguished Service Professor), Ph.D. Pennsylvania; C.H. Fauquier, Ph.D. Indiana; W.E. Klipfel, Ph.D. Missouri; R.L. Jantz, Ph.D. Kansas; P.W. Parmalee (Emeritus), Ph.D. Texas A&M; M.C. Wheeler (Emerita), Ph.D. Yale.

Associate Professors:
F.V. Harrison, Ph.D. Stanford; I. Harrison, Ph.D. Syracuse; B.J. Howell, Ph.D. Kentucky; M.H. Logan, Ph.D. Pennsylvania State; J.F. Simek (Head), Ph.D. SUNY-Binghamton; G.F. Schroedl, Ph.D. Washington State.

Assistant Professors:

Research Associate Professor:

Research Assistant Professors:
S. Frankenfield, Ph.D. Northwestern; D. Morey, Ph.D. Tennessee; S. Tardiff, Ph.D. Michigan State.

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 grades 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, a department advisor will be assigned in consultation with the student.

The anthropology major consists of 450 and 27 additional hours of upper division course work in Anthropology. This course work shall be distributed as follows:
(1) one course from categories (a), (b), (c), (d) and (e); and (d) and two courses from category (e).
(a) archaeological method and theory: 361, 362, 440, 464
(b) archaeological area: 360, 461, 462, 463
(c) cultural area: 310, 311, 312, 313, 314, 315, 319
(d) cultural method and theory: 410, 411, 412, 413, 414, 431
(e) biological anthropology: 480, 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.

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, which consists of 15 hours of upper division Anthropology courses, chosen in consultation with an Anthropology advisor.

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**ART**

**Professors:**


**Associate Professors:**


**Assistant Professors:**

T. W. Hiles, Ph.D. Pennsylvania State.

**B. F. A. in Studio Art**

The B.F.A. is 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 (BA Studio, BFA Studio and Art Education, BFA Graphic Design, Illustration) must present 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, Printmaking, Sculpture, Watercolor, and approved Inter-Area combinations, after passing the appropriate portfolio course.

**Basic Requirements**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Art History 171, 172, 173.</td>
</tr>
<tr>
<td>4</td>
<td>Studio 101, 103.</td>
</tr>
<tr>
<td>4</td>
<td>Studio 295.</td>
</tr>
<tr>
<td>3</td>
<td>Studio 211 Drawing I: 213 Painting I (or 215 Watercolor I); Sculpture (241 or 243 or 244 or 245 or 246); Printmaking (161 or 262 or 263 or 264).</td>
</tr>
</tbody>
</table>

**Concentration - Ceramics; Drawing; Painting; Printmaking; Sculpture; Watercolor; or Inter-Area (approved combinations of studio media).**

| Hours Credit | Total: 46 |

**Portfolio Review (Pre-requisite to 300 and 400 courses).**

| Total: 32 |

**Studio Electives**

Additional hours in studio course electives to be completed in the Art Department or at our affiliated facility, Arrowmont School of Arts and Crafts. Students may also apply a maximum of 8 hours of approved studio courses from Architecture, Art Education, Broadcast Journalism, Computer Science, Vocational Technical Education, Interior Design or Theatre. Students may elect an additional major in Art Education and licensure to teach must take 14-15 hours in undergraduate Art Education courses. (9).

**Total: 15 hours**

**General Curriculum**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>English Composition</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-U.S. History/Social Science</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Natural Science/Mathematics</td>
<td>6-8</td>
</tr>
<tr>
<td></td>
<td>Liberal Arts Non-Art Electives</td>
<td>14-16</td>
</tr>
</tbody>
</table>

| Total: 34 hours |

**Approved Studio Electives for Concentration.**

| Total: 127 hours |

**B.F.A. in Graphic Design/Illustration**

The Graphic Design/Illustration major is specifically designed to provide the basic visual education for those persons who wish to pursue careers in the commercial application of art in fields such as advertising, art direction, package design, publications, television, etc.

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. Transfers who expect to enroll in 300 (junior level) or 400 (senior 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 earned prior to graduation.

A minimum of 127 credit hours are required for graduation. Two options are available: Graphic Design or Illustration. Students are advised that courses in Graphic Design/Illustration must be taken in sequence, and that successful completion of Art 350 (Portfolio Review, S/NC) is required to all upper division courses.

**GRAPHIC DESIGN CONCENTRATION**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Art Core 171, 172, 173</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Art History electives 101, 103</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Art 295, 211, 213 (or 215)</td>
<td>9</td>
</tr>
</tbody>
</table>

| Total: 28 |

**Design and Professional Electives**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Art 259, 292, 331, 363, 385, 386, 387, 386, 396, 404, 405, 453, 454, 459, 491, 492, 495 Advertising 250, 350, 490, Marketing 301</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Studio Electives Students must choose a total of 9 hours from a minimum of two categories: (1) Fiber-Fabric; (2) Papermaking; (3) Printmaking; (4) Ceramics; (5) Sculpture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total: 45</td>
<td></td>
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</tbody>
</table>

**ILLUSTRATION CONCENTRATION**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Art Core 171, 172, 173</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Art History electives 101, 103</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Art 295, 211, 213 (or 215)</td>
<td>9</td>
</tr>
</tbody>
</table>

| Total: 28 |

**Illustration**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Art 350 (S/NC)</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Art 212, 9 hours of drawing electives</td>
<td>12</td>
</tr>
</tbody>
</table>

| Total: 127 hours |
In addition to the general B.A. requirements (found in the Undergraduate Catalog), the following are required for B.A. majors in the Arts Department:

**B.A. Majors in Art History**

<table>
<thead>
<tr>
<th>Prerequisite:</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 172, 173, 183</td>
<td>9</td>
</tr>
<tr>
<td>Major: Art History courses numbered 200 and above (May include Greek and Roman Art and Archeology, Department of Classics)</td>
<td>21</td>
</tr>
<tr>
<td>Studio courses numbered 200 and above</td>
<td>6</td>
</tr>
<tr>
<td>Art 481</td>
<td>3</td>
</tr>
<tr>
<td>Total: 39 hours</td>
<td></td>
</tr>
</tbody>
</table>

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 I, II should be considered.

**B.A. Major in Studio**

<table>
<thead>
<tr>
<th>Prerequisite:</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 101, 295, 103</td>
<td>7</td>
</tr>
<tr>
<td>Art 171 and 6 additional hours of Art History</td>
<td>9</td>
</tr>
<tr>
<td>Major: Studio courses numbered 200 and above, including a minimum of 15 hours in 300-400 level courses</td>
<td>24</td>
</tr>
<tr>
<td>Total: 40 hours</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the general B.A. requirements, the following are required for minors in the Arts Department:

**B.A. Minor in Art History**

<table>
<thead>
<tr>
<th>Prerequisite:</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 172, 173</td>
<td>6</td>
</tr>
<tr>
<td>Minor: Art History courses numbered 200 and above</td>
<td>15</td>
</tr>
<tr>
<td>Total: 21 hours</td>
<td></td>
</tr>
</tbody>
</table>

**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 Department 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, Department 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, invitational, the 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:**

P.J. Carney (Head), Ph.D., Iowa; C.W. Asp, Ph.D., Ohio State; D.M. Lipscomb (Adjunct), Ph.D., Washington; H.L. Luper, Ph.D., Ohio State; I.V. Nabelek, Ph.D., Czech Technical (Prague); H.A. Peterson, Ph.D., Illinois; B. Silverstein, Ph.D., Purdue.

**Associate Professors:**

S.B. Burchfield, Ph.D., Michigan State; C.J. Ferrell, M.A., Tennessee; P. Gordon, Ph.D., Tennessee; E.J. Hamby, Ph.D., Iowa; A. Krishnan, Ph.D., Texas (Dallas); J. Thelin, Ph.D., Iowa; G. Wallace, Ph.D., Northwestern.

**Instructors:**


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 and to professional certification in some aspect of speech, language and hearing disorders. The master's degree is required for most 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 department as early as possible in their programs. Suggested elective courses for students not majoring in Audiology and Speech Pathology include 304, 305, 320, 371, 465 and 473.


Applicants for enrollment in clinical practice must submit an application to the departmental Director of Clinical Services. Requirements for enrollment in practicum courses (433 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.

Undergraduate degrees in speech pathology and in audiology are pre-professional degrees. That is, a minimum of a Master's degree is required for professional certification.

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**

**Professors:**

J.E. Churchich (Chancellor's Research Scholar), Ph.D., Sheffield (England); J.G. Joshi, Ph.D., Poona (India); K.J. Mundy, Ph.D., Rochester; W.D. Wicke, Ph.D., Harvard.

**Associate Professors:**

J. Koonin (Head), Ph.D., Kentucky; D. Roberts, Ph.D., California (Davis).
Upper Level Distribution requirements: Biochemistry 420, Microbiology 495, or Zoology 409.

Concentration B is designed primarily for students whose career goals involve graduate school in a biological discipline or professional school, (medicine, dentistry, etc.). Prerequisites are Biology 110-120 or Botany 110-120 and Zoology 117-118; Chemistry 120-130; Mathematics 141-142 or 151-152; and Physics 221, 222. Requirements in the major are Biology 210, 220, and 230; Chemistry 350, 360, 369; Biochemistry 410; and fourteen hours of additional course work in biological science selected from any 300 or 400 level course offered in Biochemistry, Botany (except 305, 306, 309), Microbiology, and Zoology. No more than 8 hours from one department may count toward the major and only 3 hours of undergraduate research. One of the following capstone courses may count both toward the major and toward Upper Division Distribution requirements: Biochemistry 420, Microbiology 495, or Zoology 409.

A Minor consists of Biology 210, 220, 230 and 8 hours of upper-division courses chosen from the list below. Biochemistry 410-419; Botany, any 300- or 400-level courses; Microbiology, any 300- or 400-level courses; Zoology, any 300- or 400-level courses. (In meeting the upper-division minimum requirement, not more than 6 hours may be credited from any one biological science department, and not more than 3 hours of research courses may be credited.) Prerequisites to the minor are introductory biology courses (Biology 110-120 or Zoology 117-118) and Chemistry 120-130.

A B.S. major in Biology may be obtained by completing either Concentration A or Concentration B.

Concentration A is designed for students whose career goals require a broad-based education in the biological sciences and who are directed toward secondary education or the business world and are not planning on graduate or professional school in a biological discipline. Prerequisites are Biology 110-120 or Botany 110-120, or Zoology 117-118; Chemistry 120-130; Mathematics 115-121 or 115-122; and Physics 221, 222. Requirements in the major are Biology 210, 220, 230; two semesters chosen from Chemistry 350, 360-369, 310-319, or Biochemistry 310; a total of 18 hours of upper division courses in the biological sciences including one course from each of these groups; Botany 310, 320, 330; Microbiology 310, 430; and Zoology 330, 350, 360, 380. Additional courses to reach the 40 hours minimum may be selected from any 300 or 400 level courses in Biochemistry, Botany, Microbiology, and Zoology; only one course may be chosen from Botany 305, 306, and 309; courses must include at least 3 hours at the 400-level, and no more than 3 hours of undergraduate research. One of the following capstone courses may count toward the major as well as toward upper division major in Botany may be obtained by completing one of the following concentrations: General Program, Organismal Botany, or Cellular and Molecular Botany. Prerequisites for all three concentrations are: Botany 110-120 or Biology 110-120; and Chemistry 120-130. Co-requisite to the General Program is one of the following sequences: Mathematics 116-121 or 141-142 or 151-152, or Physics 121-122, or Geology 101-102, or Chemistry 350-360-369. Corequisites for both of the other concentrations are: Botany 141-142 or 151-152, Physics 121-122 or Geology 101-102; and Chemistry 350-360-369.

General Program requirements are: 2 courses from Biology 210-220-230; Botany 310, 320, 321, 330, 1 hour of 371, 1 hour from 400 or 441-442; 4 hours of additional Botany, and 3 hours of upper division Biochemistry courses selected from Biochemistry, Microbiology, or Zoology. A minimum of 31 hours completes this major's option.

Concentration in Organismal Botany requirements are: Biology 210, 230; Botany 321, 310, 320, 330, 1 hour of 371, 2 hours from 400 or 441-442; and 7 additional hours selected from Botany (305, 306, 309 do not meet this requirement), Biology (220 is recommended for partial fulfillment of this requirement), or upper division Biochemistry, Microbiology, Zoology. A minimum of 40 hours completes this major's option (includes 6 hours of Organic Chemistry).

Concentration in Cellular and Molecular Botany requirements are: Biology 210, 220; Botany 321, 310, 320, 330, or 451, 1 hour of 371, 2 hours from 400 or 441-442; Biochemistry 410; and 3 additional hours selected from Botany (305, 306, 309 do not meet this requirement); Biology 230 is recommended for fulfilling this requirement; or upper division Biochemistry, Microbiology, Zoology. A minimum of 40 hours completes this major's option (includes 6 hours of Organic Chemistry).

Minor consists of 2 courses from Biology 210, 220, 230, 1 hour of Botany 371, and 6 additional hours of upper-division Botany (not more than one course from 305, 306, 309) and 3 additional hours of upper-division Botany or related biological sciences. Prerequisite to the minor is Botany 110, 120 or Biology 110, 120.

CHEMISTRY

Professors:
G. Mamantov (Head and Alumni Distinguished Service Professor), Ph.D. Louisiana 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, Ph.D. Manchester (England); W.E. Bull, Ph.D. Illinois; J. Q. Chambers, Ph.D. Kansas; K.D. Cook, Ph.D. Wisconsin; J.A. Dean (Emeritus), Ph.D. Michigan; J.F. Eastham (Emeritus), Ph.D. California (Berkley); W.H. Fletcher (Emeritus), Ph.D. Minnesota; F.A. Grimm, Ph.D. Cornell; G.A. Guichon (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Universite de Paris (France); G.W. Kabalka (Alumni Distinguished Service Professor), Ph.D. Purdue; D.C. Klaiber, Ph.D. Pratt; P. Prinstein, Ph.D. Kovač, Ph.D. Yale; M.H. Lietzke, Ph.D. Wisconsin; L.J. Magid, Ph.D. Tennessee; R.M. Magid, Ph.D. Yale; R.M. Pagni, Ph.D. Wisconsin; J.R. Peterson, Ph.D. California (Berkley); G.K. Schwarz (Alumni Distinguished Service Professor), Ph.D. Illinois; M.J. Sepaniak, Ph.D. Iowa State; W.T. Smith, Ph.D. Emory; Ph.D. Ohio State; W.A. Van Hook, Ph.D. Johns Hopkins; E.L. Wehry, Ph.D. Purdue; T.F. Williams (Alumni Distinguished Service Professor), Ph.D. London (England); C. Woods, III (Associate Dean), Ph.D. North Carolina State; B. Wunderlich (Distinguished Scientist, Science Alliance Center of Excellence).
BACHELOR OF SCIENCE IN CHEMISTRY

Students who wish to major in chemistry may select from either of two courses of study: Bachelor of Science or Bachelor of Science in Chemistry. Only the latter program is approved by the Committee on Professional Training of the American Chemical Society. It is designed to train students to go directly into positions in the chemical industry or to enter graduate study leading to positions in research and college teaching. A student in the B.S. in Chemistry program should, at the earliest opportunity, ask the Liberal Arts Advising Center for assignment of a faculty advisor in the Department of Chemistry. For further information, contact the Head of the Department of Chemistry, 575 Buehler Hall.

Information concerning the Cooperative Program in chemistry, see description of the B.S. program below.

CURRICULUM REQUIREMENTS:

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>Chemistry 120-130 or (preferably 121-131 or 128-138)</td>
<td>8</td>
</tr>
<tr>
<td>200, 120, 121, or 128</td>
<td></td>
</tr>
<tr>
<td>Mathematics 141-142</td>
<td>6</td>
</tr>
<tr>
<td>English Composition</td>
<td>6</td>
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<tr>
<td>Distribution</td>
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<td>Sophomore</td>
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<tr>
<td>Chemistry 140</td>
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<td>Chemistry 350-360</td>
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<td>Mathematics 241-251</td>
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<td>Total: 124 hours</td>
<td></td>
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</tbody>
</table>

*Must be chosen from German, French or Russian; a student who has not had two years of one of these languages in high school will need to complete the elementary sequence before taking the intermediate level sequence.

The distribution requirements of the College of Liberal Arts 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 guidelines.

It is recommended that a portion of these elective hours be applied to advanced courses in mathematics and physical chemistry.

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. Because these two programs are designed for students with different career goals, the following paragraphs should be carefully considered before selecting courses. A student who desires to major in chemistry should ask the Liberal Arts Advising Center for assignment of a faculty advisor in the Department of Chemistry. For further information, contact the Head of the Department of Chemistry, 575 Buehler Hall.

The B.S. degree is intended primarily for students who may have career objectives in fields other than chemistry, but in fields where chemistry has direct application such as medicine, dentistry, pharmacy, business, and ecology. The B.S. in Chemistry degree is recommended for students planning a career in chemistry. However, with the proper choice of physics, mathematics, and physical chemistry courses, the regular B.S. program is also suitable for such students.

Prerequisites for the major are Chemistry 120-130 or (preferably) 121-131 or 128-138, Chemistry 140, and Mathematics 141-142 or 151-162. Corequisites for the major are Physics 221-222 or 137-131.

The major consists of Chemistry 310, 319, 350-360, 369, 471-483 or 473-483, 479, and 10 hours of additional work in chemistry that includes at least one laboratory course or lecture/laboratory course; up to 6 hours of Biochemistry 410-420 or Geology 460 may be applied to the 10-hour requirement.

For students planning careers in chemistry, the recommended courses (from the list above) are Mathematics 141-142, Physics 137-131, and Chemistry 473-483; although not required, certain additional courses are strongly suggested for students planning to become chemists: Mathematics 241-251 and Chemistry 230, 320, 328, and 406. Because professional chemists need a reading knowledge of foreign languages, intermediate level competency should be acquired in German, French or Russian. Students who are undecided about their career goals should consult a chemistry faculty advisor at the earliest opportunity. Unlike the Bachelor of Science in Chemistry, the regular B.S. degree is not approved by the Committee on Professional Training of the American Chemical Society.

A minor in chemistry shall consist of the successful completion of 15 hours of chemistry courses numbered 200 and above including 310, 319 (4 hours) and at least one of the following sequences: 350-360, 369 (8 hours); or 471-483, 479 (8 hours); or 473-483, 479 (8 hours).

Cooperative Program

A cooperative program is available to students who are chemistry majors. After the freshman year, the student alternates a semester in school with a job in the chemical industry. The program normally requires five years and involves a total of four work semesters and eight school semesters. Students are required to have at least a 2.5 average to enter and remain in the program.

Placement in General Chemistry Sequences

The sequences which meet all requirements of a year of general chemistry and which serve as prerequisite for upper-division courses are 120-130, 121-131, and 128-138; chemistry majors are strongly encouraged to take either of the latter sequences. Courses 100 and 110 emphasize organic and biochemical chemistry, and may be used as prerequisite only for 431.

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 101 for 120 with approval of the Department of Chemistry and may then take 130. Credit may be received for only one of the courses 100, 120, 121, 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 necessary, performance on a placement examination to be given during the first class meeting. A student receiving a passing grade below B in 128 will complete the year's work by taking 130 or 131.

Beginning students who have had high school chemistry and who have had additional experience (e.g. summer institute study, special research projects, home laboratory) are invited to apply during the summer to the head of the department for permission to take a proficiency examination in one or more semesters of general chemistry. If a satisfactory grade is made on the examination, credit will be allowed for the semester (or course) for which the exam was taken. The Department of Chemistry gives credit in general chemistry to students who present satisfactory scores on the Chemistry Advanced Placement Examination.

CHINESE

See Interdisciplinary Programs (Asian Studies).

CLASSICS

Professors:

G.C. Gesell, Ph.D. North Carolina (Chapel Hill);
H.C. Rutledge, Ph.D. Ohio State.

Associate Professors:

C.P. Craig, Ph.D. North Carolina (Chapel Hill);
S.D. Martin (Head), Ph.D. Michigan; J.E. Shelton, Ph.D. Vanderbilt; D.W. Tandy, Ph.D. Yale.

The B.A. major concentration in Greek consists of 27 hours including 21 hours of Greek language courses numbered above 200, and including 3 hours of Classics 422 (Capstone); 6 hours chosen from Classics 221-222, 331, 334, 491. The student majoring in Greek
is strongly encouraged to have as background History 310 before taking the capstone course. The student concentrating in Greek is encouraged to begin or take advanced work in Latin.

There are two intermediate options in the Greek program, both of which fulfill the Liberal Arts Language requirement and prepare students for advanced work in the third and fourth years. The Classical Option is 261 followed by Upper Division The New Testament Option second year Greek is 261-262.

The Greek minor consists of 18 hours including at least 12 hours of Greek language courses numbered above 200, and 6 hours chosen from Classics 221-222, 331, 334. The student minoring in Greek is encouraged to take Classics 422 (capstone).

The B.A. major concentration in Latin consists of 30 hours including at least 15 hours of Latin language courses numbered above 200, and 6 hours chosen from Classics 221-222, 331, 334, 491. The student majoring in Latin is strongly encouraged to have as background History 310 or 311 before taking the capstone course. The student concentrating in Latin is encouraged to begin or take advanced work in Greek.

The Latin minor consists of 15 hours including at least 12 hours of Latin language courses numbered above 200, and 6 hours chosen from Classics 221-222, 331, 334. The student minoring in Latin is encouraged to take Classics 422 (capstone).

Placement Examination. Students who transfer to UT Knoxville from other colleges and students who enter with high school units in Latin should register for the placement test will be given, and students will be advised if a change in registration is indicated.

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 earns a course in a sequence may receive credit for it by passing the appropriate proficiency examination.
VanHook, R.I., Ph.D. ORNL; VanWinkle, W., Ph.D. ORNL; Vaughn, G., Ph.D. Zoology; Walton, B.T., Ph.D. ORNL; Wahry, E.L., Ph.D. Chemistry; White, D.C., Ph.D. ORNL; White, D.C., Ph.D. Microbiology; Wilson, J.J., Ph.D. Forestry, Wildlife and Fisheries; Witherspoon, J.P., Ph.D. ORNL.

The Graduate Program in Ecology offers Master of Science and Doctor of Philosophy degrees. This interdisciplinary program provides advanced courses in contemporary ecology for students from undergraduate programs in basic and applied biology, social sciences, mathematics and engineering. Research opportunities in both fundamental and applied ecology are intended to prepare students for academic careers as well as professional positions in industry or government. The Environmental Sciences Division of the Oak Ridge National Laboratory, the National Park Service, and the Tennessee Valley Authority provide advisors and research facilities. The Great Smoky Mountains, Cumberland Plateau, valley and ridge topography, TVA reservoirs and wild rivers provide locally a spectrum of natural habitats and consequent biological diversity that is truly unique. In addition, faculty research programs provide opportunities for student research elsewhere on this continent and abroad.

Application forms for admission should be obtained from the Graduate School as well as the program. Inquires concerning the admission requirements should be addressed to the Director, Graduate Program in Ecology, University of Tennessee, Knoxville, Tennessee, 37996-1610. Consult the Graduate Catalog for listing of graduate level courses.

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 Liberal Arts.

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 and 313 plus 21 additional hours in upper division economics courses. Majors are encouraged to satisfy Part II of the Natural Science Distribution Requirement with one of the mathematics packages Mathematics 115-121, 121-122, or 141-142.

Honors: The Department of Economics offers an honors B.A. degree. Candidates for the honors degree must complete 311, 313, and 21 upper division courses to include the honors seminar 491. Students interested in the honors degree should contact the department for details.

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.

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.

ENGLISH

Department: D.A. Carroll (Head), Ph.D. North Carolina; P.C. Adams (Young Professor Emeritus), Ph.D. Texas; E.W. Bratton, Ph.D. Illinois; D.R. Cox (Associate Head), Ph.D. Missouri; K. Curry (Emeritus), Ph.D. Yale; R.Y. Drake, Jr., Ph.D. Yale; W. Dykesman (Adjunct), B.A. Northwestern; A.R. Ensor, Ph.D. Indiana; R.J. Finneran (John C. Hodges Professor, Ph.D. North Carolina; J. Fisher (John C. Hodges Professor Emeritus), Ph.D. Pennsylvania; N.M. Goelee (Alumni Distinguished Professor), Ph.D. Yale; T.J. Hoffer, Ph.D. Cambridge; R.M. Kelly (Young Professor), Ph.D. Duke; B.J. Leggett (Humanities Professor), Ph.D. Florida; I. Leki, Ph.D. Illinois; M.A. Lofaro, Ph.D. Maryland; C. Maland, Ph.D. Michigan; F.D. Miller (Emeritus), Ph.D. Virginia; R.B. Miller, Ph.D. Brown; A.R. Penner, Ph.D. Colorado; J.E. Reese, Ph.D. Kentucky; N.J. Sanders (Young Professor), Ph.D. Shakespeare Institute, Stratford-on-Avon; D.J. Schneider (Douglas Bruce Professor Emeritus), Ph.D. Northwestern; D.M. Scra, Ph.D. North Carolina; W.R. Shurr (Humanities Professor), Ph.D. North Carolina; B.T. Stewart (Emeritus), Ph.D. Northwestern; J.C. Thomas, M.A. Stanford; J.B. Trahern, Jr., Ph.D. Princeton; R.H. Walker (Emeritus), M.A. Texas; T.V. Wheeler, Ph.D. North Carolina; J.M. White (Young Professor), Ph.D. Cambridge; N. Wright (Emerita), Ph.D. Yale.


Assistant Professors: J.M. Atwill, Ph.D. Purdue; Rakesh Bhatt, Ph.D. Illinois; P.G. Hamontre, M.A. Tennessee; R. Hirst, Ph.D. Rensselaer Polytechnic; L.L. Howes, Ph.D. Columbia; D. Hubbard, Ph.D. Illinois; L.D. Jennings, Ph.D. North Carolina; K. Morris, Ph.D. Texas Christian; M.E. Papke, Ph.D. McGill.


Prerequisites and Corequisites: English 101 and 102, or the equivalents, are prerequisites to all English courses at the 200, 300, and 400 levels.

Major Requirements: At least 36 semester hours of course work in the English Depart-ment, 30 of which must be at the 300 or 400 level. For all English Majors: English 201-202 (British Literature), or 221-222 (Literature of the Western World), or any two of 231-232-233 (American Literature). This requirement should be satisfied, if possible, before the student takes courses at the 300-400 level. Courses in the study of the English language, 371 or 372 are recommended for all majors.

Concentration in Literature: Ten English courses at the 300-400 level, including: (1) English 376 (Colloquium in Literature), to be taken, if possible, near the beginning of the student's major program; (2) at least four courses in literature before 1900, including at least two before 1800 (see departmental brochure, Undergraduate Study in English, for a course list); and (3) five other courses, at least one of which is based on an approach to literature other than literary history (see departmental brochure, Undergraduate Study in English, for a course list).

Concentration in Writing: Ten English courses at the 300-400 level, including: (1) a two-course sequence in expository, technical, or creative writing; (2) three other courses in writing; and (3) five other courses, at least three of which must be literature courses selected in consultation with the advisor.

Individualized Program: The Director of Undergraduate Studies is empowered to approve individualized programs developed by students in consultation with their 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, in introduction to the various genres, and in American, British, and world 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 scores, 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.

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 Romance Languages.
GEOGRAPHY

Professors: S.R. Jumper (Head), Ph.D. Tennessee; C.S. Aiken, Ph.D. Georgia; T.L. Bell, Ph.D. Iowa; R.A. Foresta, Ph.D. Rutgers; E.H. Hammond (Emeritus), Ph.D. California (Berkeley); R.G. Long (Emeritus), Ph.D. Northwestern; C.W. Minkel (Vice Chancellor for Academic Affairs and Dean of the Graduate School), Ph.D. Syracuse; C.T. Paludan (UTSI), Ph.D. Denver; D.A. Raislon, Ph.D. Northwestern; T.H. Schmude, Ph.D. Wisconsin; T.J. Wilbanks (Adjunct), Ph.D. Syracuse.

Associate Professors: T.J. Blasing (Adjunct), Ph.D. Wisconsin; L.W. Birkelman Jr., Ph.D. Wisconsin; M.A. Brown (Adjunct), Ph.D. Ohio State; C.P. Harden, Ph.D. Colorado (Boulder); S.P. Horn, Ph.D. California (Berkeley); L.M. Pulipher, Ph.D. Southern Illinois; J.B. Rehder, Ph.D. Louisiana State.

Assistant Professors: Cheng Liu, Ph.D. Tennessee; R. McKewon-Ice (Adjunct), Ph.D. Oregon; J.J. Ray (Adjunct), Ph.D. Tennessee.

A B.A. major in Geography Geography 131 and 132 are prerequisite to a major in Geography, which consists of Geography 310, 320, 340, 415, and 495, 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, 365, 385, 372, 373, 375, and 379, and at least nine hours must be at the 400 level.

Minor: The B.A. minor in Geography consists of 15 semester hours of Geography courses at the 300 level or above.

GEOLOGICAL SCIENCES

Professors: H.Y. McSween (Head), Ph.D. Harvard; T.W. Broadhead, Ph.D. Iowa; R.D. Hatcher (UT Knoxville/ORNL Distinguished Scientist), Ph.D. Tennessee; O.C. Kopp, Ph.D. Columbia; T.C. Labotka, Ph.D. Caltech; K.C. Misra, Ph.D. Western Ontario; R.E. McLaughlin (Emeritus), Ph.D. Tennessee; L.A. Taylor, Ph.D. Lehigh; K.R. Walker (Carden Professor), Ph.D. Yale; J.G. Walls (Emeritus), Ph.D. North Carolina.

Associate Professors: D.W. Byerly, Ph.D. Tennessee; G. M. Clark, Ph.D. Pennsylvania State; P.A. Dalcourt, Ph.D. Minnesota; S.G. Driese, Ph.D. Wisconsin; W.M. Dunne, Ph.D. Bristol; M. McKinney, Ph.D. Yale; R.T. Williams, Ph.D. V.P.I.

Assistant Professors: D. McKay, Ph.D. Waterloo; C.I. Mora, Ph.D. Montana State.

Prerequisites to a B.S. major are: Geology 101-102; Chemistry 120-130; Mathematical 141-142 or 147-148; plus one two semester sequence and one additional course from Physics 151-152 (or 221-222) and Biology 110-120. The single course requirement may be satisfied by high school course work in that area.

Students who enter the major with more than 90 hours of credit, and who have completed a laboratory science sequence other than Geophysics, may petition the department to substitute certain upper division physical geography courses for 131 and/or 132.

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 UTK 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 101-102. Geology courses: at least 16 hours of courses numbered 200 or higher.

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 Liberal Arts College Distribution requirements are specified. Required coursework includes: Geology 310, 320, 330, 340, 370, 440, 450, 455, 450, 470 and 485; Mathematics 141, 142, (or equivalent honors courses) and 231 (or substitution of Geology 401 for Math 231); Physics 211, Basic Engineering 101, 121, and 131; Civil Engineering 390, 435 and any one of the following: 390, 440, 450, 530, 532 or Environmental Engineering 535; Plant and Soil Science 210, English 481; 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 5 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 a minimum of 6 semester hours 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 approved department. A GPA of 3.0 must be maintained throughout matriculation. Interested students should consult their advisor for details about participation.

GERMANS AND SLAVIC LANGUAGES

Professors: J.G. Walls (Emeritus), Ph.D. North Carolina. C.W. Minkel (Vice Chancellor for Academic Affairs and Dean of the Graduate School), Ph.D. Tennessee; O.C. Kopp, Ph.D. Columbia; T.C. Labotka, Ph.D. Caltech; K.C. Misra, Ph.D. Western Ontario; R.E. McLaughlin (Emeritus), Ph.D. Tennessee; L.A. Taylor, Ph.D. Lehigh; K.R. Walker (Carden Professor), Ph.D. Yale; J.G. Walls (Emeritus), Ph.D. North Carolina.

Instructors: Beverly Moser, Ph.D. Georgetown.

Placement Examination: Students who have had previous work in German or Russian either in high school or at another college should take a placement test to determine what level course they should elect. Placement tests are given for incoming freshmen during orientation in the summer and also the first week of each semester.

Proficiency Examinations: Students who have acquired a knowledge of German or Russian through private study, tutoring, residence in foreign countries, or otherwise, should take a proficiency test. A student taking a grade of C or better on such a test will receive credit for an appropriate number of courses. Superior students are encouraged to proceed as rapidly as their achievement permits. Students who omit any course in a sequence may receive credit for it by passing a proficiency examination.

Foreign Study: Students are 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 for students who are interested in foreign study. Credits from recognized foreign study programs can readily be transferred to UT Knoxville. For qualified students, the department also offers German 481 Foreign Study and Russian 481 Foreign Study. Students should consult the department before registering for the foreign study course.

B.A. Major in German: 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 24 hours 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 151-152 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.

Minor in German: 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).

Major in German or Russian with a Concentration in Language and World Business: Students who wish to prepare for careers in international business must complete (a) a special language major in either German or Russian, (b) a professional emphasis in either International Business or International Logistics and Transportation, and (c) some form of practical experience related to the concentration. Admission is by permission of the program Director.

(a) The Special Language Major:
(1) The German major consists of 29 hours. The following are required: German 199, 301-302, 311-312, 363, 485, 491 or 493, 323 or any approved 400 level course.
(2) The Russian major consists of 32 hours. The following are required: Russian 199, 301-302, 311-312, 401-402, 451-452, 490 or 491, and 323 hours from the following: 221, 222, 226, 321, 326, 371, 372, or any 400-level courses.

(b) Professional Emphasis:
(1) International Business students will take
25 hours. The following are required: Accounting 201, Economics 201 or 207 and 321, Business Administration 311 and 495, Management 471, Logistics and Transportation 441, and an elective from a related business area chosen in consultation with an advisor.

(2) International Logistics and Transportation students will take 25 hours. The following are required: Accounting 201, Economics 201 or 207, Business Administration 311 and 495, Management 471, and Logistics and Transportation 301, 302, and 441.

(c) Practical Experience: Through German 490 or Russian 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 of Romance and Asian Languages or in Germanic and Slavic Languages for help in selecting relevant courses under the Basic Skills and Distribution requirements of the College.

Students interested in the Language and World Business program should contact the Director for advising as early as possible in their college careers. Students must have attempted 45 hours in order to be considered for progression to the Language and World Business major. The academic record presented will be assessed by the Director of Language and World Business Program. Minimum requirements for progression to the concentration are a 2.75 cumulative average in the Basic Skills and Distribution courses specifically required by the College of Liberal Arts and in the Language and World Business plan of studies, and a 3.0 average in language courses. Progression is based on availability of space in the program. Progression standards are adjusted periodically, and current requirements are available from the Language and World Business Director. For further information inquire in T-1208 McClung Tower.

B.A. Major in Russian: Russian 201-202 is a prerequisite to the major. Russian majors should prepare their programs in consultation with the departmental faculty advisor. The major in Russian shall consist of at least 50 hours of Russian courses, including Russian 301-302; 311-312; 401-402; 451-452; and 6 hours from Russian 221, 222, 226, 321, 322, 326, 371, 372, or other courses numbered above 400. It is recommended that majors also take Russian History 340-341 and 6 hours of sophomore English. Majors are urged to consider a minor in some other area of the humanities.

Minor in Russian: 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.

GREEK
See Classics.

HEBREW
See Religious Studies.

HISTORY

Professors:
P.H. Bergeron, Ph.D. Vanderbilt; R.D. Buhite (Head), Ph.D. Michigan State; E.V. Chmielowski, Ph.D. Harvard; J.C. Cobb (Bernadotte Schmidt Professor), Ph.D. Georgia; J.R. Finger, Ph.D. Washington; L.P. Graf (Bemidong Distinguished Service Professor and Emeritus), Ph.D. Harvard; Y.P. Hao (Lindsay Young Professor), Ph.D. Harvard; A.G. Haas, Ph.D. Chicago; R.W. Haskins (Emeritus); Ph.D. California (Berkeley); C.O. Jackson (Associate Dean, Liberal Arts College), Ph.D. Emory; M.M. Klein (Alumni Distinguished Service Professor, Lindsay Young Professor and Emeritus), Ph.D. Columbia; M.J. McDonald, Ph.D. Pennsylvania; L.A. Ratner (Dean, Liberal Arts), Ph.D. Cornell; W.B. Wheeler, Ph.D. Virginia.

Associate Professors:

Assistant Professors:
O. Bradley, Ph.D. Cornell; P. Brummett, Ph.D. Chicago; T.E. Burman, Ph.D. Toronto; T.A. Diagon, Ph.D. Wisconsin; A. Karras, Ph.D. Pennsylvania; B.L. Plummer, Ph.D. Maryland; R. Wakeman, Ph.D. California-Davis.

The department's program is designed to provide students with a knowledge of their cultural tradition 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 past, present, and future; and to assist them in their search for personal identity.

B.A. Major: Majors in history should prepare their programs in consultation with a 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: 151-152, 157-158, 161-162, 195-196, 251-252; or any two one semester courses from any of these sequences. AP or transfer credit is acceptable to fulfill this requirement. History 151-152 (or their honors equivalents) or 161-162 are prerequisites to a major which consists of at least 27 hours, including: (1) 6 hours of History 251-252 (or their honors equivalents); and (2) 21 upper-division hours, distributed to include at least one course in each of the following areas: (a) Europe-Latin America, (b) United States, (c) Asia-Africa. One of these courses must deal predominantly with a period prior to 1750.

Minor: History 151-152 (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) 5 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 course. 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 must include 307 and a senior thesis (407-408). Altogether the honors major consists of 30 hours, including 27 hours as outlined in the B.A. Major above, plus 307. Honors credit will be offered for 408 only if the student completes a senior honors thesis that is awarded a grade of B or above. All prospective majors 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 should consult the department's honors coordinator.

INTERDISCIPLINARY PROGRAMS

Director:
Lorayne Lester (College of Liberal Arts)

In keeping with the philosophy that integration of knowledge is as important as proficiency in a given field, the College of Liberal Arts has combined the resources of several departments to offer a series of interdisciplinary majors and minors. These programs are as follows: African-American Studies, American Studies, Ancient Mediterranean Civilizations, Asian Studies, Cinema Studies, Comparative Literature, Latin American Studies, Linguistics, Medieval Studies, Russian and East European Studies, Urban Studies, and Women's Studies. See individual program descriptions below for the major and minor requirements.

AFRICAN AND AFRICAN-AMERICAN STUDIES

Director:
Dr. Cynthia G. Fleming (History and African and African-American Studies)

Assistant Professor:
Dr. Asafa Jalata (Sociology), Ph.D. State University of New York at Binghamton.

The African-American Studies Program offers both a major concentration and a minor in African-American Studies. AAAS courses are offered not only by the program itself but also by numerous departments within the College of Liberal Arts and some other colleges as well. This diversified sponsorship of AAAS courses enables the University to offer a particularly varied range of courses in the field of African-American Studies.

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 credits. 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-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-American Studies in addition to the AAAS core course offerings.

AMERICAN STUDIES

Chair: Dr. George B. Hutchinson (English)

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 or 440, and nine additional hours from at least two different disciplines.

ANCIENT MEDITERRANEAN CIVILIZATIONS

Chair: Dr. David W. Tandy (Classics)
Co-chair: Dr. W. L. Humphreys (Religious Studies)

The major concentration in Ancient Mediterranean Civilizations consists of Classics 381 and 382, History 366, and 18 additional hours from the following list, distributed in such a way that no more than 12 hours are in any one of the three divisions: (a) Ancient Near Eastern Cultures: Religious Studies 311, 312, 326; (b) Greek Culture: Classics 221, 222, 232, 233, 253, 253, 331, 334, 383; History 310; Philosophy 120, 320; Political Science 475; Religious Studies 321, 322, 326; and (c) Roman Culture: Classics 222, 233, 254, 383, 462; History 311; Philosophy 120, 320; Political Science 475; Religious Studies 321, 322, 326, 416.

A minor in Ancient Mediterranean Civilizations consists of 18 hours, including at least two of the three core courses (Classics 381, 382; History 366). No more than nine of the remaining hours can come from one division. Courses of variable content, topics courses, reading and research, off-campus, or foreign study in the Departments of Art, Classics, History, Philosophy, or Religious Studies can be applied to the three divisions as approved.

Students are encouraged to satisfy the foreign language requirement with Greek, Latin, or Classical Hebrew.

ASIAN STUDIES

Chair: Dr. Yen-p'ing Hao (History)

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 (Islam, 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: Dr. Charles Maland (English)

The Cinema Studies minor consists of 15 hours, including English 281 Introduction to the Film Studies, and Art 292 Film Design. It is strongly recommended that Introduction to Film Studies be taken before selection of electives provided for in the minor.

For further information consult the chairperson of the Cinema Studies Program, Charles Maland, English Department. Other related courses in such departments as history, philosophy, and sociology may be approved by consultation with Dr. Maland.

Approved Area Courses are: Art 292 Film Design (3); Art 392 Intermediate and Advanced Film Design (3-6); Broadcasting 275 Introduction to Audio Broadcasting (3); Broadcasting 340 Producing for Television (3); English 281 Introduction to Film Studies (3); English 334 Film and American Culture (3); English 489 Special Topics in Film (3); French 420 French Cinema (3); German 323 German Film (3); Italian 421 Topics in Italian Literature and Cinema (3); Political Science 312 Popular Culture and American Politics (3); Women's Studies 489 Sexuality and Cinema (3).

COMPARATIVE LITERATURE

Chair: Dr. H. C. Rutledge (Classics)

A major concentration in comparative literature consists of 27 hours including Comparative Literature 201, 401-402, and 9 hours of literature in a foreign language in courses numbered 300. 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, Germanic and Slavic Languages, Religious Studies, Romance Languages. Certain courses in Philosophy and Speech Communication 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 201 and either Comparative Literature 301 or 402, 6 hours of literature in a foreign language in courses numbered 300 and above, and 6 hours of literature courses numbered 300 and 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: Classics, English, Germanic and Slavic Languages, Religious Studies, and Romance Languages. Certain Philosophy and Theatre courses 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.

LATIN-AMERICAN STUDIES

Chair: Dr. Cynthia K. Duncan (Spanish)

The major concentration consists of two optional tracks: (1) General Studies or (2) Brazilian Studies. Each 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 literature/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 Knoxville’s Latin American Studies Abroad Program at the Federal University of Ceará in Fortaleza, Brazil. Other foreign study programs are also available for Brazil and Spanish-speaking Latin America.
LINGUISTICS
Chair: Dr. Chauncey J. Mellor (German)

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 (6,5) (Japanese); Religious Studies 309, 310 (3,3); (Hebrew); other non-indo-European language sequences approved by the Linguistics Committee (required).

The Concentration shall consist of 30 hours distributed as follows: (a) 24 hours composed of Audiology and Speech Pathology 305 (3); English 371, 372, and 471 (3,3,3); French, German, Russian or Spanish 425-426 (3,3); and Linguistics 420, 430 (3,3); and (b) 6 hours of the following, selected in consultation with the Linguistics Committee: Anthropology 411 (3); Audiology and Speech Pathology 320, 465, 579, (3,3,3); Educational Curriculum and Instruction 457 (3); Special Education and Rehabilitation 522 (3,3,3); 532-533 (3,3); English 371, 372, 472, 475, 486, 508-509, 680 (3 hours each); French 421, 422, 521-522 (3 hours each); German 435-436 (3,3); 571-572 (3,3); Linguistics 400 (3); Philosophy 479 (3); Psychology 435-436 (3,3); Spanish 421, 422, 531-532, 2 (3,3,3); Theatre 426 (4). Other hours may be substituted in (b) by approval of the Linguistics Committee.

A minor in Linguistics shall consist of 18 credit hours composed of (1) either English 471 (3) or 3 hours from section (b) of the major, selected in consultation with the Linguistics Committee; and (2) 15 hours as follows: Audiology and Speech Pathology 305 (3); English 371 (3) or 372 (3); French, German, Russian or Spanish 425 (3) or 426 (3); and Linguistics 420-430 (3,3). Note: In addition to the above listed courses for the concentration and the minor there are occasional offerings in the Honors Series or in graduate seminars which may be substituted for certain requirements subject to written approval of the Linguistics Committee and the Office of the Dean.

MEDEIVAL STUDIES
Chair: Dr. Paul Barrette (French)

A major concentration in Medieval Studies consists of Medieval Studies 201 and 403 and 21 hours of upper-division courses. It is concerned primarily with the medieval experience, divided among the following three categories: (1) history, philosophy, political science, and religious studies; (2) language and literature; (3) the arts: history of art, architecture, music, and speech and theatre. Courses should either form a related pattern (for example, courses in the literature and history of Medieval England or Italy), or should revolve around a particular discipline or two closely related disciplines (for example, courses in the history of art and architecture).

A concentration in Medieval Studies focuses upon culture and society from the collapse of the Roman Empire to the 16th century. Such a concentration offers the opportunity to deepen one's self-awareness and broaden one's view of the range of human possibilities by studying a very different and remote culture, its conditions of life, social and political institutions, values and ideals, and modes of perception and expression.

Latin is the most appropriate language for students in the Medieval Studies concentration and is essential for those who plan to continue their studies in graduate school. In addition, students planning to go on to graduate school are strongly advised to supplement their Medieval Studies concentration with extensive work in one of the traditional disciplines.

A minor 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 Dr. Paul Barrette.

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 1838 (3); History 334 History of Germany to 1815 (3); History 389 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 455 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 371 Early Christian and Byzantine Art to 1350 (3); Art 372 Northern European Painting, 1350-1600 (3); Art 381 Medieval Art of the West, 800-1450 (3); Art 382 The Art of Italy, 1250-1400 (3); and Music History 210 History of Music to 1750 (3).

RUSSIAN AND EAST EUROPEAN STUDIES
Chair: Dr. Donald Fieine (Germanic and Slavic Languages)

The major concentration consists of 30 hours from the following: Geography 375, six hours from History 340-341, Philosophy 393; Political Science 459 and four additional hours from Political Science 469, 574; Russian 311, 312; Russian and East European Studies 410; and additional hours in courses numbered 301 and above offered by the Russian section of the Department of Germanic and Slavic Languages. Recommended prerequisites to the major concentration are the completion of Russian 201-202 and Russian Culture 371-372.

URBAN STUDIES
Chair: James A. Spencer (Graduate School of Planning)

Urban Studies is a valuable major concentration for students who plan to work in such areas as housing, real estate, development, neighborhood organization, and environmental design.

A major concentration in Urban Studies consists of a minimum of 30 semester hours, including Urban Studies 250, 350, 450, 460, and at least 15 additional semester hours from the Urban Studies curriculum.

A minor consists of 18 semester hours, including Urban Studies 250 and 350 plus additional semester hours from the Urban Studies curriculum. Curricular planning should be done with an advisor in Urban Studies. For more information, contact the chairperson of the Urban Studies Committee.

Approved Courses in other departments: Geography 365 Geography of Appalachia; Rural Sociology 380 Rural Sociology; Sociology 363 The City, 462 Population; and Transportation 302 Transportation Principles and Policies.

WOMEN'S STUDIES
Chair: Dr. Martha L. Osborne (Philosophy)

Women's Studies encourages inquiry into the full range of the human experience by raising new questions and opening new areas of research concerning women. The discipline enriches the traditional liberal arts curriculum by adding new perspectives on women's lives and accomplishments. Women's Studies can broaden the education of both male and female students by helping them to understand the limitations placed on both sexes by narrowly defined sex roles. Wherever there is a need to understand women and an interest in the new role they are playing in society, Women's Studies can enhance a student's career preparation and opportunities.

The Women's Studies Program offers a wide variety of courses, some interdisciplinary in nature and others originating in supporting departments throughout the university. These courses may be taken as electives, they may be used to satisfy requirements in various
colleges, or they may serve as a concentration in Women's Studies within an Interdisciplinary Program major or minor.

The major concentration in Women's Studies consists of 30 semester hours including one of the Images of Women in Literature courses (either 210 or 215), Women in Society (220), Emergence of the Modern American Woman (510), at least three hours of Independent Study (483), and at least one course from each of the three major areas: Women's Heritage (324, 380, 383, 432, 453, 456, 483), Contemporary Issues (375, 392, 410, 425, 434), and Literature and the Arts (330, 332, 422). As its content varies, 400 may be included in any of these areas. Students are encouraged to take at least nine hours in one of these areas.

The Women's Studies minor consists of one of the Images of Women in Literature courses (either 210 or 215), Women in Society (220), and an additional 12 hours of upper-division Women's Studies courses. Approved special topics courses related to Women's Studies may also be applied toward a major or a minor.

ITALIAN
See Romance Languages.

JAPANESE
See Interdisciplinary Programs (Asian Studies).

LATIN
See Classics.

LATIN AMERICAN STUDIES
See Interdisciplinary Programs.

LINGUISTICS
See Interdisciplinary Programs.

MATHEMATICS

Professors:
J.B. Conway (Head), Ph.D. Louisiana State; G.E. Albert (Emeritus), Ph.D. Wisconsin; N. Alikakos, Ph.D. Brown; V. Alexiades, Ph.D. Delaware; D.F. Andersen, Ph.D. Chicago; G.A. Baker, Ph.D. Cornell; J.S. Bradley (Emeritus), Ph.D. Iowa; J.H. Carruth, Ph.D. Louisiana State; C.E. Clark, Ph.D. Louisiana State; R.J. Daieverman, Ph.D. Wisconsin; D.J. Dastert, Ph.D. Maryland; D.E. Dobbs, Ph.D. Cornell; G. Dydek, Ph.D. Warsav (Poland); H. Frandson, Ph.D. Illinois; L.L. Tress, Ph.D. Cornell; T.G. Hallam, Ph.D. Missouri; D.B. Hinton, Ph.D. Tennessee; L.S. Husch, Ph.D. Florida State; K. Johannson, Ph.D. Bielefeld, Germany; G. Samuel Jordan, Ph.D. Wisconsin; Ohannes Karakashian, Ph.D. Harvard; Suzanne Lenhart, Ph.D. Kentucky; Hary T. Mathews, Ph.D. Tulane; Robert M. McNiel, Ph.D. Duke; Balmr S. Rajaip, Ph.D. Illinois; K.C. Reddy (Space Institute, Tullahoma), Ph.D. 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; K. Soni, Ph.D. Oregon State; R. P. Soni, Ph.D. Oregon State; F.W. Stallmann (Emeritus), Ph.D. Giessen (Germany); K.R. Stenihson, Ph.D. Wisconsin; C. Sundberg, Ph.D. Wisconsin; M. Thistlethwaite, Ph.D. Univ. Manchester (England); W.R. Wade, Ph.D. California (Riverside); C.G. Wagner, Ph.D. Duke.

Associate Professors:
K.R. Kimble (Space Institute, Tullahoma), Ph.D. Ohio State; Y. Kuo, Ph.D. Cincinnati; S. Mulay, Ph.D. Purdue; S. Richter, Ph.D. Michigan; W. H. Row, Jr., Ph.D. Wisconsin; J. Smith, Ph.D. California (Berkeley); B.K. Soni (Space Institute, Tullahoma), Ph.D. Texas.

Assistant Professors:
Charles Collins, Ph.D. Minnesota; A. Freire, Ph.D. Princeton; C.P. Pflaut, Ph.D. Maryland; D.A. Polgionone, Ph.D. Virginia; Feng Xiaobing, Ph.D. Purdue; J. Xiong, Ph.D. North Carolina, Chapel Hill.

Instructors:
Sybil Blaok, M.S. Tennessee; Kenneth Bonee, M.S. Tennessee; Tony Campbell, M.M. Tennessee; C.G. Doss, M.A. Tennessee; Richard Little, Ph.D. California (Los Angeles); Rita Reagan, M.M. Tennessee; Jennifer Stevens, M.A. Kentucky.

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 Knoxville 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: Mathematics 141-142 (or the Honors version, 147-148) is prerequisite to a minor in Mathematics. A minor in Mathematics consists of (1) 241 and 251; (2) 221 or 231; and (3) nine additional hours in Mathematics courses numbered 300 or higher. The grade in each of the above 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, cyto genetics and clinical genetics. Courses in these areas are offered to students at the graduate and undergraduate levels. Elective courses are also available to students at the College of Medicine.

The faculty with the College of Veterinary Medicine participates in the graduate program leading to M.S. and Ph.D. degrees in Comparative Medicine and Experimental Medicine. The advanced degree students can do their thesis research in the department by arrangement with other life science departments at the University.

MICROBIOLOGY

Professors:
Dwayne C. Savage (Head), Ph.D. California (Berkeley); 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. Montie, Ph.D. Maryland; W.S. Riggsby, Ph.D. Yale; B.T. Roush, Ph.D. Guelph (Canada); D.V.Sc. Bristol (England); G.S. Saylor, Ph.D. Idaho; Stacey, Ph.D. Texas (Austin); D.C. White (Distinguished Scientist), M.D. Tufts, Ph.D. Rockefeller; J.M. Woodward (Emeritus), Ph.D. Kansas; C.J. Wust, Ph.D. Indiana.

Associate Professor:
R.N. Moore, Ph.D. Texas (Austin).

Assistant Professors:

B.S. Major: Prerequisites are Biology 150 or 115-120, 210-220, Chemistry 120-130, and Mathematics 151-152 or 141-142, and Physics 221-222 or 231-232. The major consists of Chemistry 350-350-359, Biochemistry 410, Microbiology 310, 319, 320, 329, 12 additional hours of 400-level Microbiology courses. Honors B.S. Major: An honors major is offered to selected students who have achieved junior standing and 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
MUSIC

Professors:

Kenneth A. Keeling, Sr. (Head), D.M.A., Catholic University; H. Hall, Ph.D., Peabody; G.C. Bittas, M.M., Converse; J.P. Brock, M.M., Alabama; W.J. Carter (Emeritus), D.M.A.

Assistant Professors:

J. Coker, M.A., Sam Houston; P.M. Combs, M.A., Missouri; G.F. DeVine (Emeritus), Diploma, Schurz (Chicago); W. Dorn (Emeritus), M.A., Columbia; H.W. Fred, Ph.D., North Carolina; A.G. Hoford (Emeritus), M.M. Northwestern; C.R. Huber, Ph.D., North Carolina; A.W. Humphreys, Ed.D., Illinois; W.J. Julian (Emeritus), Ph.D., Northwestern; J.A. Lennon, D.M.A.

Associate Professors:

Michigan, D.K. McClelland, M.A., Columbia; J.J. Meacham, M.M. Northwestern; M.C. Moore, Ph.D., Michigan; D.B. Nardozza, M.A., Yale; D.M. Pederson, Ph.D., Iowa; W.J. Starr (Emeritus), M.M. Eastman; D.D. Stutzenberger, D.M.A.

Assistant Professors:

S.R. Searle, M.M., Tennessee; J.R. Sparks, M.M., Indiana; S.E. Young, Ph.D., North Carolina.

In June of 1991, the merger of the Departments of Music and Music Education into a single unit within the College of Liberal Arts was approved by the Board of Trustees. All inquiries regarding degrees in music and music education should be directed to the Department of Music.

Bachelor of Music Degree: The Department of Music offers curricula leading to the Bachelor of Music degree with concentrations in music theory, composition, electronic music, music history and literature, and applied music (voice; piano; organ; sacred music—organ or piano; sacred music—voice; piano pedagogy and literature; strings; woodwind, brass, and percussion instruments; multiple keyboard instruments; multiple woodwind instruments; studio music and jazz; string pedagogy). 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 liberal arts requirement. Students may take 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 of each of the two languages chosen from French, German and Italian. Students majoring in music history and literature must complete two years of either French or German.

ENSEMBLES

Ensemble participation during each semester of residence is required of all students studying applied music. String, woodwind, brass, and percussion students must meet the following ensemble requirements: (1) string students must participate in orchestra each semester; (2) woodwind, brass, and percussion students must acquire a minimum of four credits in any of the following ensembles: marching band, concert band, campus band, symphony orchestra, jazz ensemble; (3) voice students must acquire a minimum of four credits in any of the following ensembles: Concert Choir, Chamber Singers, University Chorus, Women's Chorale.

A student's preference for musical organization will be honored whenever possible, but factors considered in making the assignment will include playing ability, specific needs of various organizations, and previous performance experience at the University.

APPLIED MUSIC

Applied study is classified as Principal or Secondary.

Students studying their principal (major) instrument register for credit appropriate to their program, 2-4 credits.

Students studying a secondary instrument register for a one-half hour of credit. Study at the principal level requires one hour of private instruction per week or a one-hour class lesson plus a half-hour private lesson. Determination of the mode of instruction rests with the department. Study at the secondary level requires one-half hour private instruction per week or its equivalent in class instruction. Applied music courses do not permit non-credit registration nor may students elect non-conventional grading.

Non-music students will be accepted at the secondary level if they meet audition requirements established by area faculty (piano, voice, violin, etc.) and instruction time is available.

At students majoring in music are required to pass the Junior Music Examination, which must be taken concurrent or subsequent to enrollment in Music Theory 220, 240, and Music History 220. The examination consists of three sections: ear training, music theory, and music history and is administered annually in April, on the second day of Fall registration, and in October. Students may retake once on the next scheduled date any sections of the examination they do not pass initially. Students should register to retake the examination only after substantial review of the materials failed. Appeals for additional testing must be presented to the Undergraduate Committee of the Department.

Students transferring into the Department as majors at the junior level or above are required to pass the examination.

Departmental study guides for all sections of the examination are available in the Department Office.

All music majors are required to register for Music General 200 - Solo Class. The requirements for this course are to attend scheduled concerts, recitals, master classes, repertoire, and solo classes, and to perform at least once each semester as partial fulfillment of applied music credit requirements.

Applied Music Fees: $45 per semester for half-hour lesson (1 credit hour) $90 per semester for hour lesson (2-4 credit hours).

Computer registration and applied music fee payment must be verified in the Department of Music office no later than the end of the second day of classes of the fall, and spring semesters and the first day of the summer terms in order to be accepted for applied music study.

Applied music fees are not refundable after lessons have been scheduled.

Bachelor of Music in Music Education: The Department of Music requires all music students to participate, with credit or as a registered auditor, in a major instrumental or vocal organization each term in residence (on campus) as a music major, as approved by the student's advisor and the directors of the organizations concerned. Students preparing to be band directors are expected to enroll in marching band unless officially excused.

Instrumental Major: Concert Band, Campus Band, University Marching Band, or University Orchestra. Vocal Major: Concert Choir, University Chorus, Chamber Singers.

Bachelor of Arts Degree: The Department 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: Prerequisites: Music Theory 110, 120 (6); Music Theory 130, 143 (2); Music Performance 100 level (2).

Courses toward the major: Music Theory 210, 220 (6); Music History 200 (3); Music History 210, 220 (6); Music Performance 200 level or above (four semester minimum) (8); Music General 200 - 4 semester minimum (4); Music Ensemble (18); Music Theory 310 (3), 3 hours selected from: Music History 350, 380, 390.

Music Electives (9-3 hours) selected from: Music History 460 (3); Music General 301 (3); Music Theory 493 or Music History 493 (3); Music General 411 (9); Total of 43-46 hours.

Music Minor: 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 100-190 levels. 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 6 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-Instrumental Emphasis

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<th>Class</th>
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<td>Music Theory 130, 140</td>
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**Total: 127 hours**

*1 Must be chosen from French, German, or Italian.
*2 Full Recital Optional with approval of major area.

### B.M. Curriculum in Organ

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**Total: 127 hours**

*1 Must be chosen from French, German, or Italian.
*2 Full Recital Optional with approval of major area.

### B.M. Curriculum in Piano

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</table>

**Total: 128 hours**

*1 Must be chosen from French, German, or Italian.
*2 Full Recital Optional with approval of major area.
Music Performance 255 or 290 ..............................................6
Music Theory 430, 440 ......................................................6

Music Performance 155 or 190 ......................................................6
Music Education 310 ..........................................................3
Music Theory 310 ..........................................................3

Voice) Music Performance (300 level).................................8

B.M. Curriculum in Sacred Music (Organ or Historical Studies)

Music Keyboard 490-491 Internship ......................................................4

Total: 130 hours

"Must be chosen from French, German, or Italian.

B.M. Curriculum in Piano Pedagogy and Literature

Freshman

English Composition ..............................................6
Music Theory 110, 120 ......................................................6
Music Theory 130, 140 ......................................................2
Music History 200 ..........................................................2
Music Perf. 480 ..........................................................2
Music Ensemble ..........................................................2
Music General 200 ..........................................................2
Music General 200 ..........................................................2
Music General 200 ..........................................................2
Music General 200 ..........................................................2
Music General 200 ..........................................................2

Total: 130 hours

"Must be chosen from French, German, or Italian.

B.M. Curriculum in Strings

Freshman

English Composition 191, 102 ......................................................6
Music Theory 110, 120 ......................................................6
Music Theory 130, 140 ......................................................2
Music History 200 ..........................................................2
Music Performance 155 or 190 ......................................................6
Music Ensemble ..........................................................2
Music Performance ..........................................................2
Foreign Language ..........................................................2
Music General 200 ..........................................................2

Sophomore

Music Education 230 ......................................................2
Music Instrument 340, 350 ......................................................6
Music Ensemble ..........................................................2
Historical Studies ..........................................................2
Music General 200 ..........................................................2
Music General 401 ..........................................................2
Electives ..........................................................10

Total: 130 hours

"Must be chosen from French, German, or Italian.

B.M. Curriculum in Studio Music and Jazz

B.M. Curriculum in Theory/Composition

Freshman

English Composition 101, 102 ......................................................6
Music Theory 110, 120 ......................................................6
Music Theory 130, 140 ......................................................2
Music History 200 ..........................................................2
Music History 200 ..........................................................2
Music Performance 200 ......................................................6
Music History 200 ..........................................................2
Music Ensemble ..........................................................2
Music General 200 ..........................................................2

Total: 130 hours

"Must be chosen from French, German, or Italian.

B.M. Curriculum in Sacred Music (Organ or Voice)
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**PHYSICS AND ASTRONOMY**

| Professors: | Professors: | W.M. Bugg (Head), Ph.D. Tennessee; C.R. Bingham, Ph.D. Tennessee; W.E. Blass, Ph.D. Michigan State; M.A. Breazeale (on leave), Ph.D. Michigan State; M.J. Breining, Ph.D. Oregon; W.M. Bugg, Ph.D. Tennessee; J. Burgdorfer, Ph.D. Freie University Berlin; T.A. Callcott, Ph.D. Purdue; R.W. Chiders, Ph.D. Vanderbilt; L.G. Christophorou, Ph.D. Manchester (England); E.B. Colglazier, Ph.D. California Tech; G.T. Condon, Ph.D. Illinois; W.E. Deeds (Emeritus), Ph.D. Ohio State; K.E. Duckett, Ph.D. Tennessee; S.B. Elston, Ph.D. University of Massachusetts; K. Fox, Ph.D. Michigan; N.M. Gailar (Emeritus), Ph.D. Ohio State; S. Georgiou, Ph.D. Manchester (England); M.W. Guidry, Ph.D. Tennessee; T.H. Handler, Ph.D. Rutgers; E.G. Harris (Distinguished Professor), Ph.D. Tennessee; E.L. Hart, Ph.D. Cornell; H.C. Jacobson, Ph.D. Yale; D.T. King (Emeritus), Ph.D. Bristol (England); J.W.L. Lewis (UTSI), Ph.D. Misisipi; J. Macek (Distinguished Scientist), Ph.D. Rensselaer Polytechnic Institute; G.D. Mahan (Distinguished Scientist), Ph.D. University of California (Berkeley); A.A. Mason (UTSI), Ph.D. Tennessee; W.K. McGregor (UTSI), Ph.D. Tennessee; A.H. Nielsen (Emeritus), Ph.D. Michigan; F.E. Oberneishal, Jr., Ph.D. Pittsburgh; L.R. Painter, Ph.D. Tennessee; D.J. Pegg, Ph.D. New Hampshire; E.W. Plummer, Ph.D. Carroll; J.J. Quinn, Ph.D. Maryland; L.L. Riedinger, Ph.D. Vanderbilt; R.H. Ritchie, Ph.D. Tennessee; W.R. Rusk (Emeritus), M.S. Tennessee; W. Sandier, Ph.D. Freiburg, I.A. Sellin (Chancellor's Research Scholar), Ph.D. Chicago; C.C. Shih, Ph.D. Cornell; P.H. Stelson, Ph.D. Massachusetts Institute of Technology; M.R. Strayer, Ph.D. Massachusetts Institute of Technology; J.R. Thompson (Emeritus), Ph.D. Duke, J.O. Thompson, Ph.D. Illinois; J.W. White (Emeritus), Ph.D. North Carolina. |
| Associate Professors: | Associate Professors: | F.E. Barnes, Ph.D. Cal Tech; A.G. Eguluz, Ph.D. Brown; T. Ferril, Ph.D. Clamson; R.W. Lide (Emeritus), Ph.D. Michigan; J.W. Muehlauser (UTSI), Ph.D. Tennessee; S.Y. Shihe, Ph.D. Maryland; S.P. Sorensen, Ph.D. Copenhagen (Denmark). |
| Assistant Professors: | Assistant Professors: | G. Canny, Ph.D. Tennessee; S.J. Daunt, Ph.D. Queens (Kingston, Ontario, Canada); R. Harnmaz, Ph.D. Ohio State; J.C. Levin, Ph.D. Oregon; R. Menzel (UTSI), Ph.D. Tennessee; K.F. Reid, Ph.D. Cornell; A.J. Sanders, Ph.D. Tufts; G. Siopsis, Ph.D. California Institute of Technology; H.H. Wettering, Ph.D. Groningen. |
| Research Professors: | Research Professors: | J.L. Blankenship, Ph.D. Tennessee; I. Kamynchov, Ph.D. ITEP (Russia); J. Zhang, Ph.D. Lanzhou. |
| Research Associate Professors: | Research Associate Professors: | X. Chen, Ph.D. Purdue; L. Davis (UTSI), Ph.D. Auckland; H. Fidas, Ph.D. Tennessee; W.E. Ormand, Ph.D. Michigan State. |
PHYSICS

B.S. Major: The undergraduate physics major provides a thorough introduction to all of the core disciplines of physics so that students are prepared to pursue related specialties later in their careers. Students with special interests are encouraged to pursue those interests through research projects and/or independent study under the direction of members of the Physics faculty.

Prerequisites to the major are: Physics 137-138 and Mathematics 141-142.

The major consists of: 240, Mathematics 231 and 241, 311-312, 321, 361, 411-412, 431-432, and 461. Physics 401 is recommended, and 421 should be elected by students intending to pursue graduate studies in Physics. Total major hours: 41.

Minor: A minor in physics shall consist of Physics 137-138, 240, and twelve hours from Physics and Astronomy 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, 102 and 201 are prerequisites to the major which consists of 27 hours: 387-388, 487-488, and 15 additional hours, which must include at least one course in each of the four areas of the discipline described below. A major in 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 Political Science. Political Science 101 or 107, 102 and 201 and Economics 201 are prerequisites to the major in Political Science with a concentration in Public Administration. Corequisite courses are Mathematics 121 and Mathematics 115 or Statistics 201 and Accounting 201 and 202. Majors must earn a "C" or better in prerequisite and corequisite courses. The concentration consists of 24 hours of upper division course work in Political Science and 12 hours of upper division course work in Economics. In Political Science, students must include one course in each of the four fields of Political Science: American Government and Politics/Public Administration, Comparative Government and Politics, International Relations, and Political Theory. Students must also take Political Science 340, 440, 441 and 442. In Economics students must take Economics 311, 471, and 472. Students must also meet all eligibility requirements described above under the B.A. Major section.

PSYCHOLOGY

Major: Political Science 101 or 107, 102 and 201 are prerequisites to the major.

Students must complete all three courses with a grade of "C" or better in any of the three courses, and with a GPA of at least 2.25 in the three courses, before they are accepted as majors in Political Science. The major consists of 24 hours of courses numbered 300 and above. These 24 hours must include at least one course in each of the four areas of the discipline.

United States Government and Politics:


Comparative Government and Politics:

350, 355, 361, 452, 454, 455, 459, 461, 463, 464

International Relations: 365, 366, 370 and 470

Political Theory: 374, 475 and 476

Students whose GPA in political science courses, or in all courses, falls below 2.25 will be given a warning. If after one semester's grades have been received, either the overall GPA or the GPA in political science courses is below 2.25, the student will be dropped as a major in Political Science. Students who subsequently raise the GPA to at least 2.25 may reapply for admission as a major in Political Science, and will normally be readmitted.

Minor: Prerequisites to the minor are Political Science 101 or 107 and 102. The minor consists of 15 hours of courses numbered 300 and above.

Honor 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, 107, 102 and 201 are prerequisites to the major which consists of 27 hours: 387-388, 487-488, and 15 additional hours, which must include at least one course in each of the four areas of the discipline described above. A minor in 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.

PSYCHOLOGY

Professors: Warren H. Jones (Head), Ph.D. Oklahoma State University; G.M. Burghardt (Alumni Distinguished Professor), Ph.D. Chicago; W.H. Calhoun, Ph.D. California (Berkeley); C.P. Cohen, Ph.D. Kansas; H.J. Fine (Emeritus), Ph.D. Syracuse, S.J. Haland, Ph.D. Hopkins, L. Handler, Ph.D. Michigan State; J.E. Lawler, Ph.D. North Carolina; K.A. Lawler, Ph.D. North Carolina; J.W. Lounsbury, Ph.D. Michigan State; J.F. Lucas, Ph.D. Chicago; J.C. Malone, Ph.D. Duke; K.R. Newton (Emeritus), Ph.D. Tennessee; H.R. Pollio (Alumni Distinguished Service Professor), Ph.D. Michigan; F. Samajima, Ph.D. Kejo (Japan); R.A. Saunderess, Ph.D. Florida State; R.S. Shroder (Emeritus), Ph.D. Tennessee; E.D. Sundstrom, Ph.D. Utah; C.B. Travis, Ph.D. California (Davis); R.G. Wuhrer, Ph.D. Washington; J.A. Wibeley (Emeritus), Ph.D. Syracuse.

Associate Professors: M.G. Johnson, Ph.D. Johns Hopkins; A. McIntyre, Ph.D. YALE; W.B. Morgan, Jr., Ph.D. Tennessee; M.R. Nash, Ph.D. Ohio.

Assistant Professors: D. Baldwin, Ph.D. Kent State; R.E. Hopson, Ph.D. Michigan State; Deborah P. Walsh, Ph.D. Univ. of Mass.

Major: The Department offers two concentrations, General and Academic. The General Concentration is a broad major with many options. The Academic Concentration is intended for those students planning to pursue graduate study in psychology or a related field and has fewer options.

All students wishing to follow the General Concentration must satisfy pre-requisites of one year of a biological science (e.g. Biology 110-112). Psychology 110 with a grade of "C" or better, and a GPA of at least 2.0. Completion of this Concentration requires: (1) Psychology 210 or 220, (2) 375, 385, 395, (3) Three courses from Psychology 300 (or Child and Family Studies 312), 310, 320, 330 (or Educational & Counseling Psychology 431), 360 (or Sociology 370), 370, (4) Two elective Psychology courses at the 300 level or higher, (5) Two elective Psychology courses at the 400 level. NOTE: Only 3 hours of 399, 489, 491, 492, 493 may be used in this major.

Continuation in the General Psychology concentration requires a 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.

All students wishing to follow the Academic Concentration must satisfy pre-requisites of one year of a biological science (e.g. Biology 110-112). Psychology 110 with a grade of "C" or better, and have a GPA of at least 2.25. Completion of this Concentration requires: (1) Psychology 210 or 220; (2) Psychology 395 and one semester of 396; (3) Two courses from Psychology 300, 310, 320, 330, 360 and 370; (4) One course from Psychology 410, 450, and 493; (5) One course from Psychology 400, 420, and 480; (6) One course from Psychology 440, 445, and 470; (7) Psychology 496; (8) One semester of 459, 469, or 489; and (9) One elective course at the 300 or 400 level. Continuation in the Academic Psychology Concentration requires a maintenance of 2.25 GPA. At any time a student drops below this level, he or she will be transferred to the General Concentration, and must apply for re-admission upon achieving a 2.25 or better GPA. Re-admission is not automatic, and a review of the student's total program will be undertaken, before a decision is made about re-admission to the Academic Concentration.

Minor: Consists of 110 or equivalent; 210 or 220; and 12 additional upper-division hours. NOTE: 399, 489, 491, 492, 493 cannot be used in this minor.
RELGIOUS STUDIES

Professors:
C.H. Reynolds (Head), Ph.D. Harvard; F.S. Lusby (Emeritus), M.Div. Colgate (Rochester); D.L. Dungan, Th.D. Harvard; W.L. Humphreys, Ph.D. Union; D.E. Linge, Ph.D. Vanderbilt; R.V. Norman, Jr. (Associate Vice Chancellor), Ph.D. Yale.

Associate Professors:
J.L. Fitzgerald, Ph.D. Chicago; R.W. Gwynne, Ph.D. Washington; J.O. Hodges, Ph.D. Chicago; Mark Hulsether, Ph.D. Minnesota; M.L. Levering, Ph.D. Harvard; Gerda Schmidt, Ph.D. Pittsburgh.

Adjunct:
L.M. Tober, Ph.D. Vanderbilt.

Major: The basic concentration is designed to assure that students attain skills to analyze and interpret religious phenomena in different cultures and in different historical periods, including how sacred texts and traditions, and interpretations of critical reasoning, inform and are informed by religion. The basic concentration consists of at least 24 hours of religious studies courses at the 300 level or above, including 300, one course from five of the first six categories listed below, and two courses from category seven: (1) critical thinking about religion, 301, 305, 342, or 371; (2) religion and culture in South Asia, 374 or 376; (3) religion and culture in East Asia, 379 or 383; (4) the roots of western religion, 311, 321 or 322; (5) religions of traditional societies, 302 or 373; (6) religion and culture in the United States, 351 or 352; (7) two 400 level seminars on methods of interpreting religious phenomena, at least one of which must be 499. The remaining 3 hours which complete this major shall not include related language courses.

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 300 and 499. Up to 9 hours in this major may be taken in approved courses from other programs or departments in the College of Liberal Arts. 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 minor in religious studies discuss their program with a member of the department faculty.

ROMANCE AND ASIAN LANGUAGES

Professors:
John B. Romelser (Head), Ph.D. Vanderbilt; P.E. Barrette, Ph.D. California (Berkeley); P. Brady, Ph.D. Université de Paris (Sorbonne); C.W. Cobb, Ph.D. Tulane; B. Creel, Ph.D. California; J.C. Elliott (Emeritus), M.A. Illinois; W.H. Efflin, Jr., Ph.D. Florida; W.H. Hefflin, Jr., Ph.D. Florida State; T.B. Irving (Emeritus), Ph.D. Princeton; F.D. Maurino (Emeritus), Ph.D. Columbia; C.R.M. Pinsky (Emeritus), Ph.D. California (Berkeley); M. Petrovska (Emeritus), Ph.D. North Carolina; Y.M. Washburn, Ph.D. North Carolina.

Associate Professors:
E.J. Campon, Ph.D. Yale; P.M.E. DeRycke, Ph.D. Illinois; S. DiCaprio, Ph.D. Wisconsin; D.M. DiPuccio, Ph.D. Kansas; C.K. Duncan, Ph.D. Illinois; K.D. Levy, Ph.D. Kentucky.

Instructors:
A. Mc Keeby, M.A. Tulane; M.T. Rabot, Cert. de Lic. Poitiers.

French Major: Consists of 31 hours in courses numbered 311 and above. All majors must have the following courses (or their equivalent with consent of the department): 311-312, 313, 341 or 342 or 346; 421, 422, 440. Literature concentration students must also have 6 hours of literature at the 400 level, 3 hours of which must be either 410, 411, 412, 413, 414, or 415; 3 hours of language oriented or civilization courses at the 300 or 400 levels. Language concentration students must also have 5 hours of language-oriented or civilization courses at the 300 or 400 levels.

French Minor: The minor consists of 18 hours in courses numbered 311 and above distributed accordingly: 311-312; 313; 341 or 342; 421; plus 3 hours of electives at the 300 or 400 level.

Italian Major: Consists of 27 hours in courses numbered 311 and above.

Italian Minor: Consists of 18 hours in courses numbered 311 or above. Students pursuing a minor must consult with a departmental advisor.

Portuguese Minor: Consists of 18 hours in courses numbered 300 or above. Students pursuing a minor must consult with a departmental advisor.

Spanish Major: Consists of 30 hours in courses numbered 323 or above. The following are required: 335; 336; 421, 422, 424; 459. Students must also have a minimum of 3 hours of civilization, either 431 or 471; a minimum of 6 hours of conversation and composition from 323, 324, 423 or 424; and a minimum of 6 hours of literature from 432, 435, 436, 450, 451, 452, 461, 473, 474, 479. Majors are encouraged to take as many hours as possible, especially the surveys, 435, 436 and 473-474.

Spanish Minor: Consists of 18 hours in courses numbered 323 or above, including 335 and 336; 422; one course in conversation and composition from among the following: 323, 324, 423, 424; and the remaining courses to be chosen among civilization, phonetics, or literature. Students pursuing a minor are strongly advised to consult with a departmental advisor.

Major in French, Italian, Japanese, Portuguese, or Spanish with a Concentration in Language and World Business: Students who wish to prepare for careers in international business may complete (a) a special language major in either French, Italian, Japanese, Portuguese or Spanish, (b) a professional emphasis in either International Business or International Logistics and Transportation, and (c) some form of practical experience related to the concentration. Admission is by permission of the program director.

(a) The Special Language Major:
(1) The French major consists of 33 hours. The following are required: French 199, 311-12, 313, 341, 345, 400, 422, 432, 440, and 3 hours of 491 or 493.

(2) The Italian major consists of 29 hours. The following are required: Italian 199, 311-321, 341, 420, 401, or 491, and 9 hours of any 400-level literature courses.

(3) The Japanese major consists of 32 hours. The following are required: Japanese 199, 251-252, 351-352, 490 or 491, and 9 hours from the following: Art 386, Asian Studies 102 or 471 (if related to Japan), History 365, Japanese 313 or 314, Religious Studies 383.

(4) The Portuguese major consists of 32 hours. The following are required: Portuguese 199, 301-302, 309, 409, three hours of an approved Spanish or Portuguese literature course at the 300 or 400 level, six hours of 490 or 493 as approved by the director of the program, Latin American Studies 240, 361, 401, or 402.

(5) The Spanish major consists of 32 hours. The following are required: Spanish 199, 311-32, 323, 345, 422, 432, 431 or 471, 459, three hours of 490 or 491 and any 400-level literature course.

(b) The Professional Emphasis:
(1) International Business students will take 25 hours. The following are required: Accounting 201, Economics 201 or 207 and 321, Business Administration 311 and 495, Management 471, Logistics and Transportation 441, and an elective from a related business area chosen in consultation with an advisor.

(2) International Logistics and Transportation students will take 25 hours. The following are required: Accounting 201, Economics 201 or 207, Business Administration 311 and 495, Management 471, and Logistics and Transportation 301, 302, and 441.

(c) Practical experience: Through French 490, Italian 490, Japanese 490, Portuguese 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 of Romance and Asian Languages for help in selecting relevant
courses under the Basic Skills and Distribution requirements of the College.

Students interested in the Language and World Business program should contact the Director for advising as early as possible in their college careers. Students must have attempted 45 hours in order to be considered for progression to the major. 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 Liberal Arts in Basic Skills and Distributions and in the Language and World Business plan of study, and 3.0 average in Language courses. Progression is based on availability of space in the program. Progression standards are adjusted periodically, and current requirements are available from the Director of the Language and World Business Program. For further information, inquire in T-1298 McClung Tower.

Placement Examination: Students who have had two or more years' work in French, Italian, or Spanish in high school or one year's work in another college should register in French, Italian, or Spanish 211. During the first week of the semester a placement test will be given, and students will be advised if a change in registration is indicated.

Proficiency Examinations: Students who have acquired a knowledge of French, Italian, or Spanish through private study, tutoring, residence in foreign countries, or the like should initiate a request for a proficiency test in the Office of the Dean of Admissions and Records. A student earning a grade of C or better on such a test will receive credit for a limited number of courses. Superior students are encouraged to proceed as rapidly as their achievement permits.

Study Abroad: Four summer study abroad opportunities are available to students through the Department of Romance Languages. The department sponsors programs in Brazil (Fortaleza), France (Lille), Italy (Urbino), and Mexico. Students may 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 the program. 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 Romance and Asian Languages.

RUSSIAN

See Germanic and Slavic Languages.

RUSSIAN AND EAST EUROPEAN STUDIES

See Interdisciplinary Programs.

SPANISH

See Romance Languages.

SPEECH COMMUNICATION

Professors:


Associate Professors:

M.L. Ambrest, Ph.D. Ohio; J.E. Buckley, Ph.D. Northwestern; N.C. Cook, M.A. Alabama; R.W. Glenn, Ph.D. Northwestern.

Assistant Professors:

R.S. Amblor, Ph.D. Ohio State; C.L. Arnold, Ph.D. Florida; J.W. Haas, Ph.D. Kentucky.

Major: Speech Communication 100 and one course in quantitative analysis (e.g., Speech Communication 255, Math 115, Statistics 201, or the equivalent) are prerequisites to a major which consists of 310, 350, 390, 499, and one course from each of the following two categories: (1) 210, 270, or 280; (2) 300, 320, or 330. An additional 12 hours in Speech Communication courses are required, six of which must be at the 400 level, and not more than three at the 200 level. No more than three hours from Speech Communication 445, 491, 492, 493 may be counted toward the major. Students should inquire in the Department Office for information and recommended advisors.

Minor: Speech Communication 100 is prerequisite to a minor which consists of 18 additional hours of Speech Communication courses at least 12 of which must be at the 300 level and above. No more than 3 hours from Speech Communication 445, 491, 492, 493 may be counted toward the minor.

STATISTICS

See faculty list in the College of Business Administration.

Sociology

Professors:

D.M. Botz, Ph.D. Michigan State; J.A. Black, Ph.D. Iowa; D. Clelland, Ph.D. Michigan State; D.W. Hastings, Ph.D. Massachusetts; T.C. Hood, Ph.D. Duke; D.R. Ploch, Ph.D. North Carolina; E. Shogan, Ph.D. Illinois (Urbana); S.E. Wallace, Ph.D. Minnesota.

Associate Professors:

M.L. Benson (Head) Ph.D. Illinois; S. Cable, Ph.D. Pennsylvania State; J.P. Gaventa, Ph.D. Oxford (England); S. Kurth, Ph.D. Illinois (Chicago); R.G. Perrin, Ph.D. British Columbia.

Assistant Professor:

A. Jalata, Ph.D. SUNY-Binghamton.

Instructor:

D.K. Harris, M.A. Tennessee.

Major: Prerequisites to the major are six lower-division hours in sociology which must include either 100 or 110, followed by 200. The major consists of 24 upper-division hours in sociology and must include 321 and 331. Students should complete these two courses by the end of their junior year.

Minor: The minor consists of 12 upper-division hours in sociology and must include 321 and 331. Prerequisites to the minor are six lower-division hours in sociology which must include 200.

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 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. An additional prerequisite is either Geology 101 and 103, or 202 plus Geology 101 or 103, or Botany 206 and 209. The Concentration in Environment and Society consists of 321 (Sociological Theory) and 331 (Sociological Research) and eighteen hours of upper-division sociology courses as follows: 344 or 345, 350, 442 or 444, 464 and two courses selected in consultation with advisor.

Minor with Concentration in Environment and Society: Prerequisite to the minor is Sociology 101 or 103. The minor consists of 200, 321, 331, 380 and a choice from 347, 345, 442, or 446 and 464.

Liberal Arts 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: (a) Required courses consist of 25 hours from Mathematics 241, 251; Statistics 251, 252, 261, Statistics 461, 462, Statistics 471 or Mathematics 323; (b) Statistics elective consists of 3 hours from upper-division statistics courses not listed in part (a); and (c) Electives consist of 6 hours to be selected from two of the following groups: Computer Science 111, 112; Industrial Engineering 301, 402, 406; Management 481; Mathematics 371, 421, 423, 425, 453, 463 (other quantitative courses may be substituted as Electives with the faculty advisor's approval).
Minor: (a) Required courses consist of 16 hours from Mathematics 241, 251; Statistics 251, 252, 261; and (b) Statistics electives consist of 3 hours from upper-division statistics courses not in part (a) of the minor.

THEATRE

Professors:
T.P. Cooke, Ph.D. Florida State; R.M. Cothran, Jr.; M. Custer, M.F.A. Wisconsin; R.C. Field, M.A. Miami (Ohio); A.J. Harris, Ed. D. Tennessee; R.R. Mashburn, Ph.D. Florida State; P.L. Soper (Emeritus), Ph.D. Cornell.

Associate Professors:

Assistant Professors:

Major: Theatre 100 is a prerequisite to a major which consists of 220, 245, 250, 260, 310, 311, 312 and 430; and 12 additional hours of Theatre courses numbered 200 and above, 3 of which may be in cognate areas approved by the Department. At least one half of the hours in the major must be at the 300 level or above. No more than 6 hours of Theatre 481, 482, 483, 484, or 485 may apply to the major. Students majoring in Theatre should elect a literature package which includes English 252 to satisfy the College's Humanities Part 1 Divisional Distribution requirement.

Minor: Theatre 100 is a prerequisite to a minor which consists of: 220, 430, 6 hours in Theatre history and criticism and 6 additional hours of Theatre courses.

URBAN STUDIES

See Interdisciplinary Programs.

WOMEN'S STUDIES

See Interdisciplinary Programs.

ZOOLOGY

Professors:
A.C. Echternacht (Head), Ph.D. Kansas; R.M. Bagby, Ph.D. Illinois; D.L. Bunting, Ph.D. Oklahoma State; J.G. Carlson (Emeritus), Ph.D. Pennsylvania; T.T. Chen, Ph.D. Florida; D.A. Ethier, Ph.D. Minnesota; M.A. Handel, Ph.D. Kansas State; B. Hochman (Emeritus), Ph.D. California (Berkeley); K.W. Jeon, Ph.D. London (England); D.C. Joy (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Oxford (England); J.R. Kennedy, Ph.D. Iowa; J.N. Liles (Emeritus), Ph.D. Ohio State; J.A. MacCabe, Ph.D. California (Davis); G.F. McCracken, Ph.D. Cornell; S.L. Pimm, Ph.D. New Mexico State; S.E. Riechert, Ph.D. Wisconsin; L.E. Roth, Ph.D. Chicago; C.A. Shivers, Ph.D. Michigan State; G.L. Vaughan, Ph.D. Duke; H.G. Welch (Emeritus), Ph.D. Florida; G.L. Whitson, Ph.D. Iowa.

Associate Professors:
K.D. Burnham (Emeritus), Ph.D. Iowa; J. Drake, Ph.D. Purdue; D.J. Fox, Ph.D. Johns Hopkins; R. Ganguly, Ph.D. Nebraska; N.B. Greenberg, Ph.D. Rutgers; B.D. McKee, Ph.D. Michigan State; M.L. Pan, Ph.D. Pennsylvania.

Assistant Professors:
C. Boake, Ph.D. Cornell; J.L. Gittleman, Ph.D. Sussex (Brighton, England); J.C. Hall, Ph.D. Illinois.

Research Associate Professor:
R. Tindall, Ph.D. Pennsylvania State.

Prerequisites to upper division courses:
Biology 110-120 or Zoology 117-118 are prerequisites for all upper division courses (with the exception of 480). Additional prerequisites are included with course descriptions.

Major: Prerequisites to the major are Biology 110-120 or Zoology 117-118 and Chemistry 120-130. Corequisites are Mathematics 121-122 or 151-152 or 141-142 and a year sequence in physics (except 141-142). Physics 221-222 are recommended and are required for admission to some professional schools.

The major consists of Biology 210-220-230, 18 hours of upper division Zoology courses and two semesters of chemistry or biochemistry at the 200 level or above. (Acceptable second year chemistry sequences include: Chemistry 350-360-369; Chemistry 350 and 310-319; Chemistry 350 and Nutrition 200; Chemistry 350, 431 and Biochemistry 310; Chemistry 310-319 and Biochemistry 310). All Zoology majors are required to take at least 4 hours at the 400 level, including at least one laboratory or field course. The upper division Zoology courses must include at least one course from three of the following four areas: (1) Cellular and Developmental Biology (330, 420); (2) Physiology (440, 445); (3) Animal Diversity (350, 360); and (4) Evolution and Behavior (450, 460).

Minor: Prerequisites to the minor are Biology 110-120 or Zoology 117-118 and Chemistry 120-130 or 100-110. The minor consists of Biology 210-220-230 and 9 hours of upper division Zoology.

Honors in Zoology: An Honors major in Zoology must fulfill all of the requirements for the B.S. degree in Zoology, and take 302 and 409 during the junior year, four hours of 409 during the junior and senior years, and a senior thesis (Zoology 401) the last semester of the senior year. All prospective juniors who are declared Zoology majors with a minimum overall GPA of 3.2 in the major and prerequisite and corequisite courses are invited to apply. To remain in the program, the student must maintain a GPA of 3.2 in the major. Students interested in the Honors degree should consult with the department's Honors Coordinator.

Note: Certain Zoology courses require organic chemistry or other prerequisites; consult the catalog description for each course.

Many courses in this department are offered only in specific semesters. Students should plan in advance the proper sequence. Information on the semesters a course is to be offered is available in the departmental office.
The program is accredited by the National League for Nursing and has full approval status from the Tennessee Board of Nursing.

The baccalaureate nursing program has as its central focus and frame of reference human beings, society, and health. It is based on the belief that nursing has equal concern for the prevention of illness, the promotion of health, and the care of the sick. 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, 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-two 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 N301 and N314, are restricted to students who have progressed into the major (see PROGRESSION POLICIES AND PROCEDURES.)
on the second attempt the student will be required to withdraw from the program.

(3) Any student who receives a grade of "D" or "F" 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 grade 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 or certification in cardio-pulmonary resuscitation are included in the Undergraduate Student Handbook.

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 18.

THE BACHELOR OF SCIENCE IN NURSING CURRICULUM

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshmen</th>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101, 102</td>
<td>6</td>
<td>Sociology or Anthropology</td>
<td>3</td>
<td>Multicultural or Integrative Studies</td>
</tr>
<tr>
<td>Mathematics 110 or higher</td>
<td>3</td>
<td>Zoology 240</td>
<td>3</td>
<td>Philosophy 345</td>
</tr>
<tr>
<td>Mathematics 115 or any Statistics course</td>
<td>3</td>
<td>Zoology 230</td>
<td>5</td>
<td>Nursing 301, 302, 304, 306, 313, 316, 324</td>
</tr>
<tr>
<td>Chemistry 100-110 or 120-130</td>
<td>8</td>
<td>Microbiology 210</td>
<td>3</td>
<td>Multicultural or Integrative Studies</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
<td>Nutrition 300</td>
<td>3</td>
<td>Nursing 401, 403, 405, 409, 411</td>
</tr>
<tr>
<td>Psychology 110</td>
<td>3</td>
<td>Child and Family Studies 210</td>
<td>3</td>
<td>Validation Examinations or Nursing Electives</td>
</tr>
<tr>
<td>Sociology or Anthropology</td>
<td>3</td>
<td>Sociology or Anthropology</td>
<td>3</td>
<td>Total: 122 hours</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
<td>Multicultural or Integrative Studies</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total: 122 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RN TRACK FOR BACHELOR OF SCIENCE IN NURSING

Registered nurses must successfully complete all of the non-nursing courses listed above as well as the nursing courses listed below. Courses with an asterisk may be challenged.

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Registered nurses</th>
<th>301 Pharmacology</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>*304 Nursing Assessment and Wellness Promotion</td>
<td>4</td>
<td>305 Transitions to Professional Nursing</td>
<td>3</td>
</tr>
<tr>
<td>*306 Health Deviation Concepts I</td>
<td>4</td>
<td>*316 Health Deviation Concepts II</td>
<td>4</td>
</tr>
<tr>
<td>*325 Nursing of Children and Adults Theory</td>
<td>2</td>
<td>313 Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>315 Clinical Nursing Practicum</td>
<td>3</td>
<td>402 Family Health Nursing Theory</td>
<td>3</td>
</tr>
<tr>
<td>403 Community Health Nursing</td>
<td>6</td>
<td>405 Professional Nursing Seminar</td>
<td>2</td>
</tr>
<tr>
<td>406 Nursing Management and Strategies</td>
<td>6</td>
<td>412 Psychosocial Long Term Nursing Theory</td>
<td>3</td>
</tr>
<tr>
<td>Validation Examinations or Nursing Electives</td>
<td>11</td>
<td>Total: 55 hours</td>
<td></td>
</tr>
</tbody>
</table>

Registered nurses may earn up to eleven semester hours of upper-division nursing credits by means of validation examinations that are designed to measure prior learning. More information about the examinations may be obtained from the Student Services Office or from the faculty advisor for registered nurses.

The following courses are open to all university students: 202, 301 and 314.

GRADUATE

General requirements for the Master of Science in Nursing degree are given in the Graduate Catalog.
College of Social Work

Eunice O. Shatz, Dean and Professor of Social Work, Ph.D. Brandeis University, The Florence Heller School for Advanced Studies in Social Welfare

Professors:
Catherine Faver, Ph.D. University of Michigan; Gideon W. Fryer (Emeritus), Ed.D. Columbia University; Charles A. Glisson, Ph.D. Washington University; Ben P. Granger (Dean Emeritus), Ph.D. Brandeis University; Roger M. Nooe, DSW Tulane University; James D. Orten, DSW University of Alabama.

Associate Professors:
Reginald Avery, Ph.D. Brandeis University; Thomas Grubbs, DSW Tulane University; Judith I. Riene, Ph.D. University of Tennessee; Jeanette Jennings, Ph.D. University of Michigan; Ellie Moses, Ph.D. University of California (Berkeley); William Nugent, Ph.D. Florida State University; John Orme, Ph.D. Washington State; Frank J. Spicuzza, MSSW University of Tennessee.

Assistant Professors:
Paul M. Campbell, DSW University of Alabama; David A. Patterson, Ph.D. University of Utah.

Field Coordinator:
Phyllis Betz, MSSW, University of Tennessee.

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 potentials. The primary objective of the undergraduate social work program is to prepare students for beginning social work practice. It is the purpose of the College to provide an education which fosters growth in both academic and career development.

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 in some master's degree programs in social work, and the potential to be licensed in a number of states throughout the nation.

The social work curriculum builds on a strong liberal arts base. The humanities and social and behavioral sciences are emphasized to help students understand human diversity and the transactions between people and their environment. The curriculum combines classroom experience and agency-based field placements. Courses provide a knowledge base in social work practice theory, human behavior, social welfare policy, and research. Educationally directed field placements, which consist of over 600 clock hours of supervised field instruction in agency settings throughout greater Knoxville, provide extensive and challenging opportunities for students to apply the lessons of the classroom to the problems of society. The program is accredited by the Council on Social Work Education.

The undergraduate social work program (BSSW) started in 1982 in the College of Liberal Arts. It was granted initial accreditation by the Council on Social Work Education in January 1983, and reaffirmation was given in 1992. The program was transferred to the College of Social Work in September 1985. The three programs, BSSW, MSSW and Ph.D., in the College represent the full continuum of social work education.

FACILITIES

The College of Social Work is housed in Henson Hall, located on the corner of Cumberland Avenue and Volunteer Boulevard on the UT Knoxville campus. This building houses the administrative and faculty offices, along with classrooms for the BSSW, MSSW and Ph.D. programs. Video and computer resources are available to facilitate instruction.

GRADUATE PROGRAM

The College of Social Work offers a fully accredited two year graduate professional degree at the master's level (MSSW). The College also offers a graduate program leading to a Doctor of Philosophy in Social Work (Ph.D.). Information concerning graduate programs is given in the College of Social Work Bulletin and also in the Graduate Catalog. Masters Degree Programs are offered on the campus in Knoxville and in Nashville and Memphis. The Ph.D. Program is offered in Knoxville.

GRADING POLICY

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.

COURSE LOAD

The maximum credit hours per semester allowed for any student is 18. 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

*Initial and full 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. In a case of students having similar grade point averages at the cut off point, the grades in the sophomore level social work classes will be used.

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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 discussing the student's interest in and preliminary understanding of the profession.

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 student's potential for entry-level practice.

*Initial and full 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. In a case of students having similar grade point averages at the cut off point, the grades in the sophomore-level social work classes will be used.

**CURRICULUM**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Hours</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>English 101, 102</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Foreign Language (Intermediate Level)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Mathematics 110</td>
<td>3</td>
<td></td>
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<tr>
<td>History 151-152 or 161-162</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Physiology or Biology Sequence with lab</strong></td>
<td>8</td>
<td></td>
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<tr>
<td>Women's Studies 220</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Zoology 210, 220</td>
<td>6</td>
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<tr>
<td>Anthropology 130</td>
<td>3</td>
<td></td>
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<tr>
<td>Humanities (Literature Package)</td>
<td>6</td>
<td></td>
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<tr>
<td>Humanities (Philosophy)</td>
<td>3</td>
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<tr>
<td>Psychology 220</td>
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<td></td>
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<tr>
<td>Social Work 200, 250</td>
<td>6</td>
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<tr>
<td>Economics 201</td>
<td>4</td>
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<tr>
<td><strong>Junior</strong></td>
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<td>Social Work 312, 313, 314</td>
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<tr>
<td>United States Studies</td>
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<tr>
<td>Foreign Studies</td>
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<tr>
<td>Political Science 101</td>
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<tr>
<td>Math 115 or Psychology 385</td>
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<td>Social Work 310, 380</td>
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<tr>
<td>Child and Family Studies 220</td>
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<tr>
<td><strong>Senior</strong></td>
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<tr>
<td>Social Work 412, 416</td>
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<td>Social Work 480, 481</td>
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<td>Social Work 460</td>
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<td>Anthropology 312</td>
<td>3</td>
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<tr>
<td>Electives</td>
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</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>124 hours</strong></td>
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</tbody>
</table>

*Courses 423 - Communication Processes for the Hearing Impaired (3), and 525 - Manual Communication (3) will fulfill the foreign language requirement.

*The following sequences may be selected:
- Astronomy 161-162;
- Botany 110-120;
- Chemistry 120-130;
- Geography 131-132;
- Geology 101-102;
- Physics 121-122.

*The following literature packages may be selected:
- Classics 253-254;
- English 201-202;
- English 221-222;
- English 231-232 or 233;
- German and Slavic Languages 221-222;
- Religious Studies 312-313;
- French 291-292;
- Spanish 261-262.

*One course selected from:
- Classics 221; Classics 222; Philosophy 110; Philosophy 111; Philosophy 120; Philosophy 121; Philosophy 240; Philosophy 344; Philosophy 380; Philosophy 382.

*One course selected from:
- Anthropology 310; Anthropology 315; Geography 363; History 380; History 440; Philosophy 390; Political Science 311; Political Science 374; Religious Studies 352; Sociology 343; Sociology 340; Speech 466.

*One course selected from:
- Anthropology 314; Classics 361; Classics 382; English 302; Geography 372; Geography 373; Geography 375; Geography 376; German 363; History 320; History 374; Philosophy 326; Political Science 350; Political Science 361; Religious Studies 332; French 432; Spanish 431; Spanish 471; Sociology 448.
Jose-Marie Griffiths, Director
Glenn E. Estes, Assistant Director

Professors:
Glenn E. Estes, M.L.S., Kent State; Jose-Marie Griffiths (Director), Ph.D., London (UK); Gary R. Purcell, Ph.D., Case Western; Carol Tenopir, Ph.D., Illinois; P.C. Wilson (Emeritus), Ph.D., Michigan.

Associate Professors:
J. Michael Pemberton, Ph.D., Tennessee; Richard Pollard, Ph.D., Brunel (UK); William C. Robinson, Ph.D., Illinois; George M. Sinkankas, Ph.D., Pittsburgh.

Established in 1971, the Graduate School of Library and Information Science 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 in Library degree. In addition, the Graduate School of Library and Information Science provides elective courses at the undergraduate level.

UNDERGRADUATE PROGRAM

The Graduate School of Library and Information Science 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 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.

Certain courses are open to students in the College of Liberal Arts who are interested in preparation for graduate study in the profession of library and information science. For a list of recommended courses, contact the Graduate School of Library and Information Science.

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 Graduate School of Library and Information Science.

GRADUATE PROGRAM

The Graduate School of Library and Information Science 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 Graduate School of Library and Information Science 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 GSLIS 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 and X-server terminals are 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, Sun SPARStation, and IBM Ultimedia computers. The advanced laboratory activities provides a gopher server, high-level database and information retrieval software, and multimedia authoring and display tools.
University Honors

Thomas W. Broadhead, Director
Dorothy Hendricks, Associate Director

University Honors programs have been 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. Already-enrolled students are ineligible. 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 Office administers three separate programs: the Tennessee Scholars Program, the Whittle Scholars Program, and the Chancellor's Scholars Program.

The Tennessee Scholars and Chancellor's Scholars programs are administered by the University Honors Committee which includes faculty representatives from each of the ten baccalaureate colleges and schools and students selected by the Tennessee Scholars and Chancellor's Scholars. The Whittle Scholars Program is administered by the Whittle Scholars Committee which includes faculty appointed by the Chancellor, representatives of the University Administration, alumni, and representatives of Whittle Communications.

TENNESSEE SCHOLARS PROGRAM

Each year, twenty-five outstanding high school students will be selected by the University Honors Committee for a four-year program of honors work. These students may have any major in any college offering the Bachelor's degree. In addition to required work in their respective colleges, Tennessee Scholars are required to complete a minimum of four lower division honors courses; complete a one credit hour Tennessee Scholars 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 term in residence; attend monthly meetings of the Whittle Scholars; and complete a senior research project of merit and originality. In order to graduate in the program, students must enroll in and successfully complete at least 3 credit hours of University Honors 493 while doing their senior projects. Failure to meet the above requirements can result in removal from the program and loss of scholarship assistance.

Whittle Scholars may have to supplement the scholarship during their year abroad.

CHANCELLOR'S SCHOLARS PROGRAM

Each year the University awards Roddy, Bonham, Neyland, Holt, and Reeder-Siler scholarships to outstanding high school students. Roddy, Bonham, Neyland, and Reeder-Siler Scholars are selected by the General University Scholarship Committee, composed of faculty and University personnel. Holt Scholars are selected by a committee of alumni. Criteria for selection include academic performance and academic and professional promise.

All recipients of the Roddy, Bonham, Neyland, Holt, and Reeder-Siler scholarships are invited to become Chancellor's Scholars. In addition to required work in their respective colleges, Chancellor's Scholars are required to complete a minimum of four lower division honors courses; complete a one credit hour seminar each term in residence; develop a positive relationship with a faculty mentor; have an extensive conference with a member of the University Honors staff each term in residence; and complete a senior honors research project of merit and originality. In order to graduate in the program, students must enroll in and successfully complete at least 3 credit hours of University Honors 493 while doing their senior projects. Failure to meet the above requirements can result in removal from the program.

Retention in Tennessee Scholars Program, Chancellor's Scholars Program, and Whittle Scholars Program

Tennessee Scholars are selected on the bases of past academic performance and their potential for academic excellence. As Tennessee Scholars, they are expected to adhere to the written policies and requirements of the Tennessee Scholars 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 Committee will not be concerned if grades in occasional courses fall below superior range. However, all Tennessee Scholars are expected to maintain a cumulative grade point average of 3.25. Whittle Scholars are selected on the bases of leadership experience and skills, academic
performance and promise, and extracurricular activities. As Whittle Scholars, they are expected to adhere to the written policies and requirements of the Whittle Scholars Program and are encouraged to enroll in courses that will stimulate and challenge them as well as broaden their horizons. All Whittle Scholars are reviewed annually by the Whittle Scholars Committee as to their academic performance and progress, the planning and execution of their international experiences and their senior projects. Whittle Scholars are expected to maintain a cumulative grade point average of 3.25.

A student in the Tennessee Scholars Program or Whittle Scholars 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 than 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 its benefits, unless the student can demonstrate extenuating circumstances to the University Honors Committee or the Whittle Scholars Committee.

Senior Project Deadlines in Tennessee Scholars Program, Chancellor’s Scholars Program, and Whittle Scholars Program

The following is a list of mandatory deadlines for the senior research project in all University Honors programs:

1. No later than the end of the second year in residence, a student must have chosen a UT Knoxville faculty member to serve as mentor for the senior research project, and that faculty member must have agreed in writing to serve as the student’s mentor.

2. No later than the end of the third year in residence, a student, together with the faculty mentor, will choose two other faculty members who, together with the faculty mentor, will serve as the student’s research project committee. The purpose of the committee is to aid students in formulating, designing and executing their projects and to evaluate the projects when completed. Similarly, by the end of the third year in residence, a student must submit a written abstract or proposal for the senior research project to his/her faculty committee for suggestions and approval.

3. No later than the end of the first semester of a student’s senior year, a first draft of the senior research project must be submitted to the faculty mentor, and the faculty mentor must report that fact to the University Honors Director.

4. Within four weeks of the end of a student’s final semester, he or she will be expected to present the completed project to the student’s 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 research project has been completed and has been accepted by the committee. One copy of the research project must be filed in the University Honors Office and additional copies should be given to the student’s committee.

Failure to meet these guidelines will result in the delay of a student’s graduation.

UNIVERSITY HONORS COURSES

Seminars and colloquia focused on various topics, issues, and problems, and limited in size to 25 students. These are taught by faculty from all ten undergraduate colleges and schools, and may be repeated. University Honors courses are open to all undergraduate students on the basis of high school GPA, ACT/SAT scores, UT Knoxville GPA of 3.25 or better, or by strong professorial recommendation.

1 April 10 for students graduating in the Spring semester, and November 15 for students graduating in the Fall semester. Students graduating in August (at the end of summer school) are urged to complete their projects by the April 10 deadline, although, in special cases and with the written consent of the faculty mentor, exceptions to this rule may be made.

2 There may be types of projects that do not lend themselves to a formal (public) defense. Hence the decision whether or not to have a public defense should be decided by the research committee and the Director of the University Honors Program.
University Libraries

Paula T. Kaufman, Dean
Aubrey H. Mitchell, Associate Dean for Access Services
Diane E. Perushek, Associate Dean for Collection Services

Professors:
Bayne, Pauline S., M.S.L.S., North Carolina; Crawford, Mary Frances, M.S., M.S.L.S.
Kentucky; Felder-Hoehne, Felicia H., M.S.L.S., Atlanta; Kaufman, Paula T., M.B.A., M.S.
Columbia; Le Clercq, Anne W., J.D., M.L.S.

Associate Professors:
Baker, D. Gayle, M.S., M.L.S., Alabama; Bridges, Anne E., M.A., M.L.S., Rhode Island;
Britten, William A., M.S.L.S., Clarion; Crawford, Mary Frances, M.S., M.S.L.S.
Indiana; Leach, Sandra S., M.A., M.Ln., Emory; Lloyd, James B., M.A., M.L.S., Ph.D.
Mississippi; Miller, Tamara J., M.S.L.S.

Assistant Professors:
Carver, Carolyn S., M.L.S., Vanderbilt; Cobb, Flora, M.L.S., Texas; Figg, Milton, M.S., M.L.S.
Southern Mississippi; Garrett, Marie A., M.A., M.S.L.S., Vanderbilt; Fogg, Carol M., M.Ln.
Wise, Flossie, M.S.L.S., Tennessee.

The University of Tennessee, Knoxville Libraries* own approximately 2 million volumes, more than 3.5 million manuscripts, 2 million microforms, 30,000 audio and video recordings, plus United States and United Nations documents. The UT Knoxville Libraries currently subscribe to more than 14,000 periodicals and other 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 UT Knoxville Libraries consists of the main library (the John C. Hodges Library), five branches on the Knoxville campus (the Agriculture-Veterinary Medicine Library, the Cartographic Information Center, the Music Library, Special Collections, and the University Archives), and the Social Work Library in Nashville.

The John C. Hodges Main Library (1015 Volunteer Blvd.) is a 350,000 square-foot facility housing collections in all subject areas. The Hodges Library has comfortable study space for more than 2,100 people, 308 student carrels, and 192 faculty studies.

The Hodges Library's research holdings are augmented by Reference Services and by Interlibrary Services. Reference Services provides research assistance and access to commercially available databases. Within the library, users may also search a number of CD-ROM databases at no charge. Interlibrary Services borrows monographs and obtains copies of other materials from libraries around the world.

Library holdings are accessible via a sophisticated on-line catalog which can be searched in the Hodges Library, the branch libraries, and from home and office computers. The Online Library Information System (OLIS) also provides access to a wide range of information resources available over the Internet.

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.

*Data excludes Law Library faculty and statistics.

*Personal Reader and TDD are available at the Hodges Library.

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. It has a wide-ranging audiovisual collection and an extensive reference collection.

The Cartographic Information Center (Room 15, basement of the Hoskins Library, Cumberland Avenue & 15th Street) contains a worldwide collection of over 300,000 maps covering all subjects. Maps are received from the U.S. Geological Survey, Defense Mapping Agency, and the National Ocean Survey. Maps, atlases, globes, and books relating to cartography may be borrowed for reference, research, and teaching.

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.

The Special Collections Library (2nd floor, west wing, of the Hoskins Library) is a repository of regional and local materials, Tennesseana, and other specialties, including legislative papers and mementoes of many Tennessee political figures. Special Collections materials are of particular interest to scholars in the fields of history, political science, social sciences, biological sciences, and the arts.

The University Archives (Room 2, Hoskins Library) contains 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.

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 at The University of Tennessee is accessible to all students and faculty in the system.
University Studies

Alvin G. Burstein, Chair

The University Studies Program has three general objectives: (1) to foster interdisciplinary teaching and scholarship, especially across college boundaries; (2) to promote active, integrative, and personal learning; and (3) to nurture the personal and intellectual development of faculty and students.

In pursuit of these objectives, University Studies sponsors several main types of activities: FACULTY COLLOQUIES, which are on-going, structured, interdisciplinary conversations on a topic or nexus of topics; INTERDISCIPLINARY COURSES, often team-taught, many stemming from the colloquy discussions, and CENTRIPITALS, a series of eight faculty luncheons held over the academic year designed to encourage substantive conversation among faculty about their scholarship and creative work.

Faculty Colloquies explore important contemporary issues which are sufficiently fundamental to involve the attention of faculty and students from all colleges. Current colloquies are: Technology, Society and the Common Good; Aging and Society; Land and People (Tennessee Appalachian Forum); Interdisciplinary Rhetoric Group; Psychoanalysis and the Humanities; Critical Theory Group; Forum on International Development; and Appalachian Studies.

For further information, contact: Dr. Alvin G. Burstein, Chair
312C Austin Peay
PHONE: 974-3348.
Reserve Officers Training

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

ARMY ROTC

LTC David A. Jones, Professor of Military Science and Tactics; M.E. North Georgia College

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 Lee, a West Point 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 adapted. 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 West Point 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 of Tennessee 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. Today, Neyland Stadium stands in tribute to his great accomplishments.

The purpose of Army ROTC is to provide professional education and to prepare students for appointment as commissioned officers in the Regular Army or the United States Army Reserve components.

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.

SATISFACTORY/NO CREDIT COURSES

Since Military Science is not a major course of study that leads to a degree in a specific academic discipline, the number of satisfactory/no credit courses is decided by the college of the student's academic major. All ROTC courses are offered on a letter grade basis only.

COURSE LOAD

No more than one Military Science course may be taken during any given semester unless an exception to policy is approved by the Professor of Military Science and Tactics on a case-by-case basis. Students enrolled in the advanced program (upper division Military Science 300 and 400 level courses) and ROTC scholarship cadets are required to be full-time students, taking at least 12 hours each semester.

COURSE SUBSTITUTION

On the basis of previous honorable active military service in any branch of the Armed Services, or participation in a Junior ROTC Program at a Secondary School, a student may request exemption from portions of the Basic Course (Military Science 100 and 200 level courses). Placement credit may also be authorized for completion of basic training and advanced individual training. Exemption allowed will be determined by the Professor of Military Science and Tactics. Military Science courses taken at other colleges or universities are transferable as approved by the Professor of Military Science and Tactics.

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. Junior or Senior standing.

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 accomplished 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 commissioning (waiverable).
   e. Be enrolled as a full-time student, either at The University of Tennessee or at a nearby institution in a cooperative 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military Science 310, 410</td>
<td>8</td>
</tr>
<tr>
<td>Military Science 320</td>
<td>4</td>
</tr>
<tr>
<td>Military Science 400, 410, 420</td>
<td>8</td>
</tr>
</tbody>
</table>

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 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 military history.
d. One course in a foreign language (scholarship students only).
e. One course in Math Reasoning.
f. 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 an allowance of $100 per month during the academic year. While attending the ROTC summer studies each cadet receives approximately $650 for Advanced Summer Studies, $600 for Basic Summer Studies, plus meals and housing are provided.

Army ROTC Scholarship Program The Army ROTC scholarship program offers financial assistance to outstanding young men and women in the Army ROTC program who are interested in the Army as a career. Each scholarship provides for free tuition, textbooks subsidy, and laboratory fees in addition to a subsistence allowance of $100 per month 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. Certain other privately financed scholarships and grants are available to ROTC cadets.

Simultaneous Membership Program The "SMP" option combines the Army ROTC living allowance ($100/month) 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 cadets participation with the reserve forces is only one week per month and two weeks each summer.

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, UT Color Guard, and Drill Team. 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 allowing such military skills as small unit tactics.

Physical Fitness Training The Cadet Battalion conducts physical fitness training Monday-Wednesday-Friday from 6:15 a.m. to 7:15 a.m. The program is optional for noncontracted cadets. 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

<table>
<thead>
<tr>
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<tr>
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<tr>
<td>Military Science 210, 220</td>
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<tr>
<td>Military Science 400</td>
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<tr>
<td>Military Science 410, 420</td>
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Total: 32 hours

Basic Military Studies - Practicum

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<th>Course</th>
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<tr>
<td>Military Science 200</td>
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<tr>
<td>Military Science 310, 320</td>
<td>8</td>
</tr>
<tr>
<td>Military Science 400</td>
<td>4</td>
</tr>
<tr>
<td>Military Science 410, 420</td>
<td>8</td>
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</table>

Total: 24 hours

Advanced Placement

<table>
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<tbody>
<tr>
<td>Military Science 310, 320</td>
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<tr>
<td>Military Science 400</td>
<td>4</td>
</tr>
<tr>
<td>Military Science 410, 420</td>
<td>8</td>
</tr>
</tbody>
</table>

Total: 20 hours

Variations to these sequences of study may be approved by the Professor of Military Science on a case-by-case basis. Total Military Science hours offered is 34. Maximum total Military Science hours applicable for commission is 30. Minimum total Military Science hours applicable for commission is 20. 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 overall GPA for entrance into the advance course (Military Science 310, 320, 400, 410, 420): 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.

6. Officer Selection Battery test.

DEPARTMENT OF AIR FORCE

AIR FORCE ROTC PROGRAM

Professor of Air Force Aerospace Studies: Colonel Joseph Sutter (Head), M.S. University of Southern California.

Assistant Professors:
Captain Thomas Thomson, M.A.S., Embry Riddle University; Captain Matt Woolen, M.A.S., Embry Riddle 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
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 $100 stipend each month during the school year while on scholarship status.

High School Students: Competitive four-year scholarships are available to high school male and female students who enroll in certain scientific and engineering career fields. Some scholarships are also available to male and female 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.

College students: Other scholarship opportunities exist for students already in college. Three- and two-year 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.

PAY AND ENTITLEMENTS
All cadets enrolled in AFROTC are furnished texts and uniforms. Professional Officer Course cadets receive a subsistence allowance of $100 per month during the academic year. 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 eight 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 (615/974-3041).
Advanced Studies

THE COLLEGE OF LAW

Richard S. Wirtz, Dean
Mary Jo Hoover, Associate Dean
R. Lawrence Deesem, Associate 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 in the "College of Law Bulletin." A copy may be obtained from the Admissions Office, The University of Tennessee, College of Law, 1505 W. Cumberland Avenue, Knoxville, Tennessee 37996-1800. Completed application should be received before February 1 of the year of requested admission.

THE COLLEGE OF VETERINARY MEDICINE

Michael Shires, Dean
James J. Brace, Assistant 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 from 261 Student Services Building, The University of Tennessee, Knoxville, Tennessee 37996-0200. Applications must be received by January 15 of the year of 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

C.W. Minkel, Associate Vice Chancellor and Dean of The Graduate School
Linda R. Painter, Associate Dean of The Graduate School
Michael W. Singletary, Assistant Dean of The Graduate School
Diana Lopez, Director, Graduate Admissions and Records
S. Kay Reed, Assistant to the Dean
Ann L. Lacava, Thesis/Dissertation Coordinator
Rose Ann Tranham, Assistant Director, Graduate Admissions and Records
Irene Kaplan, Assistant Director, Graduate Admissions and Records
Jeannette Bouchard, Staff Assistant

The University of Tennessee is the official land-grant institution for the State of Tennessee with its main campus in Knoxville. UT Knoxville is the state's largest and most comprehensive institution, and is the only state-supported "Research University I" (Carnegie Classification) in Tennessee. A wide range of graduate programs leading to the Master's and doctoral degrees is available. The University offers Master's programs in 85 fields of specialization and doctoral work in 52. Approximately 6,800 graduate students are enrolled, both on and off campus. The Graduate School administration develops procedures to implement the 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. Traditionally, universities have provided graduate programs primarily for full-time, degree-oriented students. Serving the needs of students engaged full-time in intensive study and pursuit of a degree continues to be a major emphasis of UT Knoxville's graduate effort. At the same time, the University employs a variety of modes, traditional and non-traditional, in offering quality programs designed to serve students.

Complete information concerning graduate study at The University of Tennessee, Knoxville is available in the Graduate Catalog published annually. For a copy, write or visit the Office of Graduate Admissions and Records, 218 Student Services Building, The University of Tennessee, Knoxville, Tennessee 37996-0220 or call (615) 974-3251.

GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

Raymond A. Popp, Director

FULL-TIME FACULTY

Professor: D.E. Olins, Ph.D. Rockefeller.

The Graduate School of Biomedical Sciences offers programs leading to the Master of Science and Doctor of Philosophy degrees. The School publishes supplementary information in addition to the regular Graduate Catalog. All inquiries concerning admission should be addressed to: Director, The University of Tennessee-Oak Ridge Graduate School of Biomedical Sciences,
The programsof individual departments and intercollegiate programs which augment degrees in Life Sciences are interdepartmental:

- Molecular and Developmental Biology: J.M. Adler (Chair);
- Physiology: G. Vaughan;
- Coordinating Council: see Valley Authority. Sponsors include federal Oak Ridge National Laboratory and the Tennessee Center has a close working relationship with resource, and technology policy issues. The ment project involves several disciplines, energy and the environment. The Center involves directed at solutions to problems related to energy and the environment. The Center involves faculty and students in research and public service projects, manages research and development projects that involve several disciplines, and assists governmental and industry in specific problems related to energy, environmental, resource, and technology policy issues. The Center has a close working relationship with Oak Ridge National Laboratory and the Tennessee Valley Authority. Sponsors include federal and state agencies, industries, and foundations.

**LIFE SCIENCES**

Coordinating Council:
H.I. Adler (Chair); Physiology: G. Vaughan;

The programs leading to the M.S. and Ph.D. degrees in Life Sciences are interdepartmental and intercollegiate programs which augment the programs of individual departments.
The graduate program in Life Sciences supports studies and research in the following concentrations: physiology; biotechnology (M.S. only); cellular, molecular and developmental biology; ethology; environmental toxicology; and plant physiology and genetics. Students interested in any of these areas should contact either the chair of Life Sciences or the Director of the area of interest. For complete information, refer to the Graduate Catalog.

**COMPARATIVE AND EXPERIMENTAL MEDICINE JOINT GRADUATE PROGRAM**

L.N.D. Potgieter, Director

Coordinating Committee: J.E. Fuhr; J.E. Lawler; C. Lozzo; L.N.D. Potgieter; D.O. Slauson.

The Comparative and Experimental Medicine degree program (M.S. and Ph.D.) is jointly administered by the College of Veterinary Medicine, the College of Medicine/Knoxville Unit, and the University of Tennessee, Knoxville. The graduate program is intended to prepare students for teaching and/or research careers in the health sciences, emphasizing the comparative approach to the study of pathology, immuno-pathology, hematology, infectious diseases; aberrant metabolism, oncology, and genetic disorders. For complete information, refer to the Graduate Catalog.

**ENERGY, ENVIRONMENT, AND RESOURCES CENTER**

Jack N. Barkenbus, Acting Director

The Energy, Environment, and Resources Center, 329 South Stadium Hall, was created in 1973 to encourage interdisciplinary research directed at solutions to problems related to energy and the environment. The Center involves faculty and students in research and public service projects, manages research and development projects that involve several disciplines, and assists governmental and industry in specific problems related to energy, environmental, resource, and technology policy issues. The Center has a close working relationship with Oak Ridge National Laboratory and the Tennessee Valley Authority. Sponsors include federal and state agencies, industries, and foundations.

**SPACE INSTITUTE**

T. Dwayne McCoy, Vice President
K.C. Reddy, Dean for Academic Affairs

The Space Institute is a graduate education and research institution established in 1964 on a 365-acre lakeside campus in Middle Tennessee. UTSI has evolved into an internationally recognized institution for graduate study and research in engineering, physics, mathematics, and computer science. The accredited academic programs and educational policies of the Space Institute have theoretical components in appropriate departments of the University of Tennessee, Knoxville. The more than 45 faculty members of the Institute carry out these accredited academic programs through classroom teaching, informal seminars, active research, and directing the research of their students in an environment of creative work and advanced study.

Graduate degree programs are available with majors in Aerospace Engineering, Aviation Systems, Chemical Engineering, Computer Science, Electrical Engineering, Engineering Science, Industrial Engineering (engineering management concentration), Mathematics, Mechanical Engineering, and Physics. In addition to the fundamental studies characteristic of each discipline, research opportunities are available in many areas including aerodynamics, atmospheric science, fluid mechanics, advanced space propulsion, neural networks, energy conversion processes, thermal sciences, coal combustion, magnetohydrodynamics, plasma physics, space systems, propulsion, computational fluid dynamics, and other aspects of atmospheric and space flight.

The Institute has an established Center of Excellence in Laser Applications and offers graduate studies and research opportunities in laser diagnostics, laser materials interactions, pico second processes, and coherent and non-linear optics.

The Institute was established as an institution for the conduct of water research for the state. The purposes of the Center are:
1. To assist and support all the academic institutions of the state, public and private, in pursuing water resources research which addresses a wide range of problems of interest to the state, region, and nation;
2. To provide information dissemination and technology transfer services to state and local government agencies, academic institutions, professional groups, environmental organizations, and others, including the general public, who have an interest in water resources matters; and
3. To promote education in fields relating to water resources and to encourage the entry of promising students into careers in these fields. The Center maintains a technical library which includes numerous water resources-related databases on CD-ROM.

**TRANSPORTATION CENTER**

Stephen H. Richards, Director

The Transportation Center was created in 1970 to foster and facilitate interdisciplinary research and public service in the field of transportation at The University of Tennessee. It began operating full-time in 1972 and since then has contributed greatly to the overall research program of The University.

The Center, 357 South Stadium Hall, is a University-level organization administratively positioned within the Office of The Associate Vice Chancellor for Research at UT Knoxville. The Center's staff is presently organized into four research divisions: Logistics and Systems Analysis; Infrastructure and Environment; Safety and Traffic Operations; and Mobility Services and Policy.

The Center has three goals. The first is to conduct a program of research in transportation that is recognized for its excellence, comprehensiveness, innovation, productivity, and national leadership. The second is to develop and sustain the technical expertise for high quality transportation research by the faculty and students within the various departments and colleges of UT. The third goal is to serve the transportation research, service, and training needs of state and local government, business, and industry in Tennessee, the southeast region, and the nation.

**WATER RESOURCES RESEARCH CENTER**

Bruce A. Tschuntz, Acting Director

The Water Resources Research Center, 422 South Stadium Hall, is a federally designated institute for the conduct of water research for the state. The purposes of the Center are:
1. To assist and support all the academic institutions of the state, public and private, in pursuing water resources research which addresses a wide range of problems of interest to the state, region, and nation;
2. To provide information dissemination and technology transfer services to state and local government agencies, academic institutions, professional groups, environmental organizations, and others, including the general public, who have an interest in water resources matters; and
3. To promote education in fields relating to water resources and to encourage the entry of promising students into careers in these fields. The center maintains a technical library which includes numerous water resources-related databases on CD-ROM.
### Majors and Degree Programs

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<th>College of Agriculture</th>
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<td>Agricultural and Extension Education</td>
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<td>Agricultural Economics</td>
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<td>Agricultural Engineering</td>
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<td>Agricultural Engineering Technology</td>
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<td>Animal Science</td>
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<td>Entomology and Plant Pathology</td>
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<td>Forestry</td>
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<td>Ornamental Horticulture and Landscape Design</td>
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<td>Plant and Soil Science</td>
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<td>Wildlife and Fisheries Science</td>
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<td>Planning</td>
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<td>Economics</td>
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<td>College Student Personnel</td>
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<td>Curriculum and Instruction</td>
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<td>Education</td>
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<td>Vocational-Technical Education</td>
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</tr>
<tr>
<td>Civil Engineering</td>
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<td>Electrical Engineering</td>
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<td>Nuclear Engineering</td>
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<td>Foodservice and Lodging Administration</td>
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<td>Home Economics</td>
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<td>Human Ecology</td>
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<td>Interior Design</td>
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<td>Nutrition</td>
<td>M.S.</td>
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<tr>
<td>Textiles, Retailing and Consumer Sciences</td>
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<td>Aviation Systems (UTSI only)</td>
<td>M.S.</td>
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<tr>
<td>Comparative and Experimental Medicine</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>Biology</td>
<td>M.S.</td>
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<tr>
<td>Industrial and Organizational Psychology</td>
<td>M.S., Ph.D.</td>
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<td>Life Sciences</td>
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<td>Management Science</td>
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<th>College of Law</th>
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<tr>
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Continuing Education and Public Service

DEPARTMENT OF CONFERENCES

Director:
Norvel Burkett, Ed.D. Mississippi State University

Assistant Director:
Robert Gibbs, B.S. Tennessee

Program Managers:
Elaine Keener, B.A. Temple University
Glenn Trantham, B.S. Tennessee

Conference Specialists:
Susan Davis, B.A. Tennessee
Margaret Harris
Barry Neal

UT Conferences, housed in the Conference Center in downtown Knoxville, provides management services to individuals or groups who desire to hold a high quality convention, conference or meeting anywhere in the state of Tennessee or across the United States. Using the new Conference Center, statewide University system facilities, major hotels and convention centers across Tennessee and the U.S., the department assists University organizations and outside groups in designing programs to meet the needs of clients. 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 range from planning and budgeting to lodging, food services, speakers, promotional material, meeting rooms and all details to assure a successful event. Programs which meet appropriate criteria qualify for Continuing Education Credits, which become a permanent record maintained by the Division. Transcripts are available upon written request.

The department cooperates with UT CTV to provide teleconferencing services for the University and community. Professional groups and interested individuals may arrange interactive videoconferencing to locations worldwide. Arrangements may also be made to receive (downlink) and to transmit (uplink) program-
culture orientation, and university study skills. Additional information may be obtained at 907 Mountcastle Street; telephone (615) 974-3404, FAX (615) 974-6583.

NON-CREDIT COMMUNITY PROGRAMS

Director:
Cheryl LaBerge, M.A. Memorial University, Newfoundland, Canada

Coordinator:
N. Dahlin-Brown, M.S. Tennessee
J. Stiles, M.A. Tennessee

Non-Credit Community Programs provides a comprehensive array of courses and seminars designed to serve the needs of individuals and businesses in Knoxville and surrounding communities. Courses are offered on the University campus and at selected off-campus locations. Courses are taught by University faculty and citizens of the community who have gained a reputation for certain competencies or technical skills. Courses also are delivered "on-site" for business or industrial clients, with instructional services tailored to the needs of each individual group.

Courses range from computer literacy and management development to gardening, exercise and music. There are also courses which meet requirements of the state or other agencies for certification in fields such as real estate, aviation, CEBS (Certified Employee Benefit Specialist), and CCA (Certified Credit Administrator). The department co-sponsors the Smoky Mountain Field School with the Great Smoky Mountains National Park.

Continuing Education Units (CEU's) are awarded to students satisfactorily completing selected courses and seminars offered by the department.

For further information or to register, contact Non-Credit Community Programs, 600 Henley Street, Suite 105, Knoxville, TN 37902 or telephone (615) 974-0150.

UNIVERSITY EVENING SCHOOL

Director:
S.C. Bills, Ed.D. Tennessee

Associate Directors:
J.C. Sekula, Ph.D. Tennessee
M.K. Warden, Ed.D. Tennessee

Assistant Directors:
L.U. Jurand, M.S. Tennessee
D.J. VonWiesenstei, M.S. Tennessee

Assistant Professor:
C.B. Maminov, Ed.D. Tennessee

Director, Oak Ridge Graduate Program:
S.C. Bills, Ed.D. Tennessee

Assistant Director, Oak Ridge Graduate Program:
J. Howell, M.S. Tennessee

The University Evening School, in conjunction with academic colleges and departments, administers credit programs for those students attending classes on and off campus in a variety of nontraditional formats. Support services are provided to assist students in their educational pursuits. On Campus Evening Program. Classes are offered during late afternoon and evening hours for those students who work or have other commitments during the day. The following undergraduate degrees are available:

- College of Business Administration - Bachelor of Science in Business with majors in Accounting, General Business, Economics, Finance, Public Administration, Management and Marketing.
- College of Liberal Arts — Bachelor of Arts with majors in American Studies, Economics, Political Science, Psychology, Public Administration or Sociology.
- College of Education — Bachelor of Science with majors in Human Services and Technological and Adult Education with a concentration in Industrial Training.

Some departments within the Colleges of Business Administration, Education, and Engineering offer all courses required for an advanced degree during the evening. The College of Education offers an M.S. in Technological Education with concentrations in: Adult Education, Business and Marketing Education, Industrial Education, Vocational-Technical, and Technical-Engineering Education. The College of Communications offers the M.S. which can be completed in the evening.

Mini-Term. The University Evening School offers a Mini-Term during May. Students may enroll in one concentrated credit course during the Mini-Term period.

Courses and instructors listed for the Mini-Term are carefully selected to reflect a broad base of individualized offerings suited to an intensive program of study.

Off-Campus Programs. The Evening School conducts undergraduate and graduate courses in many locations away from the Knoxville campus. The courses are scheduled in response to requests and identifiable needs of adult part-time students who live some distance from the UT Knoxville location. All course offerings and instructors are approved by the appropriate academic departments, and the credit awarded is resident credit.

The College of Education (Off-Campus) offers a Bachelor of Science in Education with a major in Industrial Education (Industrial Training) and the following graduate degree programs are available: Master of Science in Education Administration and Supervision (Chattanooga); Master of Science in Education with a major in Technological and Adult Education (Statewide); Master of Science in Library and Information Science (Memphis).

The Evening School administers an off-campus center at Oak Ridge where courses leading to advanced degrees in science and engineering are offered at Oak Ridge. Graduate Study Programs lead to a Master's in Chemical, Electrical and Industrial Engineering with a concentration in Engineering Management. Courses are offered in Nuclear Engineering with a concentration in radiation protection, Environmental Engineering with a concentration in mixed waste management, Computer Science, Mathematics, Physics, Chemistry, Public Health and Mechanical Engineering.

Distance Education. The Evening School in concert with several academic departments at UTK, offers interactive telecourses which allow students at distant locations to see and participate actively with the instructor teaching in Knoxville. Graduate courses in various disciplines are transmitted to several sites through use of this advanced technology. Offerings are expected to increase through the 1990s. Videotaped courses in Engineering and other fields are sent to a variety of sites in Tennessee and elsewhere to accommodate UT students pursuing advanced degrees at distant locations.

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. As a result, students may earn college credit within a shorter time frame than the traditional semester system. 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 UT 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. Registration by mail, phone or fax is offered as a convenience to former Evening School students. Secondary registration at both on- and off-campus locations is also available.

Financial Aid. Eligibility for assistance through the Pell Grant in the Evening School Office.

SENIOR OR DISABLED CITIZENS

Legislation gives Tennessee citizens who are 60 years of age or older, or those who are totally disabled, the opportunity to attend courses at the University at no charge on an audit, space available basis. Legal verification of either of these conditions is required for enrollment. Students who are 65 or over, or who are totally disabled, and who desire to receive UT credit for their courses, may pay a reduced charge of $7 per credit hour up to a maximum of $75 for a full-time load. Registration for day and evening classes is handled by the Evening School. The University Evening School Office is located at 451 Communications and University Extension Building on the UT Knoxville campus and may be reached by calling (615) 974-5361 or 1-800-676-8657. All inquiries concerning these programs are welcome.

DEPARTMENT OF INDEPENDENT STUDY

Director:
David F. Holden, Ph.D. Kansas

Assistant Director:
Samuel A. Cain, M.S. State University of New York (Stony Brook)
The UT Knoxville Department of Independent Study administers the program of independent study by correspondence for all campuses of the University. The program includes 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 and audiocassettes as well as traditional print materials. Through this program, the University of Tennessee is able to overcome geographic limitations in performing its services as Tennessee’s land-grant institution of higher education. 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.

For information and enrollment forms for correspondence courses, contact: Department of Independent Study, 420 Communications Bldg., The University of Tennessee, Knoxville, TN 37996. Telephone: (615) 974-5134.

The following correspondence courses are offered through the Department of Independent Study. For full course descriptions refer to the listings in this Undergraduate Catalog.

| Accounting 201 Principles of Financial Accounting; 202 Principles of Managerial Accounting; 311 Intermediate Financial Accounting; 312 Intermediate Financial Accounting; 321 Cost and Managerial Accounting; Agricultural Economics 210 Introduction to Agricultural Economics; 470 Natural Resource Economics; Anthropology 110 Human Origins; 130 Cultural Anthropology; Child and Family Studies 110 Introduction to Early Childhood Education; 240 Human Sexuality; 312 Adulthood and Aging; Electrical and Computer Engineering 201K Circuits I; English 101 English Composition I; 102 English Composition II; 201 British Literature I; Beowulf through Johnson; 202 British Literature II: Wordsworth to the Present; 231 American Literature I: Colonial Era to the Civil War; 232 American Literature II: Civil War to Present; 306 Introduction to Shakespeare; Forestry, Wildlife and Fisheries 211K Introduction to Forestry, Wildlife and Fisheries; French 111 Elementary French, First Semester; 112 Elementary French, Second Semester; 211 Intermediate French, First Semester; 212 Intermediate French, Second Semester; 301 Elements of French for Upper Division and Graduate Students, First Semester; 302 Elements of French for Upper Division and Graduate Students, Second Semester; Geography 101 World Geography, First Semester;
| Accounting 201 Principles of Financial Accounting; 202 Principles of Managerial Accounting; 311 Intermediate Financial Accounting; 312 Intermediate Financial Accounting; 321 Cost and Managerial Accounting; Agricultural Economics 210 Introduction to Agricultural Economics; 470 Natural Resource Economics; Anthropology 110 Human Origins; 130 Cultural Anthropology; Child and Family Studies 110 Introduction to Early Childhood Education; 240 Human Sexuality; 312 Adulthood and Aging; Electrical and Computer Engineering 201K Circuits I; English 101 English Composition I; 102 English Composition II; 201 British Literature I; Beowulf through Johnson; 202 British Literature II: Wordsworth to the Present; 231 American Literature I: Colonial Era to the Civil War; 232 American Literature II: Civil War to Present; 306 Introduction to Shakespeare; Forestry, Wildlife and Fisheries 211K Introduction to Forestry, Wildlife and Fisheries; French 111 Elementary French, First Semester; 112 Elementary French, Second Semester; 211 Intermediate French, First Semester; 212 Intermediate French, Second Semester; 301 Elements of French for Upper Division and Graduate Students, First Semester; 302 Elements of French for Upper Division and Graduate Students, Second Semester; Geography 101 World Geography, First Semester;
| Health 110 Personal Health and Wellness; 400 Consumer Health; 406 Death, Dying, and Bereavement; History 151 Development of Western Civilization; 152 Development of Western Civilization; History 251 History of the United States; 252 History of the United States; 449 History of Tennessee; Mathematics 115 Statistical Reasoning; 119 Precalculus A; 121 Calculus A; 122 Calculus B; 130 Precalculus I; 141K Calculus I; 142K Calculus II; 201 Structure of the Number System; 202 Probability, Statistics and Euclidean Geometry; 231 Differential Equations I; 241 Calculus III;
| Philosophy 345 Medical Ethics; Political Science 101 United States Government and Politics; Psychology 110 General Psychology; 210 Biological Basis of Behavior; 220 Behavior and Experience: Humanistic Psychology; 300 Child Psychology; 310 Learning and Thinking; 330 Abnormal Psychology; 360 Social Psychology; 385 Statistics in Psychology; 395 Research Methods in Psychology; Religious Studies 326 Images of Jesus; 345 Medical Ethics; Safety 452 General Safety; Sociology 110 Social Problems and Social Change; 120 General Sociology; 350 Criminology; 351 Juvenile Delinquency; 363 The City; 415 Sociology of Aging; 451 Criminal Justice; Spanish 111 Elementary Spanish, First Semester; 112 Elementary Spanish, Second Semester; 211 Intermediate Spanish, First Semester; 212 Intermediate Spanish, Second Semester; |
Courses of Instruction

ACCOUNTING (009)

201 Principles of Financial Accounting (3) Introduction to financial accounting theory and practice with an emphasis on preparation and reporting of financial information. Prerequisite to all other courses in accounting. Prerequisite: Mathematics 110 or 121.

202 Principles of Managerial Accounting (3) Introduction to managerial and cost accounting concepts with an emphasis on uses of accounting data by managers in planning operations, controlling activities, and decision making. Prerequisite: 201.

311-312 Intermediate Financial Accounting (3,3) Theories, principles, and procedures related to the valuation of assets, liabilities, and equities; measurement of periodic income; and preparation of financial statements. Prerequisite: 202 for 311 and 311 with a grade of C or better and Management 303 for 312.

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 or Coreq: Management 303.

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: 321, Management 303, junior standing. Major exam may be given during the last class meeting. F, Sp.

411 Auditing (3) Role of auditing in society, operational auditing, professional auditing standards, auditor's legal responsibilities, audit evidence and reporting, role of internal control and statistical sampling in auditing, applications to specific transaction cycles. Prerequisite: 312 with a C or better. 341. F, Sp.

414 Advanced Accounting (3) Issues and alternatives in advanced accounting theory and problem areas including financial accounting theory, partnership accounting, business combinations, consolidated financial statements, and not-for-profit accounting. Major writing requirement. Prerequisite: 312 with a C or better.

431 Federal Income Taxation (3) Fundamentals of gross income, deductions, credits, and tax determination. Introduction to taxation of corporations and partnerships. Prerequisite: 311 with a C or better, or consent of instructor.

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 with a grade of C or better 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 with a grade of C or better.

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 with a grade of C or better.


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 with grades of C or better. Open to marketing seniors in the College of Business Administration with consent of Head of Department of Advertising.

470 Advertising Campaigns (3) Group-based development, execution, and evaluation of an advertising campaign for a regional or national client. Prerequisite: 450 with a grade of C or better.

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 presentation of different viewpoints. Prerequisite: 340. F, Sp.

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 advertising and social issues.

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.

493 Independent Study (1-3) Individual study 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.

211 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.

212 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, post-colonial 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.)

314 Peoples and Cultures of Africa (3) (Same as Anthropology 314.)

315 African-American Anthropology (3) (Same as Anthropology 315.)

319 Caribbean Cultures and Societies (3) (Same as Anthropology 319 and Latin American Studies 319.)

322 Minority Group Politics in the United States (3) (Same as Political Science 322.)

343 Race and Ethnicity (3) (Same as Sociology 343.)

350 History of Jazz (3) (Same as Music History 350.)

352 African-American Religion in United States (3) (Same as Religious Studies 352.)

353 Topics in African-American Religion (3) (Same as Religious Studies 353.)

364 Contemporary Issues in African-American Education (3) (Same as Curriculum and Instruction 364.)

371-372 African History (3,3) (Same as History 371-372.)

373 African Religions (3) (Same as Religious Studies 373 and Anthropology 373.)
Agricultural Engineering/Courses of Instruction

430 Agricultural Policy (3) Values, goals and policy process. Economic rationality and effects of policy. Historical development and current characteristics of commodity, credit, food, and trade policy. Prereq: 320 or consent of instructor. Sp

440 Agricultural Production Economics (3) Application of microeconomic theory to problem of resource allocation, enterprise selection, scale of operation, and operation of agricultural firms, economic interpretation of technical and financial agriculture production relationships. Prereq: 320 or consent of instructor. Sp

442 Agribusiness Management (3) Advanced decision making and reporting techniques. Planning and organizing functions, analyzing investment alternatives, evaluating budgets and financial statements, and the profitability and solvency, using computers in business decisions. Prereq: 342, Agriculture 290, Statistics 302, and Accounting 202 or consent of instructor. F

450 Agricultural Price Analysis (3) Demand and supply mechanisms in agriculture; price determination; spatial equilibrium; temporal price patterns; pricing institutions. Prereq: 320, 350 and Statistics 302. F

460 Rural Economic and Community Development (3) Historical and theoretical perspective on problems facing rural communities; impact of community farm and nonfarm sectors; models and tools for analyzing rural development. Prereq: 210 or consent of instructor. F

470 Natural Resource Economics (3) Nature of natural resources; economic efficiency as a basis for natural resource use; externalities and public use. Factors influencing environmental quality; alternative public policy tools for influencing natural resource use or improving environmental quality. Prereq: 210 or consent of instructor. Sp

492 Off-Campus Internship (1-3) Supervised experience at department-approved internship site. May be repeated up to a maximum of 3 hours. Prereq: Junior standing. S/N: E

493 Independent Study (1-3) Directed individual or team research and report writing in specific topics. Student must arrange with instructor before registering. May be repeated. Maximum 6 hours. Prereq: Junior standing. E

AGRICULTURAL ENGINEERING (066)

105 Fundamentals of Engineering in Bio-Resource Systems (3) Application of basic engineering principles as related to bio-resources; problem solving and reporting techniques; engineering tools; measurement techniques. Not available for credit if credit has previously been received for Basic Engineering 151. 1 hour and 1 lab. F

201 Career Opportunities (1) Activities and opportunities in the fields of specialization; required training for each area; projected career activities. 1 hour. F

303 Transport Processes in Biological Systems (3) Analysis of ballot systems with emphasis on thermal energy and mass transfer. Thermodynamics, non-conduction and less heat transfer, and mass transfer. Prereq: Mechanical Engineering 331. Sp

311 Processing Food and Biological Materials (3) Application of basic engineering principles to processing and handling of biological materials: physical properties, thermal processing, drying, evaporation, refrigeration and freezing, and physical processes and extraction. Prereq: Engineering Science and Mechanics 341. Agricultural Engineering 303. 2 hours and 1 lab. F

320 Structures and Environment (2) Environmental control systems; ventilation, heat and moisture balances, and air and water requirements of agricultural buildings; material selection and cost. Prereq: Junior standing. 1 hour and 1 lab. Sp

331 Power Units and Machinery (3) Internal combustion engines in farm and nonfarm applications; fuel requirements of agricultural buildings; material selection and cost. Prereq: Mechanical Engineering 331. Sp

340 Soil and Water Conservation (2) Hydrologic, agronomic, and engineering principles applied to re-
source management problems including food and erosion control, drainage, and water quality. Prereq: Plant and Soil Science 201-202; Coreq: 201-202. S


400 Professional Development (1) Engineering ethics; professional opportunities for professional development and continuing education. 1 hour. F

403 Engineering Design Fundamentals (3) Nature of design, functional analysis, creativity, analyses and synthesis; geometric and kinematic requirements; plane mechanisms, design analysis, design and tolerance analyses applied to design project. Prereq: Senior standing. Design content: 3 hours. 1 lab and 1 F, S

413 Component Design and Machine Synthesis (3) Synthesis of design; structural, kinematic, power, control-system development; preparation of drawings, specifications, model of design, written and oral report on project. Design content 3 hours. Prereq: 403. 1 hour and 2 labs. F, S

423 Irrigation and Waste Management System Design (3) Design of irrigation and agricultural waste management systems with consideration given to live-stock waste characteristics, and impact on crop yield and water quality. Design content: 3 hours. Prereq: 340. 311. 1 hour and 2 labs. F, S

430 Mobile Hydraulic Power System Design (3) Functional and operational characteristics of mobile hydraulic system components including pumps, valves and actuators; analysis and synthesis of power transmission and control circuits. Prereq: Engineering Science and Mechanics 341. 1 hour and 1 lab. Sp, AO

433 Food and Bioprocessing System Design (3) System design for processing, handling, and storage of food and biological materials. Mass and energy balances, product characteristics, equipment specifications, economic analysis, safety and human factors considerations. Design content: 3 hours. Prereq: 311. 1.1 hour and 2 labs. F, S

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 controls. Includes laboratory experiments and design projects. Design content. 1 hour. Prereq: Electrical and Computer Engineering 301-302, 3 labs. 1 hour and 1 lab. F, S

470 Special Problems in Agricultural Engineering (1-3) Selection, analysis solution and report of problem. May be repeated. E

480 Selected Topics in Agricultural Engineering (1-3) Current trends and problems in agricultural engineering. May be repeated. E

AGRICULTURAL ENGINEERING TECHNOLOGY (067)

202 Materials and Fabrication (3) Properties of materials including wood, metals, concrete, plastics and lubricants; drafting and plan reading; fabrication techniques and processes involving hand tools, power equipment, and arc and gas welding. 1 hour and 2 labs. F, S

212 Surveying (3) Measurement of distances, angles, and areas; differential and plane; leveling; topographic surveying and mapping; use of computer-computing. Prereq: Math 119 or consent of instructor. 1 hour and 1 lab. F, S

220 Anatomy and Physiology of Farm Animals (3) Structure and production principles of food animal species, and their adaptation to agricultural practices; management considerations; field efficiencies; capabilities; adjustment and selection. Prereq: Math 121. 2 hours and 1 lab. F

242 Agricultural Waste Management and Pollution Control (3) Waste management and pollution control characteristics of animal manure, techniques for collecting, transporting, storing, and utilizing livestock waste. Prereq: Mathematics 121. 2 hours and 1 lab. F

452 Small Internal Combustion Engines (3) Theory, concepts and mechanisms of small internal combustion engines; theoretical cycles, selection, operation, adjustment, troubleshooting and repair of single cylinder engines. Prereq: Physics 121 or consent of instructor. 2 hours and 1 lab. S

452 Agricultural Chemical Application Technology (3) Equipment for application of liquid, solid, and gaseous agricultural chemicals; system components; operational characteristics; calibration; selection and management; safety considerations; materials handling and disposal methods. Prereq: Physics 121 or consent of instructor. 2 hours and 1 lab. S

Agriculture (088)

101 Perspectives in Agriculture and Associated Natural Resources (3) Historical development, current national and international issues, and trends for the future. 3 hours. F

290 Microcomputer Applications to Problem Solving (3) Use of the microcomputer to analyze and report problems related to agricultural sciences and natural resources. Introduction to word processing, spreadsheets, data bases, presentation graphics, and other applications such as needed for problem analysis and writing reports. 2 hours and 1 lab. F, S

317 Agriculture and Natural Resources Honors Seminar (1) Discussion of selected topics, issues and problems influencing national and international food, agriculture and natural resources systems. Primarily for College Scholars Students. May be repeated. Maximum of 8 hours. Satisfactory/No Credit only. F, S

480 Agricultural Management Systems Analysis (3) Interdisciplinary management oriented course for the application of systems analysis concepts to planning and operation of farm business. Team work, application of technical knowledge to a practical farm situation and evaluation of interrelationships among various subsystems. Open to juniors and seniors by invitation only.

AIR FORCE AEROSPACE STUDIES (094)


103-104 Leadership Laboratory (1,1) Initial leadership experiences and orientation to active duty. Instruction: drill and ceremonies; Air Force standards, customs, and courtesies; the Air Force as a profession and the environment in which the Air Force officer works. Coreq: 101-102. Satisfactory/No Credit only. F, S

201-202 Air Force Aerospace Studies (1,1) Introduction to study of air power from a historical perspective starting before the Wright Brothers and continuing into the 1980s. 3 hours. F, S

303-304 Leadership Laboratory (1,1) Intermediate leadership experiences and orientation to active duty. Instruction: teaching/pertaining drill and ceremonies; Air Force standards, customs, and courtesies; the Air Force as a profession and the environment in which the Air Force officer works; and preparation for field training. Coreq: 201-202. Satisfactory/No Credit only. F, S

405 Field Training (Academic Program) (1-4) Role of United States military forces in contemporary world, with particular attention to United States Air Force, its organization and mission, various component forces of U.S. military forces including Joint Chiefs of Staff, subject to the 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-weeks. Coreq: 201-202. Satisfactory/No Credit only. F, S

401-402 Air Force Aerospace Studies (3,3) Role and function of professional officer in a democratic society; socialization process, public attitudes, and value orientations associated with professional military service; requisites for maintaining national security forces; decision-making processes of Department of Defense; political, economic, and social constraints affecting formulation of U.S. defense policy; impact of technological and international developments upon strategic preparedness; emphasis on development of communication skills. Prereq: Air Force ROTC approval and completion of 301-304. Coreq: 403-404.

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 both "mainstream" and "minority" cultures. Writing-emphasis course. F

312 Popular Culture and American Politics (3) (Same as Political Science 312.)

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.)

380 American Issues: War and the Peaceful Ideal (3) (Same as History 380.)

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 Opinions (3) (Same as Political Science 420.)

440 America: Mind, Mood, and Society (3) (Same as History 440.)

442 American Humor (3) (Same as English 442.)

455 Local and Regional History (3) (Same as History 455.)

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 Prevet students in their first year. Discussion of student services, activities, and careers; student participation in planning the college experience. Satisfactory/No Credit. F, S

220 Anatomy and Physiology of Farm Animals (3) Skeletal and joints; muscles; blood and microcirculation; nervous, endocrine, cardiovascular, respiratory, and digestive systems; demonstrations of physical-chemical phenomena. Prereq: Biology 120. 2 hours and 1 lab. F


280 Farm Animal Management Practices (3) Integration of herd/flock management practices into cattle, horse, poultry, sheep, and swine enterprises. Application of behavioral and behavioral characteristics of various animals, including facilities and restraint. Includes age and sex determination, pre- and post-natal care, identification, dehorning, castrating, docking, implanting, dubbing, foot
360 Genetics and Society (3) (Same as Botany 306.)

361 Advanced Reproduction (3) Collection, evaluation, and preservation of semen from domestic species. Breeding and infertility; diagnosis and treatment; semen cryopreservation. Prerequisites: Consent of instructor. 2 hours and 1 lab.

362 Principles of Archaeology (3) Research strategies; impact of prehistoric cultures on modern society. Prerequisites: Consent of instructor.

363 Animal Production Systems (3) Functional efficiency of various animal species. Prerequisites: Consent of instructor.

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 hours and 1 lab.


366 Dairy Cattle Evaluation (2) Comparative judging oral, oral reasons, and written reasons in dairy cattle. Prerequisites: 260.2 labs.

367 Judging Poultry and Poultry Products (2) Grading of poultry and poultry products according to USDA standards. Prerequisites: Consent of instructor.

368 Animal Health Management (3) Characteristics, symptoms, causes, and treatment of major diseases and parasites. Health regulations and herd health programs for all farm livestock species. 2 hours and 1 lab.

369 Animal Production Systems (3) Fundamentals of production and management systems in beef, dairy, pork, and poultry programs. Application of principles of nutrition, breeding, physiology, and marketing into enterprise systems. Decision making management practices and information resources, enterprise evaluation, and comparison of production systems. 2 hours and 1 lab.

370 Animal Nutrition, Feeds, and Ration Formulation (4) Properties, functions, utilization, and deficiency symptoms of essential nutrients; properties and functions of feedstuffs and principles of nutrients formulation. Prerequisites: Chemistry 110 or Chemistry 130 and Math 121.

371 Animal Health Management (3) Characteristics, symptoms, prevention, and treatment of major diseases and parasites. Health regulations and herd health programs for all farm livestock species. 2 hours and 1 lab.


373 Advanced Ration Formulation (3) 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. Prerequisites: 330 and introductory computer science course. 2 labs.

374 Advanced Animal Breeding (2) Computer simulation of genetic improvement of domestic species. Breeding and selection for swine, beef, and dairy cattle, evaluation of alternative breeding strategies; industrial programs in swine, poultry, beef, and dairy cattle; breed development, improvement, and utilization. Prerequisites: 340.1 hour and 1 lab.

461 Advanced Beef Cattle, Dairy Cattle, Horse, Poul- try, Sheep and Swine Judging (1) Specialization in judging; evaluation and presentation of oral reasons for classes of beef cattle, dairy cattle, horses, swine, poultry, laboratory, zoo, and companion animals. Prerequisites: Consent of instructor. 2 labs. SATISFACTORY/NO CREDIT. F, 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 responses and economic returns. Prerequisites: Completion of Animal Science sophomore and junior core courses or consent of instructor. 2 hours and 1 lab.

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 responses and economic returns. Prerequisites: Completion of Animal Science sophomore and junior core courses or consent of instructor. 2 hours and 1 lab.

484 Poultry 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 responses and economic returns. Prerequisites: Completion of Animal Science sophomore and junior core courses or consent of instructor. 2 hours and 1 lab.

485 Horse 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 responses and economic returns. Prerequisites: Completion of Animal Science sophomore and junior core courses or consent of instructor. 2 hours and 1 lab.

486 Lamb and Wool 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 responses and improvement programs. Management evaluated in terms of production responses and economic returns. Prerequisites: Completion of Animal Science sophomore and junior core courses or consent of instructor. 2 hours and 1 lab.

489 Companion, Zoo and Lab Animal Management (3) Principles of nutrition, physiology, breeding, handling, and housing of companion, zoo, and laboratory animals. Prerequisites: 489. Course must be taken with a grade of C or better. Consent of instructor.

490 Animal Science Field Study (1-6) Off-campus work experience approved by the department. Consent of instructor. 1 lab.

492 Animal Science Field Study (1-6) Off-campus work experience approved by the department. Consent of instructor. 1 lab.

493 Independent Study in Animal Science (1-3) Approved supervised study in areas not formally organized in courses offered in the department. Prerequisites: Approval of the instructor and appropriate core courses. Consent of the student and the department head. Consent of the instructor. 2 hours or 1 lab.

494 Animal Science Teaching Assistant (1) Assist the primary instructor in laboratory instruction and demonstration. Prerequisites: Consent of the instructor and Department Head. Consent of the instructor. 1 lab.

495 Seminar (1) Review of literature and oral and written presentation on special topics and current research in Animal Science field. Consent of the instructor. 2 hours or 1 lab.

496 Veterinary Medical Technology (1) For Animal Science majors. Prerequisites: Consent of the student and the Department Head. Consent of the instructor. 1 lab.

497 Veterinary Medical Technology (1) For Animal Science majors. Prerequisites: Consent of the student and the Department Head. Consent of the instructor. 1 lab.

498 Veterinary Medical Technology (1) For Animal Science majors. Prerequisites: Consent of the student and the Department Head. Consent of the instructor. 1 lab.
ment-substance patterns, and evaluating explanations of cultural change. Prereq: 120 or consent of instructor.

373 African Religions (3) (Same as Religious Studies 373 and African-American Studies 373.)

400 Readings in Anthropology (1-6) Problem-oriented directed readings in anthropology. Prereq: Anthropology major or instructor standing or consent of instructor. May be repeated. Maximum 6 hours.

410 Principles of Cultural Anthropology (3) Exploration and illustration of major concepts, theories, and methods in cultural anthropology, with application to analysis of specific ethnographic cases. Prereq: 120.

411 Linguistic Anthropology (3) Basic linguistic concepts applied to research in cultural anthropology, particularly investigation of relationships between language and culture. Prereq: 130 or Linguistics 200. (Same as Linguistics 411.)

412 Folklore in Anthropology (3) Introduction to anthropological study of folklore, using folklore and folktale materials from various tribal, peasant, and complex societies. Prereq: 130 or consent of instructor.

413 Dynamics of Culture (3) Definition and in-depth study of major forms of culture change, ranging from evolution and diffusion to religious revitalization and political revolt. Continuity and change in diverse cultural settings examined in anthropological, ethnographic, and historical, and contemporary cases. Prereq: 130.

414 Political Anthropology (3) Examination of the organization and dynamics of power and politics in both stateless and state-level societies. The role of symbols, rituals, and ideology in producing and reproducing power relations. The relationship between actors (individuals and structures). The encapsulation of traditional political forms and systems within modern states. Prereq: 130 or consent of instructor. Writing-emphasis course.

430 Fieldwork in Archaeology (3-9) Practicum work in archaeological data recovery and analytical techniques. Prereq: Consent of instructor. May be repeated. Maximum 9 hours.

431 Ethnographic Research (3) Conceptual and practical exploration of methods and techniques cultural anthropologists use in fieldwork. Prereq: 130 or consent of instructor.

435 Historical Archaeology Laboratory (3) Laboratory procedures for the processing, identification, and interpretation of artifacts from historical sites. Antiquarium material from historic East Tennessee sites will be used for class projects. Prereq: 361 recommended.

440 Cultural Ecology (3) Concepts and methods in studying dynamic interactions between prehistoric and present day cultures and their environments. Topics include ecological theory, methods of analysis, and review of selected case studies. Prereq: 120, 130, 410, or consent of instructor.

450 Current Trends in Anthropology (3) Theoretical issues in anthropology for undergraduate students. Topics may include practical experience or laboratory study of anthropological materials. May be repeated. Maximum 6 hours. Prereq: Either 110, 120, 130 or consent of instructor.

459 Selected Topics in Anthropology (3) Theoretical issues in anthropology for undergraduate students. Topics may include practical experience or laboratory study of anthropological materials. May be repeated. Maximum 6 hours. Prereq: Either 110, 120, 130 or consent of instructor.

461 African Prehistory (3) African cultural history from the earliest evidence of human activity to the time of European contact. Emphasis on the stone age of Africa south of the Sahara. Prereq: 120 or consent of instructor. (Same as African-American Studies 460.) Writing-emphasis course.

462 Early European Prehistory (3) Origins and evolution of human culture in Europe through the beginnings of settled life. Primary focus on Paleolithic/ Mesolithic chronology and on Iron Age. Prereq: 120 or consent of instructor. Writing-emphasis course.

463 Rise of Complex Civilizations (3) Development of complex societies in Old World from origins of agricultural economics to rise of States. Focus on Mesolithic, Neolithic, and Metal Age lifeways in Africa, Europe, and Asia. Prereq: 120 or consent of instructor. Writing-emphasis course.

464 Principles of Zoooarchaeology (3) Basic osteological studies of major vertebrate groups, with emphasis on the aboriginal'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 archaeological remains from historic urban sites in the United States. Course content will include lectures and field and laboratory research on urban sites in East Tennessee. 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 Museology III: Field Projects (1-12) (Same as Art 484.)

491 Primate Evolution (3) Living and fossil primate taxonomy, ecology, and comport. Survey of primate fossil record with emphasis on the origin or major primate lineages. Prereq: 110.

491 Foreign Study (1-15)

492 Off-Campus 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) Introduction to human fossil record from the earliest human remains to the earliest representative of modern human form. Prereq: 110.

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. (Same as African-American Studies 496.)

499 Human Response to Environmental Stress (3) Explores the physiological perception of stress from the physical environment and the physiological, anatomical and behavioral responses to this stress.

ARCHITECTURE (133)

101 Introduction to Architecture (3) Scope and definition of architecture in the cultural, building industry, and allied design professions. Architectural design as a creative process. Orientation to courses and programs of the school. Coreq: 171. F

102 Visual Design (2) Principles of visual design and techniques of representation. Coreq: 122. Sp

111 Architecture and the Built Environment (3) An introduction to architecture and the built environment for non-architecture majors. Significance of our surroundings, forces that can create them. Creative aspects of design. Survey of examples from local to global. Strategies for individual and collective involvement.

171 Design Fundamentals I (3) Definition, ideas, and processes of design. Sketch design studies and freehand drawing. Introduction to drafting techniques; graphic and visual skill development. Coreq: 101. F


180 Introduction to Architecture (2) Introduction to the fundamentals of construction, materials and static in a lecture/seminar format.

181 Introduction to Basic Design (6) Introduction to basic principles in design and three dimensions. The work will be explored in a seminar format 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 Gothic period, Romanesque period, Renaissance Italian, France and Spain. Prereq: History 151, 152, F.

212 History and Theory of Architecture II (3) Architectural thought and ideas of building and community form. French, Italian, Gothic, Renaissance Italian, France and Spain through the mid-twentieth century. Prereq: 211. Sp

213 History and Theory of Contemporary Architecture (3) Architectural thought in design practice in the late twentieth century. Examples of contemporary architectural works and review of theoretical issues. Prereq: 212. F, 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 Architecture (3) Survey of the role of the computer in architecture, its potentials and limitations. Recent developments in computer graphics with specific applications and demonstrations. F, Sp

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 controls. F, Sp


281 Principles of Architectural Form (6) Principles of architectural form emphasizing building configuration and order. Study of single buildings which explore possibilities of site, use, shape and color. (1 credit hour seminar and 5 credit hour studio). Prereq: 182 or equivalent.

282 Principles of Architectural Design (6) Principles of architectural design emphasizing site, function, circulation, structure, context and design of buildings (1 credit hour seminar and 5 credit hour studio). Prereq: 281.

312 Materials and Methods of Construction (3) Properties of interior and exterior building materials and their relation to construction methods and detailing. Theory of material selection and application and the role of materials and methods play in the design process. Prereq: 232. Sp

323 Advanced Computer Applications (3) Computer applications in architecture with special emphasis on environmental control systems and/or structural calculations. Prereq: 231.


332 Architectural Structures II (4) Continuation of analysis and design of simple structures of steel, wood and concrete based upon specific loading requirements. Use of section and building codes, handbooks and design tables—select, cost determinations. Prereq: 331. Sp

334 Advanced Architectural Structures (3) Philosophy of structural design in relation to materials and form. Advanced mathematical and experimental analysis of structures, including composite structures. Prereq: 323 or equivalent.

335 Structures in Architecture I (3) Introduction to the structural properties of materials, foundations and simple
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.


345 Principles of Environmental Control I (3) Introduction to heating, ventilating, air-conditioning, solar energy, plumbing, and fire-protection systems. Prereq: 180 and 346. Prereq: 180 and Arch. Admission.

346 Principles of Environmental Control II (3) Introduction to electrical design and wiring, lighting and acoustics in buildings. Prereq: 180 and Arch. Admission.


400 Service Practicum (0) Experience in architectural or equivalent office for a minimum of 3 months to be completed prior to fifth year entry. E

403 Introduction to Preservation (3) History, theory, and legal aspects of architectural preservation and restoration.

404 Preservation Technology (3) Techniques of preservation: methods of analysis, history of materials and technology used in old buildings. Prereq: 403.

405 Descriptive Analysis of Historic Buildings (3) Identification and analysis of characteristic features or 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.

409 Cultural Comparison of Housing Patterns (3) Patterns of spatial organization and discrete elements of design for specific cultures with emphasis on housing. Cultural, social, economic, climatic and technical forces as sources of form.

410 History and Theory of Urban Form (3) Patterns of community growth and development through history and some examples from prehistoric times to the present, including 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 reading assignments, lectures, 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)

418 Forms of Utopia (3) Ideas and architectural expressions of Utopian movements. Visionary and fantastic architecture. Concepts of the future.

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) Stylistic periods from the Gothic Revival through the Twentieth Century.

421 History of Landscape Architecture (3) Intellectual, societal, and geographical influences which provide the theoretical basis for design throughout history. Selected examples of landscape architecture analyzed in terms of personal and public design.

422 Modern East European Architecture (3) Twentieth-century architecture in Russia, Czechoslovakia, Poland, Hungary, East Germany, Rumania, Bulgaria, Yugoslavia.

425 Special Topics in Architecture (1-4) Individual projects under faculty direction. Credit adjusted to project complexity and level of effort. May be repeated. Maximum credit 6 hours. E

426 Special Topics in History, Theory and Criticism (1-4) Special topics in history-related subjects. May be repeated. Maximum credit 6 hours.

431 Structural and Mechanical Applications (4) Analysis and selection of structural and mechanical systems for a specific case study to integrate technical information into a unified design solution. Prereq: 332, 342. Coreq: 471. F

443 Building Energy Analysis (3) Balancing heat flow through external, internal, and large commercial buildings; local climate evaluation; site planning, building size and orientation, window area, wall treatment for insulation control. Energy use quantification methods and economic analysis of energy efficient design features. Architectural program analysis of external and internal load dominated buildings. Prereq: 341.

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: 342.

462 Professional Practice (4) Management and organizational theories and practices for delivering professional 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 practitioners 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.


466 Marketing Services (3) Theories of marketing for architectural practice. Case studies. Public relations procedures.


472 Architecture Design VI (6) Order and form in complex buildings developed to address programmatic, structural, energy and environmental issues. Prereq: 471. Sp

473 Architectural Photography (3) Photography as a design, research, and presentation medium. Application of photographic techniques, printing and processing. Color, black and white.

480 Comprehensive Design Project I (3) Project selection and preparation for Architecture 482. Formation and documentation of hypotheses. Preparation of background and program information. Goals and concepts set for a project to be taken semester immediately preceding 482. F

481 Advanced Architectural Design Topics (6) Faculty initiated design projects. Advanced architectural topics not covered under 483, 484, 485, 486, or 489. Prereq: 472. F

482 Comprehensive Design Project II (6) Student selected topic under faculty direction. Exploration of design hypothesis which informs the character of substantial building design. (See Architecture 480.) Completed project will address all issues of environment, structure, end use, and ethical consideration of design appropriateness. Design is expected to stand up to rigorous scrutiny regarding strength of idea, economy of means, durability, viability for stipulated site, 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 responding to specific community conditions. Exploration of urban design in making and understanding the architecture of the city. Prereq: 472. F


485 Development and Design (6) Exploration of image making, consumerism and the allocation of scarce resources. Issues of finance, economics, urban economics, and marketing are analyzed in relation to urban and architectural design. Application of financial feasibility models. Prereq: 472 and 463 or consent of instructor. F

486 Design of Sustainable Architecture (6) Architectural design studio emphasizing concern for the environment through consideration of energy conservation techniques, and use of renewable resources. Prereq: 472. F

489 Structural Innovations (6) Building design with innovative structural configuration and technology. Exploration of new materials, detailing, and methods in building construction. Prereq: 472. F

491 Foreign Study (1-15) Research and design project(s) conducted in various locations abroad. Prereq: 472. F

492 Off-Campus Study (1-15) Studies conducted under direction of architect or expert in an allied profession, in service to public service organizations or agencies of government, and public groups. Not a Design Course elective.

493 Independent Study (6) Faculty initiated studies and projects which are approved by the dean and conducted in a studio. May be repeated once. Prereq: Consent of dean. E

ART (140)

101 Studio Fundamentals: Drawing and Design (2) Introduction to basic principles and techniques in drawing and techniques and the elements and principles of pictorial organization.

103 Studio Fundamentals: Three Dimensional Design (2) Projects dealing with realspace and three dimensional materials. Primarily for art, architecture, art education, and interior design and housing majors.

151 History of Graphic Design/Illustration (2) Major movements and pivotal artists/designers/illustartors/art directors, 1850 to the present, and their impact on current graphic design trends. (Does not apply to art history requirement.)

171 Introduction to Twentieth Century Art (3) History of development of modern art from Surrealism through Abstract Expressionism, Pop Art, Post-Particularly Abstract, Op Art, Kinetic Art, Happenings, Environments, Conceptual Art, Minimal Art, and Super Realism.

172 Western Art (3) Major monuments in Western Art with emphasis on Europe from prehistory through the Middle Ages. Writing-emphasis course.

173 Western Art (3) Major monuments in Western Art with emphasis on Europe from prehistory through the Middle Ages. Writing-emphasis course.

183 Asian Art (3) Art of Central and Southeast Asia, China, Korea, and Japan from prehistory through common Buddhist forms and into modern media. Writing-emphasis course.

181 Introduction to Studio Art: Various Media (3) Individual sections for various artistic disciplines. For
243 Metal Casting Sculpture I (3) Metal casting methods and techniques. May include use of hand and power tools, pouring, and construction.

244 Wood Sculpture I (3) Wood as sculptural medium. May include use of hand and power tools, carving, and construction.

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, as shown to create diverse forms. May include carving, modeling, moulding, construction, and found objects.


112 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.

113 Painting I: Introduction (3) Capacities of oil and acrylic painting on canvas. Prereq: 101, 103 for art majors; none for non-art majors.

114 Painting II (3) Techniques of expression in oil and/or acrylic. Prereq: 213 for art majors; 191-Painting for non-art majors. May be repeated. Maximum 6 hours.


216 Watercolor II (3) Capacities of transparent watercolor, with attention to individual exploration of surface, space, and concept. Prereq: 215 for art majors; Art 191-Watercolor for non-art majors. May be repeated. Maximum 6 hours.

217 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: Determined by department for individual topic. May be repeated. Maximum 6 hours.

220 Ceramics I: Handbuilding (3) All ceramic handbuilding techniques including forming methods, glazing, clay preparation, firing, small and large scale pieces. Ceramic history and techniques. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

221 Ceramic II: Throwing (3) Thrown ceramic forms including functional utilitarian pottery techniques, glazing and firing methods. Prereq: 221 for art majors; Art 191- Ceramics for non-art majors.

222 Special Topics in Ceramics (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

233 Photography I (3) Art of black and white photography. Field and studio shooting, history of photography, basic developing, and enlarging techniques.

234 Special Topics in Photography (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

241 Sculpture I (3) Problems which explore basic materials and techniques including clay modeling, plaster construction, moldmaking. 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 figure as subject. Modeling process 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, ceramics shell casting methods. May be repeated. Maximum 6 hours.

352 Intermediate Graphic Design II (3) Concepts of corporate graphics. Problems include all areas of graphic design and illustration. Prereq: 351.

353 Black and White Illustration (3) Black and white media and techniques as applied to product and editorial illustration. Prereq: 350.

354 Color Illustration (3) Flat and process color media and techniques as applied to product and editorial illustration. Prereq: 353.


356 Introduction to Computer Enhanced Design (1) The computer as a design tool. Prereq or Coreq: 351.

360 Printmaking Portfolio Review (0) Review of prior work in printmaking. Successful completion required prior to registration for junior and senior courses. Prereq: Consent of department. Satisfactory/No credit only.

362 Intaglio II (4) Color intaglio printing from a single metal plate, including a la poupee, chine colle', and relief rolls. Prereq: 262 and 360. May be repeated. Maximum 8 hours.

363 Lithography II (4) Color lithography from stone and plates using murl registration. Extra techniques; including xerox and monotype transfers, acid treating, reverse, chine colle' and photolithography. May be repeated. Maximum 8 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. May be repeated. Maximum 8 hours.

371 Early Christian and Byzantine Art, to 1350 (3) Art in Italy and the Eastern Empire from the beginnings of Christian art to c. 1350. Mosaics and painting, sculpture and architecture. (Same as Medieval Studies 371.)

372 Northern European Painting, 1350-1600 (3) From court art of late Middle Ages to Northern Renaissance. Jan van Eyck, Roger van der Weyden, and Durer; early printmakers. (Same as Medieval Studies 372.)

374 Art of Northern Europe, 1600-1750 (3) Concentrated study of Rubens, Rubens, Rembrandt, Georges de La Tour, Vermeer, Poussin, and Hals.

381 Medieval Art of the West, 800-1400 (3) Western European art of the "Dark Ages," Romanesque, and Gothic periods. (Same as Medieval Studies 381.)

382 The Art of Italy: 1250-1450 (3) Development of exploration of naturalism. Revival of antiquity and development of perspective in the Early Renaissance. Including Duilio, Giotto, Masaccio, Donatello, Botticelli. (Same as Medieval Studies 382.)


384 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.

385 Chinese Art (3) Survey from pre-Shang Dynasty to contemporary movements in China, Taiwan, and Hong Kong. New discoveries are stressed. Writing-emphasis course.

386 Japanese Art (3) Survey from ancient Jornan art in clay to the Ninjao painting style of today. Variety of media emphasized. Writing-emphasis course.

392 Advanced Film Design (3-6) Theory and practice of filmmaking. Prereq: 292. (Same as Cinema Studies 392.)

396 Beginning Airbrush (3) Techniques of airbrush drawing, skills and creative applications emphasized. For art majors.

401 Individual Class Projects in Fabric (3-6) Prereq: 201, 301 or consent of instructor. May be repeated. Maximum 12 hours.

402 Individual Class Projects in Fiber (3) Prereq: 202, 302 or 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.

404 Computer Enhanced Design (3) Exploration of computer systems, software and techniques. Prereq: 356 or consent of instructor. May be repeated. Maximum 6 hours.

405 Advanced Computer Enhanced Design (3) Prereq: 404 or consent of instructor. May be repeated. Maximum 6 hours.

409 Special Topics in Fiber/Fabric (3) Student or instructor-initiated course to be offered at convenience of department. Prereq: Determined by department for individual topic. Maximum 12 hours.

411 Drawing IV (6) Individualized pursuit of personal drawing techniques and concepts, supplemented by individual and group critiques and weekly life drawing sessions. Prereq: 311. May be repeated. Maximum 12 hours.

413 Painting IV (6) Advanced painting stressing individual concepts and personal expression with varied media. Prereq: 313. 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 and drawing, and watercolor curriculum. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

421 Ceramics: Individual Projects (3-6) Special topic each semester, e.g., low fire ceramics, alternative firing methods, specialized clay techniques. Individual direction stressed. Prereq: 321 and 322. May be repeated. Maximum 12 hours.

422 Ceramics: Advanced Projects (3-6) Each student is responsible for invention of specific concept using appropriate materials, methods and presentation. Prereq: 421. May be repeated. Maximum 12 hours.


424 Ceramics: Clay and Glazes (3) Clay chemistry, clay bodies, glaze composition, glaze formulation, mixing and testing of clay bodies and glaze formulas. Prereq: 321 and 322.

425 History of Ceramics Seminar (3) Survey of the historical development of ceramics through the ages. Emphasis on ceramics sculpture, and the vessel aesthetic. Slides lectures and individual presentations. (Does not apply toward art history requirement.) Prereq: 321 and 322.

426 Kilns: Design, Construction and Operation (3) Designing kilns, traditional and modern refractories, construction methods, and operation of wood, gas and electric kilns. Prereq: 321 and 322.

429 Special Topics in Ceramics (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

431 Photography III (3-6) Individual development of photographic problems and techniques. Prereq: 232 and 331. May be repeated. Maximum 12 hours.

439 Special Topics in Photography (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

441 Advanced Sculpture (3-6) Individual development of sculptural problems and techniques. Prereq: 3 hours of 200 level sculpture. May be repeated. Maximum 12 hours.

449 Special Topics in Sculpture (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.


452 Advanced Graphic Design II (3) Advanced investigation into visual systems and their impact on visual design. Prereq: 451.

453 Advertising Illustration (3) Concepts of advertising illustration media and techniques as applied to project illustration. Prereq: 354.


455 Senior Portfolio Seminar (3) Assembly, organization and writing of senior level portfolio. Consent of instructor required. Prereq: Only by prearrangement with the department. Prereq: Senior standing and consent of instructor. May be repeated. Maximum 12 hours.

459 Special Topics in Graphic Design/Illustration (3) Student or instructor-initiated course offered at discretion of department. Prereq: Determined by department for individual topic. 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: 362. May be repeated. Maximum 12 hours.

463 Lithography III (6) Exploration of individual projects through advanced color printing methods and combinations with other print media. Prereq: 363. May be repeated. Maximum 12 hours.


469 Special Topics in Printmaking (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

471 History of North American Art (3) Survey of landmarks in painting, architecture, sculpture, and design from prehistory to 1900.

472 History of 20th Century American Art (3) Development in architecture, painting, and design from 1900.

473 19th Century American Painting (3) From West and Copley to emergence of "The Eight".

474 History of Modern Architecture in Europe and America (3) Survey of 19th century styles, Sullivan and skyscraper, 20th century: Viennese leaders, the Bauhaus, Gropius, Van der Rohe, Le Corbusier, and Wright, Aalto to Kahn, Tange and Metabolism, Archigram, Soester, and Venturi.


479 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.

481 Museology I: Museums, Purpose and Function (3) Purposes, functions and development of museums of art, history, 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, promotion, 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 482. May be repeated. Maximum 12 hours. (Same as Anthropology 484.)


486 Art of Indian Asia (3) History of Indian art with consideration of the art of Central Asia and Southwest Asia. Writing-emphasis course.

499 Studies in Art History (3) Concentration in individually selected area. Prereq: 12 hours of art history and consent of instructor. May be repeated. Maximum 6 hours.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

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.

496 Advanced Airbrush (3) Advanced techniques of airbrush painting and design and in use in illustration emphasis; Prereq: 396.

499 Special Topics (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

ART ARROWMONT PI BETA PHI SCHOOL OF ARTS AND CRAFTS

200 Special Topics (2-4) Student- or instructor-initiated course offered at convenience of department. May be repeated.

210 Drawing (2-4) Beginning to intermediate. May be repeated.

220 Ceramics (2-4) Beginning to intermediate. May be repeated.

230 Photography (2-4) Beginning to intermediate. May be repeated.

240 Painting (2-4) Beginning to intermediate. May be repeated.

250 Metal Design (2-4) Beginning to intermediate. May be repeated.

260 Fibers (2-4) Beginning to intermediate. May be repeated.

270 Fabric (2-4) Beginning to intermediate. May be repeated.

280 Enameling (2-4) Beginning to intermediate. May be repeated.

290 Wood (2-4) Beginning to intermediate. May be repeated.

400 Special Topics (2-4) Student or instructor-initiated course offered at convenience of department. May be repeated.

410 Drawing (2-4) Intermediate to advanced. May be repeated.

420 Ceramics (2-4) Intermediate to advanced. May be repeated.

430 Photography (2-4) Intermediate to advanced. May be repeated.

440 Painting (2-4) Intermediate to advanced. May be repeated.

450 Metal Design (2-4) Intermediate to advanced. May be repeated.

460 Fibers (2-4) Intermediate to advanced. May be repeated.

470 Fabric (2-4) Intermediate to advanced. May be repeated.

480 Enameling (2-4) Intermediate to advanced. May be repeated.

490 Wood (2-4) Intermediate to advanced. May be repeated.

ART EDUCATION (141)

301 Foundation of Art Education (3) Basic philosophy and structure including directed learning activities in two and three dimensional design, art appreciation, and teaching methodology. Prereq: Admission to Teacher Education Program. F, Sp

302 Concepts of Teaching and Painting (3) Processes in teaching of drawing and painting including consideration of pertinent literature and research. F, Sp

303 Concepts of Sculpture and Crafts (3) Processes in teaching of sculpture and crafts including pertinent literature and research. Prereq: 301 and admission to Teacher Education Program. F

304 Concepts of Printmaking, Graphic Design and Lettering (3) Processes in teaching printmaking, graphic design and lettering including pertinent literature and research. Prereq: 301 and admission to Teacher Education Program. Sp

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. Sp

400 Curriculum Planning and Teaching Strategies (3) Program development, instructional methods, professional literature, contemporary issues, simulation and micro teaching situations. Prereq: 301 and admission to Teacher Education Program. F, Sp

410 Pre-Internship Seminar (1) Orientation describes the objectives and policies of the internship program. Must be completed the term immediately preceding the internship. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. Sp, Su

481 Internship I: Grades K-12 (3-6) Test of material and skills and the ability to work with children. Teaching experience in local public schools. Application for internship should be made upon admission to Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

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: 481 and admission to Teacher Education Program. Satisfactory/No Credit only. Sp

489 Special Topics (3) May be repeated. Maximum 6 hours.

493 Independent Study (3) May be repeated. Maximum 9 hours.

ASIAN LANGUAGES (144)

131-132 Elementary Chinese I, II (5,5) Must be taken in sequence. F, Sp

151-152 Elementary Japanese I, II (5,5) Must be taken in sequence. F, Sp

161-162 Elementary Persian (4,4) Taped language program. Must be taken in sequence.

199 Japanese Language and World Business (2) The course will examine the importance of foreign trade at the local, state, and national level. An interdisciplinary team of faculty from the College of Business Administration and Liberal Arts will provide an overview of the value of language study and international cultural awareness in world business. Restricted to students majoring in Business Administration or World Business major concentration. See the 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) Classical and modern literature. 312: Classical literature, modern literature. Writing-emphasis course.

313-314 Japanese Literature in English Translation (3,3) 313-Classical and modern literature. 314: Modern literature. 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 conversation, drill, 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 of Chinese or consent of instructor. May be repeated. Maximum 9 hours.

451 Readings in Japanese Literature (3) Prereq: Mastery of intermediate-level of Chinese or consent of instructor. May be repeated. Maximum 9 hours.

480 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.

ASIAN STUDIES (145)

101-102 Asian Civilization (3,3) Comparative study of development of religion, social institutions, and high culture in India, China, Japan, and the Islamic world. 101-India and the Islamic World. 102-China and Japan. Writing-emphasis course.

121-122 Elementary Modern Standard Arabic I, II, (5,5) Literary Arabic, the language of the press, broadcasting, literature, and formal situations. Meets every day, three days with instructor and two with native informant in addition to language lab. Must be taken in sequence.

141-142 Elementary Modern Hebrew I, II (4,4) Taped language program. Must be taken in sequence. Enrollment by permission of instructor.

221-222 Intermediate Modern Standard Arabic I, II (5,5) Literary Arabic, the language of the press, broadcasting, literature, and formal situations. Meets every day, three days with instructor and two with native informant in addition to language lab. Must be taken in sequence. Prereq: 121-122 or equivalent or consent of instructor.

241-242 Intermediate Modern Hebrew I, II (4,4) Taped language program. Prereq: 141-142 or equivalent or consent of instructor. Must be taken in sequence.

261-262 Intermediate Persian (4,4) Taped language program. Prereq: 161-162 or equivalent or consent of instructor. Must be taken in sequence.

319 Islamic Language in English Translation (3) Selections from the Koran, classical Arabic and Persian poetry, and classical Arabic, Persian, and Turkish prose, including history, philosophy, mysticism, and belles-lettres.

321 Spoken Lebanese-Palestinian Arabic (4) Informal Arabic for use in daily life. Emphasis on appropriate response and understanding of cultural context. All work is oral, including exams, but grammatical analysis is based on standard (written) Arabic. Prereq: 121-122 or consent of instructor.

322 Advanced Modern Standard Arabic (4) Advanced grammar and readings in modern Arabic. Prereq: 221-222 or consent of instructor.

323 Classical Islam (3) Same as Religious Studies 333.

333 Islam in the Modern World (3) Same as Religious Studies 333.

471 Selected Topics in Asian Studies (3) Content varies. May be repeated. Maximum 9 hours.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)
ASTRONOMY (150)
151-152 Introductory Astronomy (4,4) Survey of the composition, structure, and dynamics of the universe which introduces the basic vocabulary of astronomy and scientific method. Components of the solar system including results from interplanetary exploration; hypotheses about origin and evolution of the solar system in light of current knowledge and scientific reasoning; stellar birth, evolution and death as a chain of events; changes and dynamics 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 1 hour laboratory. Only one of the three sequences 151-152, 161-162, or 217-218 may be taken for credit.

217-218 Honors Introductory Astronomy (4,4) Introduction to the study of modern astrophysics. Historical perspectives in understanding the celestial universe, 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; galactic structure and models of the universe; observational technique and interpretation of underlying physical laws in accompanying laboratory. 3 hours lecture, 2 hours laboratory. Only one of the three sequences 151-152, 161-162, or 217-218 may be taken for credit.

411 Astrophysics (3) Development of analytical physics and principles of scientific method. Components of the solar system including results from planetary exploration spacecraft; hypotheses and theories of the origin and evolution of the solar system in light of current knowledge and scientific reasoning; stellar birth, evolution, and death as a chain of events; characteristics of galaxies and of the beginning of the universe in light of modern astrophysics and particle physics. Prerequisites for interpretation of observations are reinforced in laboratory. Must be taken in sequence. 3 hours lecture, 2 hours laboratory. Only one of the three sequences 217-218, 214-215, or 217-218 may be taken for credit.


420 Advanced Topics in Biochemistry (3) Selected topics of current research interest, e.g., allosteric theory and control of protein function, immunology, regulation of gene expression, bioenergetics, etc. Emphasis on original literature and current state of the art of the science. Prerequisites: current knowledge of current methods. Recommended, but not required, for biology majors. May be repeated with permission of the instructor. 3 credits, 3 hours laboratory. Only one of the three sequences 419-420, 419-420 or 419-420 may be taken for credit.

421 Independent Research in Biochemistry (1-6) Supervised research in the laboratory of a staff member. Limited to undergraduates and by consent of instructor. May be repeated. Maximum 12 hours. Prereq. or Coreq: 410, 419.

422 Junior/Senior Seminar (1) Lecture/discussion on a topic of biochemical principles and techniques in the research, clinical, diagnostic or therapeutic environment. May not be used toward requirements for major. Laboratory and research participation required. 3 credits, 3 hours discussion and/or experiment. 471-481 Introduction to Physical Biochemistry (3,3) Physicochemical principles with applications to biological systems. Must be taken in sequence. 471 Thermodynamics: chemical equilibrium; solution chemistry; transport phenomena; biophysics; kinetics; enzyme catalysis. 481 Elementary quantum chemistry, interactions of light with biological molecules; optical and magnetic spectroscopy; light scattering; case studies of selected macromolecules. Prereq. Mathematics 142, Chemistry 360-369 and Biology 120 or consent of instructor. 471-F, 481-S. (Same as Chemistry 471-481.)

313 Introductory Plant Pathology (3) (Same as Entomology and Plant Pathology 313.)


330 Field Botany (4) Principles of taxonomy, basic ecological concepts and the identification, recognition, collection and preservation of native and naturalized plants. Prereq: 8 hours in biological sciences. F, Sp, Su.

346 Introduction to Oceanography (4) Physical, chemical, biological, and geological processes of the oceans, including tides, waves, ocean circulation, ocean basin processes, marine sedimentation, biogeochemical cycles, and food webs.

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 guidance of selected staff. By application only. May be repeated with consent of department. Maximum 4 hours.

401-402 Field Studies in Botany: (Specific Topic to be announced) (3,3) Field experience and taxonomy of special plant groups. Selected field topics will vary and may include: Bryology, Lichenology, Pteridology, Agrostology, Mycology, Physiology, Aquatic Vascular plants, Synanthrology, Woody Plants, and Botanical Photography. May be repeated, but no specific topic may be repeated for credit. Maximum 9 hours.


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 110-120.

431 Plant Ecology (3) Interactions between individuals, species, communities and their environments. Circulation of energy and matter in ecosystems. Weekly field trips or laboratory periods, and at least two weekend field trips. Prereq: 330 or equivalent. Sp.

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 grade average 3.0, consent of instructor. May be repeated. Maximum 8 hours.

451 Plant Tissue Culture (3) Methods for the culture of cells, tissues, and organs including media preparation and maintenance of plant cultures in the laboratory. Prereq: Botany 110-120 or Biology 110-120 or equivalent and Chemistry 120-130 or equivalent. Recommended: Botany 310-320, 321; Microbiology 310 or 318; Ornamental Horticulture and Landscape Design 330; and Plant and Soil Science 331. (Same as Ornamental Horticulture 451.)

BROADCASTING (202)

275 Introduction to Radio and Television (3) Lecture and lab course providing students with an overview of radio, television, recording and the recording industry. Includes history, programming, regulations, and effects of radio and television on society. Students gain practical experience in radio at WUTK-FM and television through a weekly TV lab. Prereq: Communications 100.

310 Radio News (3) Writing, reporting, and performing news for radio. Lecture and lab course with experience in total news operation of WUTK-AM. Prereq: 275 and Communications 200.

320 Radio Sales and Promotion (3) Principles of radio sales and promotion. Use of ratings in sales presentations and promotion campaigns. Students are assigned to work in sales and promotion at WUTK-AM. Prereq: 275 and Communications 200.


410 Television News (3) Writing, reporting, 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.

420 Television Sales and Promotion (3) Problems and practices of television sales and cable sales and promotion. Case studies in sales and sales management; use of ratings and computers in sales presentations and promotion campaigns. Practical experience in television sales and promotion included. Prereq: 320.

430 Producing for Television (3) Principles of television studio and field production, both technical and creative. Writing, producing, shooting and editing video stories and programs. Includes use of video cameras, design, and editing system. Prereq: 330.

440 Corporate Video (3) Examination of special requirements of business, industrial, educational and medical uses of video. Management, planning, budgeting, planning and evaluation of video productions. Prereq: 330 or equivalent. May include: Corporate video, satellite videoconference. Includes production of corporate video projects. Prereq: 275 or consent of instructor.

470 Cable Television and Emerging Technologies (3) History and structure of the cable television industry. Cable regulations and programming. Examination of the role of the telephone company in cable video programming. Exploration of all technologies used in corporate video, including satellite videoconferencing. Includes production of corporate video projects. Prereq: 275 or consent of instructor.

490 Radio and Television Management (3) Business policies and practices of broadcast operations, departmental functions, cost and income analysis, leadership styles, team techniques and management. Capstone course to be taken in student's last semester. Prereq: 275, 310, 320, 330.

492 Practicum (1) Work and learning experience at radio, television or non-broadcast facilities. Final written report required. May be repeated once. Prerequisites: Senior standing and consent of department head.

493 Independent Study (1-15) Prereq: Consent of instructor.

494 Foreign 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 and theories of international management. Students should have successful completion of Business Administration 355 and 356. Prereq: Consent of instructor.

BUSINESS ADMINISTRATION (205)

311 International Business (3) Survey of international business, with emphasis on operations in an international context. Analysis of international trade and investment environments, including cultural, political, economic and legal characteristics. Prereq: Economics 201.

320 Business Career Planning and Placement (1) Career opportunities in business. Making the career decision, preparing for and conducting a job campaign. Using the Placement Office. Satisfactory/No Credit only. Prereq: Satisfactory progression to upper-division level in Business or Liberal Arts Business Minor.

487 Honors: Corporate Executive in Residence Seminar (2) Interaction with top corporate executives from a wide spectrum of business, industry, and international strategic planning as it is applied in major U.S. Corporations. Executive presentations and small group discussion on good business practices in consumer and industrial settings. Prereq: Senior standing, Finance 201, Management 301, Marketing 201 and consent of instructor.

490 Intensive Study (1-15) Prereq: Consent of instructor.

492 Off-Campus Study (1-15) Satisfactory/No Credit grading only. Prereq: Consent of instructor. See page 57.

493 Independent Study (1-15) Prereq: Consent of instructor. See page 57.

495 Seminar in International Business Policy (3) Capstone course for students in the Language and World Business Program designed to integrate concepts and theories of international management. Students should have successful completion of Business Administration 355 and 356. Prereq: Consent of instructor.

BUSINESS LAW (216)

301 The Legal Environment of Business (3) Introduction to legal system including legal ethics (jurisprudence), sources of law, steps in lawsuits, constitutional law relating to businesses, environmental and securities laws, antitrust law, employer-employee relations, product liability, consumer protection, business associations, personal law, contracts, and white collar crimes and torts. Prereq: Junior standing. E.

401 Law of Business Organizations and Commercial Transactions (3) Introduction to legal implications of basic business concepts. Includes contract law, tort law, intellectual property, negotiable instruments, secured transactions, bankruptcy, suretyship, insurance, and legal liability. 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, gas laws, 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: alkenes, unsaturated and aromatic hydrocarbons, structures and reactions of various organic functional groups. Biochemistry: amino acids and proteins, carbohydrates, lipids, and nucleic acids. 3 hours and 1 lab. Prereq: 100 or 130 or 131 or 138. 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, kinetics. 130 - Chemical equilibria, thermodynamics, descriptive chemistry of non-metallic and metallic elements, introduction to organic and biochemistry. Prereq for 130: 120 or 121 or 128. 3 hours and 1 lab. E.

121-131 General Chemistry (4,4) For chemistry majors. Subject matter similar to Chemistry 120-130. Prereq for 131: 120 or 121 or 128. 3 hours and 1 lab. 121 F, 131-Sp.

128-138 Honors: General Chemistry (4,4) 3 hours and 1 lab. 128-F, 138-Sp.

140 Chemical Programming (2) Use of the computer in solving problems encountered in chemistry. Required of and limited to chemistry majors. Prereq: Coreq 150 or Coreq 130 or 131 or 138. 1 hour and 1 lab. Sp.

200 Introduction to Chemical Research (1) Participation in an active research program in analytical, inorganic, organic, physical, or polymer chemistry. Students work under the direction of faculty members, perform 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: Coreq or Coreq 200: or higher level course in chemistry and consent of instructor. May be repeated. Maximum 4 hours.

230 Inorganic Chemistry (3) Periodicity, valence, bonding, and the descriptive chemistry of the elements.
475 Day Care Administration (3) Theories, methods, and materials for administrators of early childhood education programs; writing funding proposals, staff selection, management, recruitment, and paperwork. Prereq: Consent of instructor.

479 Preparation Seminar (1) Orientation to practicum placement, experiences and requirements. Must be completed immediately preceding enrollment in 480. Prereq: Must have completion of prerequisites. Satisfactory/No Credit only.

480 Internship in Family Studies (9) Supervised experiences in community-based family life programs. Correq or Prereq: Completion of Family Studies core, completion of the Instructional Pod and Family and Community Service Pod, including CFS 407, HE 325, 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.

222 Classical Greek and Roman Mythology (3) Use of myth in literature, art, 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 influences into Greece and Rome, including early Christianity. Readings include Sophocles, Euripides, Roman poetry, and modern scholarship. Writing-emphasis course.

223 Archaeology and Art of Ancient Greece (3) Survey of Greek prehistoric to the Roman period (ca. 3000-100 B.C.). For prehistoric times emphasis on architecture and artifacts used to recreate the culture of the Minoan and Mycenaean civilizations and that of the following Dark Age. For Archaic, Classical, and Hellenistic periods emphasis on developments of architecture, sculpture, and vase painting. Includes minor arts and the relationship between architecture 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. Prereq: 223 or consent of instructor. Writing-emphasis course.

253-254 Greek and Roman Literature in English Translation (3,3) Greek Literature. Major literature of ancient Greece from Homer to Menander, with emphasis on the sixth and fifth centuries B.C. 254-Roman Literature. Major works on the Roman poets from Quintus Ennius to Lucretius. Prereq: Consent of instructor. Writing-emphasis course.

273 Medical and Scientific Terminology (3) Greek and Latin roots from which medical and scientific terminology is derived. Extensive practice in analysis of terms. Practice in use of Latin nomenclature.

331 Archaeology of the Aegean Bronze Age and Early Greece (3) Includes Troy, the Cycladic Islands, the Minoan and Mycenaean civilizations. Major sites include Mycenae, Athens, Thebes, and Sparta. Prereq: Consent of instructor. Writing-emphasis course.

334 Cities and Sanctuaries of the Ancient Greek World (3) Archaeological survey of the development of the Greek city and sanctuary from prehistoric times through the Roman period (ca. 2000 B.C.-200 A.D.). Includes topography and plans of major cities and sanctuaries, functions of buildings, development of city planning, quality of city life, religious rites and festivals including the Olympic games. Ancient sites include Mycenae, Athens, Thebes, Alexandria, Etruscan, Olympian, Delphi. Students are recommended to have taken one of the following: 222, 234, 253, 254, 281, History 310. Writing-emphasis course.

381 Greek Civilization (3) Major aspects of ancient Greek civilization: religion, arts, political life, political and social relations between the ancient cities. Prereq: Consent of instructor. Writing-emphasis course.

382 Roman Civilization (3) Major aspects of ancient Roman civilization: political institutions, art and architecture, history, culture, and literature. Prereq: Consent of instructor. Writing-emphasis course.

383 Women in the Greek and Roman World (3) The condition of women in the apparently male-dominated world of Classical Greece and Classical Rome. Evidence for literature, visual arts, and other arts is examined from the time of Homer to the second century A.D. with emphasis on Athens in the fifth century B.C. 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: 261.

402 Greek Prose (3) History, philosophy, and oratory. Authors vary. May be repeated for credit. Maximum 9 hours. Prereq: 261.

422 Seminar in Classical Studies (3) Field of Classical studies today: recent achievements in the areas of both philology and archaeology; impact of the decipherment of Linear B; new understandings of the culture and politics of the "golden age" of Pericles and Augustus; Classical studies and the academic profession on both the high school and college levels. May be repeated. Maximum 16 hours. Writing-emphasis course.

441 Special Topics in Classical Civilization (1-3) Topics in art, literature, religion, and society of Greece and Rome. May be repeated up to three times with consent of department.

461 Studies in Classical Archaeology (3) Variable content course offering subject matter not taught in an existing course or concentration on one aspect of the existing survey. May be repeated. Maximum 9 hours. Prerequisites according to topic.

462 Roman Law (3) Development of Roman law through examination of cases from the writing of the Roman jurists, the world's first legal professionals. Emphasis on understanding legal institutions in relationship to Roman society. Cases cover aspects of Roman property and contract law.

481 Foreign Study (1-15) See Director of Special Programs. Primarily for College Scholar students.

492 College Honors: Off-Campus Study (1-15) See Director of Special Programs. Primarily for College Scholar students.

493 College Honors: Independent Study (1-15) See Director of Special Programs. Primarily for College Scholar students.

498 Honors: College Scholars Studies (2-12) Designed for College Scholars working on their senior thesis, project, or performance. May be repeated. Maximum 16 hours.

COMUNICAHONS (259)

100 Introduction to Mass Communications (3) Overview of systems of mass communications, with emphasis on American media, their ownership, legal and social controls, role and effects. Advertising, broadcasting, journalism, and public relations are examined in the context of theories of mass communications. E

200 Writing for Mass Communications (3) Information gathering and writing under deadline for print and broadcast media, including news and promotional copy. Preparation of news, advertising and persuasive text. Grammar, usage, and style examinations. Prerequisites: 100, English 102, and typing proficiency. E

300 Mass Communications Research Methods (3) Social science research methods, especially sampling surveys, used by communications media. Applications to both internal decision-making and to external communication in media. Prereq: 200 or consent of instructor. F, Sp

400 Mass Communications Law and Ethics (3) Emphasis on legal issues directly affecting the mass media: libel, privacy, free press-fair trial, judicial controls, governmental regulations. Also includes ethical standards and practices of the mass media in America. Prereq: 200 or consent of instructor. F, Sp

COMPARATIVE LITERATURE (260)

201 Introduction to Comparative Literature (3) Basic knowledge, techniques, and sources necessary to compare literatures of various cultures, ages, and nations.

202-203 Cross-Cultural Perspectives in World Literature (3,3) Literary perspectives and values in different periods and cultures. Variable content: Writing-emphasis course.

401-402 Special Topics in Comparative Literature (3,3) Content varies. May be repeated. Maximum 9 hours.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

COMPUTER SCIENCE (266)

102 Introduction to Computer Science (4) Problem solving and algorithm development. Organization and characteristics of modern digital computers. Emphasis
on developing good programming habits. Building abstractions involves data and data. Programming in a modern computing language.

111 Computer Organization (3) Number systems, internal represention of numbers in computers, hardware components, hardware organization, introduction to assembly language, microprogramming general organization. Computing with register machines, introduction to digital circuits. Prereq: 102. 3 hour lab required.

112 Data Structures (3) Structured programming, data structures and applications, I/O techniques, files, queues, trees, tables, streams, algorithms, files. 3 hour lab required. Prereq: 102.


291 Lower-Division Special Topics (1-3) Topics vary. Programming language acquisition, microprogramming software packages. May be repeated. Maximum 9 hours.

311 Discrete Structures (3) Propositional and predicate calculus, algorithms, graphs, trees. Prereq: Mathematics 222 and 102.

320 Problem Solving (3) General approaches to problem solving, with emphasis on formalizing intuitive heuristics. Structure of problems and goals, generation of alternatives, and dealing with incomplete information. Prereq: 111 and 311. 3 hour lab required.

340 Introduction to Information Systems Design (3) Principles of design and analysis of information systems (e.g. data processing, management information and decision support systems). Advanced data structures, concepts and techniques. Format is 2 lecture hours and 3 lab hours. Prereq: 111 and 112.

350 Systems Programming (3) Linkers, loaders, multitasking, I/O interfaces, interrupt handling, monitors, editors. Prereq: 111 and 112. 3 hour lab required.

371 Numerical Algorithms (3) (Same as Mathematics 371)

380 Theory of Computation (3) Recursive functions, Turing machines, computability, halting problems, Godel's theorem. Prereq: 111 and 311.

411 Senior Thesis I (3) Advanced computer science technology and research. Students begin writing a senior thesis. Prereq: Senior standing. Writing-emphasis course.

412 Senior Thesis II (3) Continuation of 411. Writing-emphasis course.

420 Advanced Topics in Machine Intelligence (3) Topics such as search, learning, expert systems, neural networks, pattern recognition, and natural language processing. Emphasis on faculty research. May be repeated. Maximum 9 hours. Prereq: Completion of core curriculum or consent of instructor.

430 Advanced Topics in Hardware Systems (3) Topics such as architecture, parallel processors, microprogramming, networks and communications. Emphasis on faculty research. May be repeated. Maximum 9 hours. Prereq: Completion of core curriculum or consent of instructor.

460 Advanced Topics in Software Systems (3) Topics such as operating systems, compilers, parallel computation, software engineering, database systems and programming languages. Emphasis on faculty research. May be repeated. Maximum 9 hours. Prereq: Completion of core curriculum or consent of instructor.

470 Advanced Topics in Scientific Computation (3) Topics such as numerical methods, supercomputers and computer modeling and simulation of physical systems. Emphasis on faculty research. May be repeated. Maximum 9 hours. Prereq: Completion of core curriculum or consent of instructor.

471 Numerical Analysis (3) (Same as Mathematics 471)

472 Numerical Algebra (3) (Same as Mathematics 472)

480 Advanced Topics in Theoretical Computer Science (3) Topics such as theory of computation, complexity theory, formal languages and graph theory and its applications. Emphasis on faculty research. May be repeated. Maximum 9 hours. Prereq: Completion of core curriculum or consent of instructor.

483 Independent Study (1-15) Special project in area of student's primary interest. Directed by Computer Science faculty, perhaps jointly with student's faculty advisor. Intended for students with a specific project to pursue in conjunction with a faculty member. Project may be from a department other than Computer Science in which a faculty member from the appropriate department will be assigned to the project. May be repeated. Maximum of 6 hours may be applied to the major. Prereq: consent of instructor.

494 Special Topics in Computer Science (1-3) May be repeated. Maximum 9 hours.

DANCE (274)

101 Practicum: Dance Production (1) Supervised technical and 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 I (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. Maximum 4 hours.

310 Ballet: Level II (2) Instruction and practice in intermediate classical ballet techniques. Available to majors and 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 majors and minors or with consent of instructor. May be repeated. Maximum 12 hours.

330 Modern: Level II (2) Instruction and practice in intermediate modern dance techniques. Available to majors and minors or with consent of instructor. Maximum 12 hours.

340 Tap: Level II (2) Instruction and practice in intermediate tap dance techniques. Prereq: 240 or consent of instructor.

390 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 majors and minors or with consent of instructor. May be repeated. Maximum 16 hours.

415 Teaching Creative Dance for Children (2) Theory, methods, materials and practical experience in the presentation and integration of creative dance in grades K-6. A mini-teaching experience is involved in this class.

420 Jazz: Level III (2) Instruction and practice in advanced jazz and modern dance styles and techniques. Available to majors and 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 majors and minors or with consent of instructor. May be repeated. Maximum 16 hours.

440 Composition I (2) Choreographic skills emphasizing form, content and music. Prereq: 440 or approval of instructor.

445 Composition II (2) Choreographic skills emphasizing design, use of costumes and props. Prereq: 440 or approval of instructor.

450 Composition III (3) Application of choreographic and production skills culminating in the presentation of a work. Prereq: 440 or 445 or approval of instructor.

460 Rhythmic Analysis (3) Basic nature and principles of rhythm and rhythmic notation, with emphasis on their correlation with dance movement and composition. Prereq: Consent of instructor. Senior standing or graduate status required for graduate credit. Different level of performance is expected of those registered for graduate credit.

465 Dance Notation (3) Fundamentals of movement notation with emphasis on notation and reading of elementary movement study. Senior standing, graduate status required for graduate credit. Different level of performance is expected of those registered for graduate credit.

480 Dance History through the 19th Century (3) Survey of the dance of various societies and cultures from pre-history through the nineteenth century. Senior standing or graduate status required for graduate credit. Different level of performance is expected of those registered for graduate credit.

481 History of Dance II (3) Survey of history and philosophy of dance in the 20th century. Senior standing or graduate status required for graduate credit. Different level of performance is 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 level of performance is 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 minor or major dance program. Senior standing or graduate status required for graduate credit. Different level of performance is expected of those registered for graduate credit.

ECOLOGY (278)

370 Environment and Conservation (2) Introduction to natural and artificial environments and natural resource conservation. Limited to students in the College of Education.

ECONOMICS (283)

100 Survey of Economic Ideas (3) Ideas of major economists in context of socioeconomic conditions of their time. Emphasis on nontechnical treatment. May not be substituted for Economics 201.

201 Introductory Economics: A Survey course (4) Theory of consumer behavior, production and costs, price and behavior of firms in perfectly competitive, monopolistic and imperfectly competitive markets, input prices, income distribution, welfare and general equilibrium. Prereq: 201.


321 International Economics (3) Balance of payments, exchange rate determination, monetary and fiscal policies, monetary exchange arrangements, comparative advantage, tariff, and non-tariff trade distortions, protection arguments, regional integration. Prereq: 201.

323 Economic Development (Third World) (3) Theories of economic development, policies and strategies used to promote economic improvement in less developed countries. Prereq: 201. Writing-emphasis course.


331 Government and Business (3) Antrist 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 markets, public policy questions, demand and supply, wage of differentials, unemployment, unions in the private sector, investment in individuals, education and training, mobility. Prereq: 201.

343 Labor Relations and Collective Bargaining (3) Sea Management (3).


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 and urban structure, growth, and methods of analysis, urban problems. Prereq: 201.

381 Econometrics (3) Methods of specification, estimation, testing and forecasting of economic relationships. Includes specification of models, estimation methods, statistical inferences of empirical results, forecasting procedures, applications, econometric problem solving, such as multi-collinearity, heteroscedasticity, and autocorrelation. Prereq: 201; Statistics 201; Mathematics 121-122 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. 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.


424 Political Economy of World Development (3) Topics vary. Latin America, Asia, Soviet Union and Eastern Europe. Analysis of major economic strategies, policies, and problems. Major writing requirement. Prereq: 201. Writing-emphasis course may be repeated when topic varies. Maximum 9 hours.


452 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 impacts on growth of environment. 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) Taxation, tax systems, 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 to problems of economic theory. Prereq: Economics 311 with a grade of B or better, Mathematics 141-142 or 147-148.

490 Honors Seminar (3) Topics vary. Senior standing, 3.4 or higher GPA in economics and consent of instructor. Prereq: Independent Study (1-3) Opportunity for qualified students to pursue topics of special interest. Prereq: Senior standing, 3.0 GPA in economics courses, and consent of instructor. Maximum total credit 3 hours.

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.

102 Teaching and Helping Professions in Education (3) Study in selected interdisciplinary/professional areas in the College of Education. The course is designed for students considering a major in the College of Education or who are entering-level students in the College. The course provides an opportunity to pursue the many and varied programs of study in the College.

302 School and American Society (3) (Same as Educational Curriculum and Instruction 302.)

400 Professional Studies: Teachers, School, and Society (3) Focus on roles and responsibilities of teachers, on how schools are organized and the relationship between the schools and the broader society. Prereq: or 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. Prereq: or Coreq: Educational and Counseling Psychology 210 and Education 400; Prereq: Admission to Teacher Education.

403 Professional Studies: Teaching and Curriculum (2) Organizational patterns of curricula and classrooms developed by teachers to meet the needs of students. Emphasis on the selection of appropriate instructional strategies and resources, Prereq: or Coreq: Educational and Counseling Psychology 210 and Education 400; Prereq: Admission to Teacher Education.

EDUCATIONAL AND COUNSELING PSYCHOLOGY (311)

210 Psychoeducational Issues in Human Development (3) Understanding and application of the psychology of human development to teaching/learning processes in educational settings. Primarily for students entering teaching or Human Services.

212 Career and Personal Development (3) Systematic approaches to facilitating career development and life planning. Pr, Sp

215 Learning Skills and Study Systems (3) Approaches to enhancing academic performance through study skills, efficient reading and understanding of personal factors.

308 Laboratory in Educational and Counseling Psychology (1-3) Practice in acquiring knowledge and skill in areas such as interpersonal relations, career decision-making, communication and self-awareness. Individual and small-group format. May be repeated. Maximum 9 semester hours. Satisfactory/No Credit only.

311 Personality and Mental Health (3) Perspectives of mental health with applications to education and other social institutions. Prereq: or Coreq: Women's Studies 410, F, Su

324 Application of Instructional Technology in Elementary and Middle Schools (3) Methods and background on how to teach word recognition skills, comprehension, study skills and how to use materials. For BS Education students only. Prereq: Admission to Teacher Education Program. F, Sp

326 Teaching Language Arts/Reading in Elementary and Middle Schools (3) Language and language development related to the teaching of oral (listening-speaking) and certain aspects of literacy (reading process/readiness and writing). Includes methods and materials. For BS Education students only. Prereq: Admission to Teacher Education Program. F, Sp

328 Teaching Language Arts/Reading in Elementary and Middle Schools (3) Language and language development related to the teaching of oral (listening-speaking) and certain aspects of literacy (reading process/readiness and writing). Includes methods and materials. For BS Education students only. Prereq: Admission to Teacher Education Program. F, Sp

329 Teaching Developmental Reading in Elementary and Middle Schools (3) Methods and background on how to teach word recognition skills, comprehension, study skills and how to use materials. For BS Education students only. Prereq: Admission to Teacher Education Program. F, Sp

331 Laboratory and Field Studies in Elementary Education (1) Observation and research regarding reading, language arts, counseling, social studies, and other school subjects. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

332 Field Experiences in Teaching: Secondary I (1) Field experiences in tasks related to teaching roles. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

333 Field Experiences in Teaching: Secondary II (1) Field experiences in tasks related to teaching roles. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

335 Introduction to Secondary Schools (3) Aspects of teaching in grades 7-12, including curricular program and roles and responsibilities of secondary school teachers and administrators. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

355 Laboratory and Field Studies in Elementary Education (1) Observation and research regarding learning and behavior and appropriate interventions. Prereq: Admission to Teacher Education Program.

403 Independent Study (1-15) Independent investigation of problems in educational and counseling psychology. May be repeated. Maximum credit 15 hours.

EDUCATIONAL CURRICULUM AND INSTRUCTION (301)

141 Efficient Reading and Study Skills (2) Improvement of reading comprehension and rate. Intensive vocabulary enrichment, study skills as they relate to content area subjects. Satisfactory/No Credit only. F, Sp

203 Field Study in Education (1-3) Problems of persons in active service in the field. Methods of teaching, curriculum materials, school-community relationships and school organizations. May be repeated. Maximum 6 hours.

302 School and American Society (3) Historical, philosophical and social perspectives on contemporary education issues. (Same as Education 320.) F, Su

304 Microcomputers and Instructional Design (3) Introduction to basic operations and application of the microcomputer as related to curriculum development and instructional design. Prereq: Admission to the Teacher Education Program. F, S

324 Applications of Instructional Technology in Elementary and Middle School Teaching (1-3) Applications of instructional technology in the elementary and middle schools and with an emphasis on the applications of technology to enhancing academic performance through study skills, efficient reading and understanding of personal factors. For BS Education students only. Prereq: Admission to Teacher Education Program. F, Sp

326 Teaching Science and Social Studies in Elementary and Middle School Teachers (3) Methods of teaching science and social studies in elementary and middle schools. Teaching approaches common to both fields-including inquiry, multi-sensory activities and group approaches. For BS Education students. Prereq: Admission to Teacher Education Program. F, Sp

335 Teaching Elementary and Middle School Mathematics (3) Methods and specific program in the teaching of mathematics. Unit planing, daily planning, grouping, classroom management are included. 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 hours. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

352 Field Experiences in Teaching: Secondary I (1) Field experiences in tasks related to teaching roles. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

353 Field Experiences in Teaching: Secondary II (1) Field experiences in tasks related to teaching roles. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

355 Introduction to Secondary Schools (3) Aspects of teaching in grades 7-12, including curricular program and roles and responsibilities of secondary school teachers and administrators. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only.

356 Elementary and Middle School Teaching Laboratory Experience (1) Simulation and micro-teaching experiences to develop planning skills and give feedback to participants relative to the micro-teaching to school settings. Prereq: Admission to Teacher Education Program. Coreq: 422.
456 Teaching Speech and Drama Grades 7-12 (3) Preparation of speech and drama for secondary school. 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. F

461 Developing Reading Skills in Content Fields (3) Teaching reading and study skills in content areas of the school program. Extensive assessment of textbooks. Emphasis on middle school and high school. F, Su

471 Internship I: Elementary (3-6) Methods and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

472 Internship II: Elementary (3-6) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. Sp

473 Student Teaching in the Elementary School (3-10) Semester equivalent to Educational Curriculum and Instruction 4810 or 4820. Intended for students in the four year program or equivalent. 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 creative (listening-speaking) and aspects of literacy (reading process, readiness and admission to Teacher Education Program. F, Sp

445 Early Childhood Education: Program Development and Teaching in Kindergarten (3) Curriculum planning, classroom organization and management practices for teaching young children; relationship of kindergarten to local elementary school. Prereq: Admission to Teacher Education Program. F, Sp

451 Education in Cultural Perspective (3) Contribution of anthropological concepts to understanding of educational processes; cross-cultural daily planning, grouping, general factors related to classroom management. Not open to students with recent course in language arts methods. Prereq: Admission to Teacher Education Program. F, Sp

452 Adolescent Literature (3) Literature written or appropriate for adolescents. F

453 Elementary and Middle School Mathematics Instruction (3) Procedures for helping children learn mathematics; teaching through daily planning, grouping, general factors related to classroom management. Not open to students with recent course in language arts methods. Prereq: Admission to Teacher Education Program. F, Sp

454 Teaching Strategies and Issues in Social Studies Education (3) Goals, objectives, techniques, materials, and evaluation; directed observation in public schools, preparation of teaching plans and materials, simulated teaching experiences. Prereq: Admission to Teacher Education Program. F

455 Teaching of Foreign Language, Grades 7-12 (3) Instructional methods, lesson planning, peer-teaching, materials, and language and cultural evaluation techniques. Required for certification in modern foreign languages. Prereq: Completion or near completion of 16 hours of certifica-
tion and admission to Teacher Education Program. F

456 Teaching Speech and Drama Grades 7-12 (3) Preparation of speech and drama for secondary school. 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. F

461 Developing Reading Skills in Content Fields (3) Teaching reading and study skills in content areas of the school program. Extensive assessment of textbooks. Emphasis on middle school and high school. F, Su

471 Internship I: Elementary (3-6) Methods and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

472 Internship II: Elementary (3-6) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. Sp

473 Student Teaching in the Elementary School (3-10) Semester equivalent to Educational Curriculum and Instruction 4810 or 4820. Intended for students in the four year program or equivalent. Prereq: Admission to Teacher Education Program and permission of instructor. May be repeated. Maximum 8 hours. E

474 Student Teaching, Grades 7-12 (3-10) Semester equivalent to Educational Curriculum and Instruction 4710 or 4720. Intended for students in the four year program or equivalent. Not to be substituted for Educational Curriculum and Instruction 481 I or 482 Internship II. Prereq: Admission to Teacher Education Program, permission of Mentoring Team, and 203 F, Sp

475 Utilization of Instructional Media (3) Basic communication process, needs for instructional media, instructional development, selection and utilization of basic media, and basic software production techniques. (Same as Library and Information Science 475.) F, Sp, Su

476 Instructional Media in Elementary Education (3) Basic operation of audiovisual hardware, selection and utilization of materials, and basic production techniques; material for effective communication in the elementary classroom. Media Lab experience in production of AV software. F, Su

481 Internship I: Grades 7-12 (3-6) Methods and theories of teaching. Internship is completed in the local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

482 Internship II: Grades 7-12 (3-6) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools. Prereq: 481 and admission to Teacher Education Program. Satisfactory/No Credit only. F

485 Teaching of Mathematics, Grades 7-12 (3) Preparation of teaching plans and materials for teaching in secondary schools. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. F

486 Introduction to Instructional Computing (3) Classroom uses of computers, applications, for teachers; overview of computer operation and software for teachers of all grades. F, Sp

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

495 Special Topics (1-3) Topics to be assigned. May be repeated. Maximum 12 hours. E

496 Teaching Science Grades 7-12 (3) Methods, materials, recent trends in science and environmental edu-
cation programs for secondary schools. Prereq: Admission to Teacher Education Program. F, Sp

436 Contemporary Issues in African-American Education (3) Analysis of educational policies and programs as they relate to African-American students in various settings. Required for certification in Education. Prereq: Admission to Teacher Education Program. F

443 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 ability for the two fields. Not open to students with recent course or background in The Teaching of Elementary School Science and Social Studies. Prereq: Admission to Teacher Education Program. F, Sp

444 Elementary and Middle School Teaching Methods I (3) Methods and materials for teaching in the elementary and middle school, including content and form, current trends and techniques. Emphasis will be given to planning, daily teaching, evaluation, etc., as well as language and concept development. Prereq: Admission to Teacher Education Program.

424 Studies in Elementary Education (1-3) Topics on teaching methods; Early Elementary (K-3), Middle Elementary (4-8), and Skills (K-6). Prereq: Admission to Teacher Education Program and permission of instructor. May be repeated. Maximum 6 hours. E

429 Language Arts/Reading Instruction in Elementary and Middle Schools (3) Language and language development as applied to teaching of creative (listening-speaking) and aspects of literacy (reading process, readiness and admission to Teacher Education Program. F, Sp

430 Elementary and Middle School Developmental Reading Instruction (3) Word recognition (including phonics), comprehension, evaluation, and materials. Not open to students who have had recent course in language arts methods. Prereq: Admission to Teacher Education Program. F, Sp

434 Topics in Reading Education (1-6) May be repeated. Maximum 6 hours. Prereq: Admission to Teacher Education Program and a course in Reading Education, E

435 Early Childhood Education Program: Development and Teaching in Kindergarten (3) Curriculum planning, classroom organization and management practices for teaching young children; relationship of kindergarten to local elementary school. Prereq: Admission to Teacher Education Program. F, Sp

449 Aerospace Engineering Laboratory (3) Designing, conducting, and reporting results of experimental exercises. Test standard and specifications. Analysis of data and formation of conclusions. 3 hours lab per week. Prereq: 345, 351, F

494-495 Selected Topics in Aerospace Science (1-4) Current problems and topics in aerospace science, including industrial application and other areas. Prereq: Consent of Instructor. Satisfactory/No Credit. F, Sp

ENGINEERING BASIC (179)

100 Seminar (1) Overview of the College, engineering as a profession, engineering ethics. Consideration of each major and the various engineering disciplines. Satisfactory/No Credit. F

101 Computer Programming (3) Introduction to computer programming, instruction and applications. Prereq: Introduction to computer programming. Satisfactory/No Credit. F

102 Introduction to Computer Programming (3) Introduction to computer programming, instruction and applications. Prereq: Introduction to computer programming. Satisfactory/No Credit. F

103 Fundamentals of Digital Systems (3) Logic gates, binary arithmetic, computer fundamentals. Satisfactory/No Credit. F

111 Fundamentals of Engineering Graphics (3) Technical sketching, mechanics construction with emphasis
ENGINEERING CHEMICAL


301 Engineering Career Planning and Placement (1) Fundamentals of seeking professional employment, including resume preparation, interviewing, and the entire job-seeking process. Intended for last-term juniors. Satisfactory/No Credit. S

ENGINEERING CIVIL AND ENVIRONMENTAL

210 Engineering Surveys (3) Measurement through application of surveying techniques; theory of errors in surveying; map projections; civil system design. Lab. Prereq: Math 141, Math 142.

305 Seminar (2) Selected topics including historical and modern civil engineering achievements, professional and ethical responsibilities. Prereq: Junior standing.


330 Transportation Engineering II (3) Introduction to design and analysis of transportation systems, design of various transportation modes, their guideways and terminals. Two lectures and 1 lab. Prereq: Junior standing and 210.

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, 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; measurements and distribution, abstractions, and runoff; storm hydrograph and peak flow analyses. Including design floods; reservoir and channel design; rainfall and surface flow frequency analyses; groundwater flow. Prereq: 390.

400 Senior Design Project (3) Open-ended design projects including unit operations formulation, specifications, feasibility and various design components. Topics vary but include problems typical of those designed by Civil Engineering consulting firms. Prereq: Completion of all technical courses through junior year.

405 Legal and Ethical Aspects of Engineering (2) Legal principles underlying engineering work; laws of contracts, torts, real property, and professional registration and ethics. Prereq: Senior standing.

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: 340.

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 materials, emphasis on micro-computer application. Prereq: Senior standing or consent of instructor.

442 Construction Methods and Equipment (3) Fundamental operations in construction and equipment selection and productivity; concrete and steel construction; and construction contracts and economics. Prereq: 340.

451 Highway Engineering (3) Design, construction, operation, and maintenance of highway facilities; includes application of various engineering principles and concepts to the process of planning, design and construction of highway facilities; covers both geometric and pavement design. Prereq: 210, 251, 352.
452 Traffic Engineering (3) Characteristics of driver, vehicle, and roadway and their interrelationship; traffic studies; basic considerations of traffic circulation and control, light, control, capacity analysis, roadway safety analysis, and design. Prereq: 210, 251, 352.

453 Airport/Railroad Planning and Design (3) Airport master planning and railroad engineering. Runway configuration, airfield geometry, and terminal layout and design. Prerequisites: introductory course in traffic engineering and highway design. Prereq: 210, 251, 352.

461 Analysis of Framed Structures (3) Maximum stresses due to moving loads; uses of influence lines; lateral forces due to earthquake and wind; analysis of portals, building frames, and space frames; matrix methods; use of computer in structural analysis. Prereq: 361.

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: 361.

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) Reinforced concrete columns and floor slabs, columns with combined axial loads and bending, footings and retaining walls. Prereq: 471.

480 Water and Waste Transport (3) Theory and design of water distribution systems, and wastewater collection systems. Prereq: 351.

485 Principles of Geohydrology (3) Same as Geology 485.

490 Water Resources Project Design (3) Development of multiple-purpose reservoir and dam project, including data acquisition; spillway and outlet works design; channel and gravity dam stability analyses; drains and filters; maintenance and operation principles; and dam safety concepts, including dam break analyses. Prereq: 390, 395.

494 Urban Drainage Engineering (3) Design and management of urban conveyance and control structures. Application of hydrologic and hydraulic principles to design of drainage systems for urban, strip mining, and highway development; design of inlet structures, ditches, culverts, and detention/retention basins; application of commonly-used computer-runoff models; evaluation of land-use changes of streamflow quantity and quality. Prereq: 390, 395.

495 Water Resources Development and Management (3) Institutional framework including: water law, evaluation procedures for comparing and selecting among water resources projects, propagation of principles of institutional economics, benefit-cost analysis, and cost allocation methods; environmental impact assessment procedures; decision making using mathematical methods; case studies. Prereq: 391. Senior standing.

ENGINEERING ELECTRICAL AND COMPUTER (320)

201 Circuits I (3) Fundamental laws of circuit analysis. Ohm’s Law, Kirchhoff’s current and voltage laws, the law of conservation of energy, circuits containing independent and dependent voltage and current sources, resistors, capacitors, inductors, and diodes. Analysis of linear and non-linear circuits using node and mesh analysis, superposition, and source transformations. Prereq: Calculus I or the equivalent. Prereq: 231 and Mathematics 231.

202 Circuits II (4) Average complex, imaginary and real power; effective values of voltage and current. Three phase circuits; delta and wye connections. Complex frequency, capacitive and inductive reactance of electrical components, and current and voltage response. Resonance: general case, special cases in series and parallel circuits. Scaling; magnitude and frequency. Mutual inductance, transformers as circuit elements. Linear and ideal transformers; admittance, impedance and hybrid parameters; trigonometric and complex Fourier series, includes laboratory experiments. Prereq: 201, Coreq: Mathematics 232 and Mathematics 241.

205 Electrical and Computer Engineering Computations (3) Complex analysis and phasor calculus; linear algebra: algorithms for roots of equations; numerical integration and solution of ordinary differential equations. Programming in C and use of the application language MATLAB. Coreq: or Prereq: 201.


215 Electronic Engineering (3) Digital electronic design, including digital logic, microprocessors, and microcontrollers. Prereq: 311.


217 Control Systems (3) Analysis and design of control systems using both classical and modern techniques. Prereq: 311.


220 Power Systems Analysis (3) Analysis and design of electrical power systems. Prereq: 311.


234 Advanced Topics in Electrical Engineering (3) Special topics in electrical engineering. Prereq: 311.

235 Junior Seminar (1) Presentations and discussions related to professional development and current topics in electrical engineering. Prereq: 201. Satisfactory/No Credit.


413 Passive and Active Network Synthesis (3) Network analysis techniques, passive network driving point synthesis, transfer function synthesis, approximation theory, topics in active network synthesis. Design content: 3 hours. Prereq: 312.


422 Machines (4) Dynamic behavior of rotating machinery and stability of systems. Prereq: 311.

423 Power Electronics (4) Principles and characteristics of power semiconductor devices, single-phase and polyphase phase-controlled converters, converter control, ac system control, voltage-source inverters and dc-dc converter principles, industry applications. Includes laboratory experiments and design projects. Design content: 1 hour. Prereq: 312.


425 Direct Electrical Energy Conversion (3) Principles and practices of energy conversion devices and interfacing them to loads. Includes photovoltaics, MHD, and fuel cells. Design content: 2 hours. Prereq: 312.


434 Communication Systems II (3) Probability, random variables, and random processes as applied to communication systems. Prereq: 311.

441 Communication Systems III (3) Random variables, random processes, and noise in communication systems. Prereq: 311.


443 Microwave Circuits and Electronics (3) Scattered wave design techniques to include isolators and circulators. Phase shifters. Design content: 1 hour. Prereq: 341.

451 Microprocessors in Computer Engineering (4) Project oriented using a microcomputer kit having a monitor program and development system with cross-assemblers, file management, and emulation capability. Design content: 3 hours. Prereq: 351.

452 Organization and Design of Digital Systems and Computers (4) Offered with hardw... 30; 321, 342. Includes laboratory experiments and design projects. Design content: 3 hours. Prereq: 351.

453 Data Acquisition Systems (4) Digital-to-analog conversion techniques; quad and 2-R latch networks; error analysis of A/D converters; power supply, threshold circuits; analog-to-digital conversion techniques; open loop systems; direct and matrix converters; closed loop systems; digital output amplifiers. Design content: 1 hour. Prereq: Senior standing or consent of instructor.

454 Open System Interconnection (OSI) Protocols (4) OSI reference model for network, Manufacturing Automation Protocol (MAP) and Technical Office Protocol (TOP) includes material from International Standards Organization (ISO) standards, Draft International Standards (DIS) and Working Papers, IEE Standards, MAP and TOP Specification. Includes laboratory work on MAP, TOP and 3.0 network supporting programmable logic controllers. Design content: 1 hour. Prereq: Senior standing or consent of instructor.

461 Plasma Magnetohydrodynamic Engineering (3) The MHD approximation; MHD waves and instabilities; MHD in static and dynamic systems; MHD in pulsed and steady-state power generation. Applications to fusion energy, industry, and astrophysics. Design content: 1 hour. Prereq: 351.

462 Plasma Kinetic Theory Engineering (3) Introduction to kinetic theory: beam analysis; driven waves in a plasma; transition from multiple beams to a continuum: Vasov and Landau theory; microwave generation in plasmas and traveling wave tubes; free electron masers; self-sustaining devices. Design content: 1 hour. Prereq: 341.


473 Introduction to Digital Image Processing (3) Basic methods for digitizing, storing, processing, and displaying images. Computational procedures for image enhancement, restoration, coding, and segmentation. Design content: 2 hours. Prereq: 461 and 462. Includes laboratory experiments and design projects. Design content: 1 hour. Prereq: Senior standing or consent of instructor.


483 Special Topics in Electrical and Computer Engineering (1-3) Topics relating to recent developments and current practice. May be repeated. Prereq: Consent of instructor.


488 Plasma Laboratory (1) Experiments and design projects illustrating material covered in 461 and 462. Design content: 1 hour. Prereq: 461 or consent of instructor.

489 Plasma Laboratory (1) Experiments and design projects illustrating material covered in 461 and 462. Design content: 2 hours. Prereq: 463 or consent of instructor. (Same as Nuclear Engineering 464.)

491-496 Senior Seminar (1) An introduction to Industrial Engineering and its methodologies. Prereq: Sophomore standing.

500 Fundamental Computer Applications in Industrial Engineering (3) Application of modern computer hardware and software to enhance professional productivity. Spreadsheets, word processing, graphics, and databases. Design content: 1 hour. Prereq: 481.

501 Operations Research (3) Introduction to mathematical modeling and optimization techniques, sensitivity analysis, simulation, operations research, and decision making. Includes laboratory experiments and projects. Design content: 1 hour. Prereq: Senior standing or consent of instructor.

502 Motion and Time Study (3) Design of work methods including analysis, improvement and timing of work and determining standards. For non-industrial engineering students. Prereq: Junior standing.


504 Integrated Manufacturing Systems (3) NC and CNC machine tools, robotics and CAD/CAM systems, handling systems, hard automation, alternative integrated manufacturing systems, and manufacturing information control systems. Prereq: 400.


505 Motion and Time Study (3) Design of work methods including analysis, improvement and timing of work and determining standards. For non-industrial engineering students. Prereq: Junior standing.

508 Production Facilities Design and Material Handling (3) Design of production facilities including plant layout and analysis and planning for overall moving, packaging, storage, and waste handling systems. Involves office layout and service areas. Principles applicable to design of facilities for such diverse groups as hospitals, banking, and industry. Prereq: 302, 401.

509 Senior Seminar (1) Discussions, lectures and trips to unify students education experience. Prereq: Senior standing in Industrial Engineering.


540 Project Management (2) Project planning, scheduling, and control based on networking and precedence diagramming methods. Includes scheduling, resource usage and cost-time trade off algorithms, multi-project control, computer applications, and PERT methods of handling uncertainty in activity time estimates.

541-546 Research Methods in Industrial Engineering (3) Methodology and application of research methods in industrial engineering. Topics such as process control, statistical modeling of processes, behavioral sampling, single subject experimentation, classical experimental design methods, and time series and experimental designs. Validity and reliability concepts as related to measurement and collection of data. Strategies to control confounding and biasing of results when analyzing data, fixing variables, and building extraneous variables into an experiment. Selection of appropriate experimental designs for the analysis of messy data. Prereq: 300 and senior standing, Statistics 251.
414 Laboratory and Methodology in Human Factors Engineering (3) Project and laboratory-oriented investigation of human factors problems. Instrumentation and measurement of human capabilities and limitations, and identification of environmental factors that affect work such as temperature-humidity, lighting, and noise. Measurement of task loading effects and effects of interface design on human performance. Student-selected group project. Prereq: 304 and senior standing.

421 Informational Systems I (3) Systems engineering approach to design, development, implementation, and evaluation of systems of information. Emphasizes informational aspects of ES systems. Study of data structures and database management systems. Prereq: 200 and senior standing.

422 Senior Industrial Engineering Problems Analysis (3) Application of Industrial Engineering to field assignments in local organizations, including problem definitions, analysis and presentation. Prereq: 402, 403 and 405.


440 Total Quality Management (3) The philosophy of continuous quality and organizational improvement processes management and implementation issues; definition, identification and analysis of systems as compared to processes; continuous improvement mechanisms; radial charts, pareto charts, cause and effect diagrams and the seven new tools; data collection and control strategies; capability analysis, quality of design; components of variation: measurement issues; issues relevant to continuous improvement; processes, managing quality in short-run environments; the use of classical statistical tools such as correlation and other techniques. Course contains a lab component to provide hands-on experience. Prereq: IE 300 and senior standing or consent of the instructor.

494-495 Special Topics in Industrial Engineering (3) Recent developments in Industrial Engineering including new areas of application, new research techniques and new methodologies. May be repeated once. Prereq: Senior Standing and consent of instructor.

ENGINEERING MATERIALS SCIENCE (638)

201 Introduction to Materials Science and Engineering (3) Correlation of atomic structure, crystal structure and microstructure with solids. Chemical, physical and mechanical properties of engineering significance. Prereq: Chemistry 130. E

300 Materials Laboratory Procedures (1) Thermometry, sample preparation for microscopic examination; microscopic examination of polished sections; determination of tensile properties; hardness; formation of conclusions. 3 hours per week. Prereq: 201.

302 Mechanical Behavior of Materials I (3) Tensile testing of metals, ceramics and polymers; deformation mechanisms in the various materials. incl. crystalline and non-crystalline forms; rubber elasticity, viscoelastic behavior, creep, time-temperature superposition in polymers; fatigue. Prereq: 201, 303, or consent of instructor. Prereq: Chem. Engr. 322, 340, 360.

303 Thermodynamics of Solids (3) Applications to solids of analysis and properties of metals, ceramics, and polymers; gas equations of state; gas-condensed phase equilibria; phase stability; phase rule; multicomponent systems. Prereq: Chem. Engr. 320.


340 Principles of Polymeric Materials (3) Synthesis and molecular structure of polymers; polymerization kinetics; molecular weight determination; crystalline and amorphous transitions; crystallography; 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.

390 Materials Seminar (1) Professional and ethical considerations, safety, patents, product liability. Seminar. Prereq: 201, F, Credit grading only.


405 Structural Characterization of Materials (4) X-ray diffraction and fluorescence; scanning and transmission electron microscopy; microanalytical techniques.

421 Mechanical Behavior of Materials II (3) Descriptions of stress and strain; linear elastic constitutive equations; elastic constants; stress-strain curves in various materials; yield criteria; brittle fracture; plastic; stress and strain constutive equations, forming limits and critical criteria. Prereq: 302, ESEM 320, 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

426 Materials Joining (3) Processes for joining metals, ceramics and polymers; mechanical, adhesive, fusion solidification/crystallization; surface characteristics necessary for joining and chemical bonding; thermal effects on structure and properties of joints; design of joints. Prereq: 201.

443 Polymer Processing (3) Rheological measurements; flow through tubes and slits, including end effects and extrudate swell; selected applications, including blow molding, 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; characterization laboratory. Sp

470 Environmental Degradation of Materials (3) Mechanisms, measurement techniques and control of environmental degradation processes in metals, polymers, composites, and ceramics; 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 of composite design; manufacture and application of fiber reinforced polymers, metals and ceramics; Prereq: 302 or equivalent. (Same as Engineering Science and Mechanics 206). F

474 Biomaterials (3) Metals, polymers and ceramics utilized in orthopedic, cardiovascular and dental surgical implant devices; corrosion and degradation problems; material properties of primary importance; tissue response to synthetic materials. Prereq: 201. Recommended for engineering science and mechanics majors. F

475 Fracture-Safe Design (3) (Same as Engineering Science and Mechanics 423).

491 Materials Design I (3) Analysis of materials requirements and performance in engineering structures and components; design aspects of materials selection and application; principles of structural integrity; failure modes of structures. Prereq: 201. Recommended for engineering science and mechanics majors. F

492 Materials Design II (3) Design projects involving materials selection and performance. Prereq: 491, Sp

494 Special Project Laboratory (1-3) Group or individual investigation of problems related to materials science and engineering. May be repeated once. 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, development 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

341 Fluid Flow (3) Development of mass, momentum, and energy principles for fluid systems; dimensional analysis, internal and external viscous flows. Prereq: ESM 231, Mathematics 241. F, Sp, Su

344 Heat Transfer (3) Heat transfer by conduction, radiation, free and forced convection. Prereq: 331, 341, 391. F, Sp, Su

345 Mechanical Engineering Instrumentation and Measurement (3) Fundamentals of measurement systems; standards; dynamic characteristics of instruments; statistical data treatment; transducers; signal conditioning; strain, pressure, temperature and flow measurements. Coreq: ECE 353. Prereq: 341, ECE 301. F, Sp, Su


396 Manufacturing Processes (3) Processes related to design of machine parts; casting, hot and cold forming, metal removal and welding. Manufacturing tolerances and surface finishes. Prereq: Materials Science 201, F, Sp

391 Engineering Analysis (3) Analysis techniques for problems of Mechanics and Astronautical Engineering. Emphasis on numerical methods including use of symbolic math and spreadsheet software packages and numerical computation of ordinary and partial differential equations. Prereq: Basic Engr. 201 and Mathematics 231, 231, F, Sp

401 Thesis (3) Problem investigation and report. Prereq: Senior standing. F, Sp, Su

415 Energy Conversion Systems (3) Fossil fuel energy conversion subsystems with emphasis on coal technology. Coreq: 475, F

422 Environmental Noise (3) Acoustics - measurements and control of noise in industrial and community environments. Prereq: Senior standing in engineering or consent of instructor.

431 Seminar (1) Topics related to engineering including eligibility for formal oral presentation by students on engineering topics. Prereq: Senior standing. F, Sp

449 Mechanical Engineering Laboratory (3) Designing, conducting and reporting results of experimental exercises. Test standards and specifications. Analysis of data and presentation of conclusions. 3 hours per week. Prereq: 332, 344, 345. Coreq: 475. Sp, Su

451 Systems and Controls (3) Analytical models of physical systems; comprised of combinations of mechanical, electronic, and other types of devices; feedback control systems; transient and frequency response; stability analysis; non-linear control of linear systems;
analysis of transport processes in therapeutic devices for design, optimization, and development of currently available devices; federal regulation and ethical considerations. Pre-req: 341, Mathematics 251.


494-495 Special Engineering Science Topics (1-3, 1-3) Problems related to recent developments and practice. May be repeated once for credit. Pre-req: junior or senior standing, consent of instructor.

ENGLISH (339)

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, and collaborative projects; two individual conferences required. Students wishing additional help with writing should also register for English 100. A, B, C, NC grading.

102 English Composition II (3) Critical strategies for reading and writing about literature; emphasis on the documented essay, essay skills, and continued development of style and voice; typical assignments include analytical book reports, journals, quizzes, and collaborative projects; two individual conferences required. Students wishing additional help with writing should also register for English 104. Pre-req: 101. A, B, C, NC grading.

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 Compositescore of 28 (or SAT verbal/composite scores of at least 550/700). Individual instruction in mechanics, paragraph development 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/NC 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. Pre-req: English 101. S/NC only.

118 Honors English Composition (3) For students whose ACT composite scores are 28 or above (or SAT verbal/composite scores of at least 550/1050). Grading scale and workload are same as in regular sequence though course proceeds at an accelerated pace. Practice in argumentation, critical reading, literary interpretation, and research methods. May include the study of a long work of literature in addition to readings in non-fiction, short fiction, poetry, and drama. Students receiving a grade below B in 118 will complete a year's work in English Composition by taking 102. Students receiving A or B will complete additional freshman English requirements by choosing 102, a sophomore literature course in the English Department, or 355. A, B, C, NC grading.

121 English Grammar Review for Non-Native Speakers (3) Comprehensive review of English grammar and structures. Extensive practice in reading and writing. Required during their first semester in the University of all non-native English speaking students. Students must register only for the English Placement Examination a need for work in English structures, reading, or writing. Admission to this course is by the English Placement Exam only. Meet one or two hours a week. A, B, C, NC grading.

131 Composition for Non-Native Speakers of English I (3) Paragraph and composition organization and development with emphasis on informative and persuasive writing. Includes grammar and mechanics. Individual conferences. Admission to this course is by the English Placement Exam only. A, B, C, NC grading.

132 Composition for Non-Native Speakers of English II (3) Writing based on reading and discussion. Analysis of works of literature. Emphasis on research techniques and writing research papers. Individual conferences. Admission to this course is by the English Placement Exam only. A, B, C, NC grading.

201 British Literature I: Beowulf through Johnson (3) Major literary works from three periods: Middle Ages, Renaissance, and Restoration and Eighteenth Century. Writing-emphasis course.


207 Honors British Literature I (3) Enriched section of 201 designed for students with a 3.25 or higher GPA.

208 Honors British Literature II (3) Enriched section of 202 designed for students with a 3.25 or higher GPA.

221 Literature of the Western World I: Ancient, Medieval, and Renaissance (3) Writing-emphasis course.

222 Literature of the Western World II: Enlightenment, Romantic, and Modern (3) Writing-emphasis course.

231 American Literature I: Colonial Era to the Civil War (3) Development of American literature from its beginning to the end of the eighteenth century. Writing-emphasis course.

232 American Literature II: Civil War to the Present (3) Development of American literature from Civil War to the present. Writing-emphasis course.

233 Major Black Writers (3) Black American literature as a literary tradition. Writing-emphasis course.

234 Honors American Literature I: Colonial Era to the Civil War (3) Enriched section of 231 designed for students with a 3.25 or higher GPA.

238 Honors American Literature II: Civil War to the Present (3) Enriched section of 232 designed for students with a 3.25 or higher GPA.

251 Introduction to Poetry (3) Poetry as a distinct mode of artistic expression. Critical tools for perception reading of poems. Writing-emphasis course.

252 Introduction to Drama (3) Critical tools for perceptive reading of play texts. Writing-emphasis course.

253 Introduction to Fiction (3) Fiction from the eighteenth through the twentieth centuries, emphasis on the novel. Critical tools necessary for judging varieties of fiction. Writing-emphasis course.

258 Honors Introduction to Drama (3) Enriched section of 252 designed for students with a 3.25 or higher GPA.

263 Introduction to Creative Writing (3) Practice in writing poetry and fiction, combined with study of models and techniques. Writing-emphasis course.

266 Honors Introduction to Fiction (3) Enriched section of 253 designed for students with a 3.25 or higher GPA.

281 Introduction to Film Studies (3) Selected world cinema feature films. Critical techniques necessary for understanding and analysis of narrative cinema. Basic elements of film expression and contours of film style. Writing assignments. (Same as Cinema Studies 281.)

285 Business and Technical Writing (3) Principles of written communication in science and business.

301 British Culture to 1660 (3) English literature in the context of parallel developments in art, architecture, music, and social and intellectual history. Writing-emphasis course.

302 British Culture: 1660 to present (3) English literature in the context of parallel developments in art, architecture, music, and social and intellectual history. Writing-emphasis course.

305 Introduction to Shakespeare (3) May not be used by English majors to fulfill the pre-1800 literature course requirement.

310 Literature of the Restoration and Early Eighteenth Century: Dryden to Pope (3) Survey of English literature and culture from 1660 to 1745.

312 Literature of the Later Eighteenth Century: Johnson to Burns (3) Survey of English Literature and culture from 1745 to 1800.

333 Black American Literature and Aesthetics (3) Black American literature and aesthetics since 1899, with emphasis on cultural evaluations and the principles of being "American". Writing-emphasis course.

334 Film and American Culture (3) American films as both works of art and social documents. Relationship between the medium of film and American culture in the second half of the twentieth century. (Same as American Studies 334 and Cinema Studies 334.) Writing-emphasis course.

351 The Short Story (3) Emphasis on 20th century American, British, and International.

355 Advanced Expository Writing (3) Strategies of writing on personal and academic subjects. Discussion of student and professional writing. Open to sophomores with instructor's consent.

363 Writing Poetry (3) Introduction to writing poetry.

364 Writing Fiction (3) Introduction to writing novels and short stories.

365 Writing Drama and the Screenplay (3) Introduction to writing one-act and full-length plays, as well as screenplays.

371 Foundations of the English Language (3) Phonology, morphology, and syntax of English. History of the English language to 1800. (Same as Linguistics 371.)

372 The Structure of Modern English (3) Survey of English as a literary tradition, descriptive, and generative—transformational—to the structure of modern English. (Same as Linguistics 372.)

376 Colloquium in Literature (3) Methods and objectives of literary study; conferences to plan student's program in major.

381 Introduction to Folklore (3) Essential terms and concepts in modern folklore-folk-life studies. Emphasis on North American materials: folktale, folksong, myth, superstition, riddles, riddles, games, dance, games, and architecture. (Same as American Studies 381.)

388 Literature of the English Bible (3) Types of literature in the Bible: legend, folktale, history, biography, poetry, prophecy, apocalyptic. (Same as Religious Studies 589.)

398 Junior-Senior Honors Seminar (3) Designed for course limited to students with a 3.0 or better GPA. This course examines social and intellectual forces and concepts that have shaped literature in English from medieval to recent times.

401 Medieval Literature (3) Reading and analysis of selected medieval literary masterpieces in modern English. Writing-emphasis course.

402 Chaucer (3) Reading and analysis of the Canterbury Tales and Troilus and Criseyde in Middle English.

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., 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 1550 and 1640. Representative plays by Shakespeare's contemporaries (e.g., Marlowe, Webster, Jonson).

409 Spenser and his Contemporaries (3) Principal achievements in prose and poetry of sixteenth-century authors such as Spenser, Wyatt, Marlowe, More, Sidney and Chapman.

410 Milton, Donne and their 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, Waill)

411 Literature of the Restoration and Early Eighteenth Century: Dryden to Pope (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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>413</td>
<td>Restoration and Eighteenth-Century Genres and Modes</td>
<td>Study of major genres or literary mode in drama, novel, poetry, non-fiction, prose, satire, romance, or political writing between 1760 and 1800. May be repeated for credit.</td>
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<tr>
<td>414</td>
<td>Romantic Poetry and Prose I</td>
<td>Emphasis on Wordsworth, Coleridge, and Blake, with readings from Lamb, De Quincey, and other prose writers.</td>
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<tr>
<td>415</td>
<td>Romantic Poetry and Prose II</td>
<td>Emphasis on Keats, Shelley and Byron, with readings from Hazlitt, Peacock, and other prose writers.</td>
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<tr>
<td>416</td>
<td>Victorian Poetry and Prose I</td>
<td>Emphasis on authors such as Tennyson, the Pre-Raphaelites, Carlyle, Newman, and Mill.</td>
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<tr>
<td>420</td>
<td>The Nineteenth-Century British Novel</td>
<td>Major novelists from Scott to Hardy.</td>
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<tr>
<td>421</td>
<td>Modern British Novel</td>
<td>Includes such authors as Lawrence, Joyce, Woolf.</td>
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<tr>
<td>422</td>
<td>Women Writers in Britain</td>
<td>Emphasis on the literary consciousness and works of women writers.</td>
<td>(Same as Women's Studies 422).</td>
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<tr>
<td>432</td>
<td>American Romanticism and Transcendentalism</td>
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<td>433</td>
<td>American Realism and Naturalism</td>
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<td>434</td>
<td>Modern American Literature</td>
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<td>435</td>
<td>American Novel Before 1900</td>
<td>Emphasis is on early and sentimental novels through Brown and Cooper, and major figures to 1900, including Hawthorne, Melville, Stowe, Clemens, and James.</td>
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<tr>
<td>436</td>
<td>Modern American Novel</td>
<td>Authors such as Faulkner, Steinbeck, Welty.</td>
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<tr>
<td>441</td>
<td>Southern Literature</td>
<td>Southern writing from colonial period into the twentieth century, including frontier humorists, local color writers, and southern literature.</td>
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<tr>
<td>442</td>
<td>American Humor</td>
<td>Development of American humor from the early nineteenth century to the twentieth century, with particular emphasis on Mark Twain.</td>
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<tr>
<td>443</td>
<td>Topics in Black Literature</td>
<td>Contents vary according to particular genres, authors, or themes from 1845 to the present, including Langston Hughes and the Harlem Renaissance.</td>
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<tr>
<td>447</td>
<td>Teaching English as a Second or Foreign Language I</td>
<td>deals with grammatical structures of English with emphasis on the second or foreign language.</td>
<td>(Same as Linguistics 447).</td>
</tr>
<tr>
<td>448</td>
<td>Teaching English as a Second or Foreign Language II</td>
<td>deals with second language acquisition issues in teaching the four language skills to learners of English.</td>
<td>(Same as Linguistics 474).</td>
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<tr>
<td>449</td>
<td>Teaching English as the Second or Foreign Language Course</td>
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<td>450</td>
<td>British and American Ballad and Folktale</td>
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<tr>
<td>451</td>
<td>Studies in Folklore</td>
<td>Topics vary. May be repeated with different topic. Max. hours 6.</td>
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<tr>
<td>452</td>
<td>Major Authors</td>
<td>Concentrated study of at least one of the most influential writers in British or American literary history.</td>
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<td>453</td>
<td>Popular topics in literature</td>
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<td>454</td>
<td>Special Topics in Literature</td>
<td>Topics vary. May be repeated. Max. hours 6.</td>
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<tr>
<td>455</td>
<td>Special Topics in Writing</td>
<td>Original writing integrated with reading, usually taught by a professional author. Topics vary. May be repeated. Max. hours 6.</td>
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<tr>
<td>456</td>
<td>Special Topics in Politics</td>
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<td>457</td>
<td>Special Topics in Language</td>
<td>May be repeated. Max. hours 6 with consent.</td>
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<td>458</td>
<td>Special Topics in Criticism</td>
<td>Content varies. Special topics in the historical and critical approaches to British and American literature.</td>
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<td>459</td>
<td>Special Topics in Film</td>
<td>Content varies. Special topics in film genres, cinema movements, or other topics. Topics may be repeated with consent of department.</td>
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<tr>
<td>460</td>
<td>Foreign Study</td>
<td>One or more all day or overnight field trips may be required.</td>
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<tr>
<td>462</td>
<td>Writing for Publication</td>
<td>Principles and practices of writing for publication. Dissertations, theses, articles, and reports in science and technology.</td>
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<tr>
<td>463</td>
<td>Advanced Poetry Writing</td>
<td>Development of skills acquired in Basic Writing Poetry course. Prereq: 363 or consent of instructor.</td>
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<tr>
<td>464</td>
<td>Advanced Fiction Writing</td>
<td>Development of skills acquired in Basic Writing Fiction course. Prereq: 364 or consent of instructor.</td>
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<tr>
<td>465</td>
<td>Advanced Fiction Writing</td>
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<td>466</td>
<td>Senior Honors Paper</td>
<td>Intended for but not limited to students with a 3.2 or better GPA. This is an independent tutorial in which the student prepares and writes a documented study or creative project that is more substantial than what can be accomplished in a standard course. See the Director of Undergraduate Studies in English for details.</td>
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<tr>
<td>468</td>
<td>Forest Protection</td>
<td>Biological, economic and legal consideration of fire, pathogens, insects, wildlife, and pollutants in the forest ecosystem.</td>
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<td>469</td>
<td>Plant Pathology</td>
<td>Introduction to the microorganisms and environmental conditions causing disease in plants. Biology of pathogens, host-pathogen interactions, disease management. Basic analytical tools are developed and used to study the disease process of different pathogens. Major writing requirement.</td>
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<tr>
<td>470</td>
<td>Risk Management and Insurance</td>
<td>Identification, measurement and decision making with regard to insurance and risks facing the firm. Emphasis is on understanding the risks in the most cost-efficient manner.</td>
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<tr>
<td>471</td>
<td>Estate and Financial Planning</td>
<td>Process of estate accumulation, safekeeping, and distribution, with particular emphasis on impact of insurance and taxation.</td>
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369 Meat Science Lab (1) Slaughter and processing of pork, beef, and lamb. Prereq: 140 or consent of instructor. 2 hours and 1 lab. Distribution of fluid milk. Evaluation and scoring of milk, cream, and cheese. Effect of processing on product characteristics. Prereq: 360 or consent of instructor. 3 hours and 1 lab. A, F.

450 Meat Products Technology (4) Processing methods for making cured, smoked, fresh, frozen and processed meats. Effect of processing on product characteristics. Prereq: Chemistry 110, Microbiology 210. 2 hours and 1 lab. A, F.

460 Meat Products Technology (4) Processing methods for making cured, smoked, fresh, frozen and processed meats. Effect of processing on product characteristics. Prereq: 360 or consent of instructor. 3 hours and 1 lab. A, F.

470 Food Crop Products (3) Food products from plants emphasizing types, manufacturing systems, quality attributes and utility. Prereq: Nutrition 110. 2 hours and 1 lab. A, F.

480 Cereal Science and Bakery Products (3) Chemistry and technology of processing cereal grains. Interactions of ingredients during production and storage of baked products. Prereq: 410 or 411 or equivalent. 2 hours and 1 lab. A, Sp.

493 Independent Study (1-12) Specialized research in areas of interest under faculty direction. Field experience in supervised internship in the food industry. May be repeated; maximum 12 hours. Prereq: Consent of Instructor. E, F.

FORESTRY (396)

301 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: Economics 201 or consent of instructor. F, S.


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: Consent of instructor. F.


331 Wood Properties and Uses (2) Wood as a biological material; detailed examination of the woody cell wall; influence of environmental and site factors on wood formation; physical and mechanical properties of wood and the relationship of the woody cell wall to these properties; wood use in important commercial products; day field trips may be required. Prereq: Botany 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 commercial softwoods, hardwoods and foreign woods; laboratory procedures for making temporary slides for microscopic examination; use of a microscope; identification of wood samples; day field trip may be required. Prereq: Forestry, Wildlife and Fisheries 311 or consent of instructor. Coreq: 331 for Wood Properties. F, Sp.

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 resolution. Prereq: Forestry, Wildlife and Fisheries 311 or consent of instructor. Coreq: 331 for Wood Properties. F.

423 Wildland Recreation Planning and Management (3) Principles and practices of recreation planning and design projects; management strategies, methods of visitor and recreation site management; case studies. Weekend field trips may be required. Prereq: 321, 323, Ornamental Horticulture and Landscape Design 280, or consent of instructor. 2 hours and 1 lab. Sp.

433 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 and composite wood manufacturing practices; 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.


435 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; sawing, boring, planing, veneer cutting, and laser machining; day field trip may be required. Prereq: 311 and 332, or consent of instructor. 1 hour lecture and 2 hour lab. F.

436 Wood Industry Survey (1) Industry descriptions and plant visitations to include sawmills, pulp and paper, plywood, flooring, furniture and wood treating. Day field trips may be required. Prereq: Consent of instructor. Utilization Concentration or consent of instructor. Sp.

492 Practicum in Forestry (1-6) Supervised experience at department-approved, employment location. Prereq: Junior standing. Satisfactory/No credit only. E.

493 Independent Study in Forestry (1-15) Special research or individual problems in forestry. Letter grade or Satisfactory/No Credit only. E.

495 Internship in Wildland Recreation (1-6) 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.

FORESTRY, WILDLIFE AND FISHERIES (398)

211 Introduction to Forestry, Wildlife and Fisheries (3) History of natural resources policies and practices; social perspectives and attitudes concerning natural resources; their use; techniques of integrated natural resources management, ecological principles, current policies, social trends, and forest and wildlife resource utilization. Day-long field trip required. 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. Prereq: 300.

300 Current Issues in Renewable Natural Resources (1) Current resource issues presented by invited guest speakers. May be repeated; maximum 3 credit hours. Prereq: Consent of instructor. May be repeated; maximum 3 credit hours. Prereq: Consent of instructor. F.

311 Dendrology and Silvics of North American Trees (3) Identification, classification and nomenclature of important North American trees and woody scrubs; forest
associations; critical characteristics of trees and stands as the basis for the practice of silviculture. Prereq: 1 year of Botany or Biology, 2 hours and 1 lab.

312 Principles of Silviculture (2) Principles for treating forest stands to achieve selected objectives. Coreq: 311 and (for Forestry majors) 313. 1 hour and 1 lab. F

313 Measurements and Sampling (2) Measurement techniques and sampling methods for forested areas. Estimation of area, volume, and biomass. Prereq: 201. Coreq: (for Forestry majors) 210. 1 hour and 1 lab. F

315 Forest Soils and Watershed Management (3) Soil science, properties, water relations and the basis for forest water management. Classification and management of forest soils. Hydrology and management of water in the forest ecosystem. Overnight weekend field trips may be required. Coreq: 311, 312, 2 hours and 1 lab. F

316 Managing Natural Resource Organizations (3) Evolution of natural resource professions and organizations. Culture and structure of natural resource organizations. Organizational and managerial functions. Operations and strategic issues including case studies. Prereq: 211, 2 hours and 1 lab. Sp

317 Principles of Wildlife and Fisheries Management (3) Ecological relationships of wildlife with other animals and their habitats. Biological, social, and economic aspects of their management. Prereq: 211 or 250, or consent of instructor. F

410 Wildlife Habitat Evaluation and Management (3) Ecological relationships between wildlife and their habitats. Evaluation and management of wildlife habitat. Effects of land-use practices on wildlife habitat. Weekend field trips required. Prereq: 317 or Biology 230. 2 hours and 1 lab. F

416 Planning and Management of Forest, Wildlife, and Fisheries Resources (3) Integrated forest and wildlife resource management through developing land management plans and analyzing case studies including conflict resolution. Prereq: Senior standing. 1 hour and 2 labs.

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 admission to French 211. This class will not count toward the College of Liberal Arts intermediate-level foreign language requirement. For elective credit only.

199 French Language and World Business (2) The course will evaluate and assess the importance of foreign trade at the local, national and international levels. An interdisciplinary team of faculty from the colleges of Business and Liberal Arts will provide an overview of the value of language study and international cultural awareness in world business. Restricted to students majoring in the Language and World Business majors 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 held to a maximum of 15 for individual attention. Students follow enriched program with emphasis on speaking ability and reading, including literature. Coreq: 211 and (for French majors) 221 in 211 may enter 212 with permission of instructor. Credit for 200 given to students receiving a grade of A or B in the course. F, Sp

291-292 French Literature in English Translation (3,3) 291 From the Middle Ages to the Age of Voltaire. Song of Roland, Rabelais, Montaigne, the Classical period, and Voltaire, 292-Diderot, 19th and 20th centuries: Flaubert, Berton, Sartre, Camus. May not be counted toward the major or minor. Writing-emphasis course.

300 French Transition (2) Development of linguistic skills necessary for satisfactory work in courses above 300. Recommended for students who would benefit from additional training beyond 212 in basic skills of reading, speaking and writing French. 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, reading, writing, and spoken language. Coreq: 221, 218 or equivalent. Open to graduate students preparing for language examinations, and upper division students desiring teaching knowledge of the language. Undergraduate credit only. Not for credit those having 111-112 or equivalent. No auditors.

311-312 History of French Literature (3,3) Chronological survey of French literature from its origins through the Age of Voltaire. Recommended for students who would benefit from additional training beyond 212 in basic skills of reading, speaking and writing French. May not be counted toward the major or minor.

313 Aspects of French Literature (3) Study of masterpieces from the great literary movements and counter-movements. Prereq: 212 or equivalent.

324 Women in French Culture (3) Role of women in shaping French history and culture. Feminists (George Sand), royal mistresses (Mme de Maintenon), intellectuals (Mme de Stael); actresses (Sarah Bernhardt), scientists (Marie Curie). Taught in English. May not be counted toward the major or minor. (Same as Women's Studies 324.)

341-342 Intermediate Composition and Conversations (3,3) Grammatical analysis of modern French prose; review of grammatical principles and their application in translation from English to French, both written and oral exercises in free composition. Prereq: 212, 218 or equivalent. Either 342 or 345 may be applied toward the major, but not both.

345 French Business (3) Contemporary French language as it applies to business transactions. Understanding and composing business letters; oral communication and elements of French culture related to good business practice. Either 342 or 345 may be applied toward the major but not both. Prereq: 341 or consent of instructor.

400-401 Consecutive and Simultaneous French-English and English-French Translation (3,3) 400-Consecutive Translation to and from English. Introduction to 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: 342, 345, or equivalent. Preferably taken in sequence.

410 Medieval French Literature (3) Major representative works of Medieval French literature. Texts in modern French. Prereq: 212, 218 or equivalent. (Same as Medieval Studies 410.)

411 French Literature of the 16th Century (3) Major works of the 16th century, from Boccaccio to Rabelais and Montaigne. Readings in poems from the writers from Lyon and members of the Pleiades. Prereq: 212, 218 or equivalent.


413 French Literature of the 18th Century (3) Major works of the Enlightenment. Prereq: 212, 218 or equivalent.

414 French Literature of the 19th Century (3) French Romanticism and its counter movements, Realism, Naturalism and Naturalism. Prereq: 212, 218 or equivalent.


416 Survey of Francophone Literature (3) Introduction to reading in French outside of France. Prereq: 212, 218 or equivalent.

419 Readings in French Literature (3)

420 French Cinema (3) The French cinema from its earliest days through the New Wave directors. Prereq: 212, 218 or equivalent. 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. Laboratory training highly recommended. Students from departments outside the Romance Languages may take this course for graduate credit. Graduate credit is not offered to students majoring in the Department of Romance Languages. Prereq: 212, 218 or equivalent.

422 Advanced Grammar (3) Improving one's own style studying basic and more refined structures of the French language. Writing creative free-style compositions. Prereq: 342 or 345.

423 Advanced Conversation (1,1) Informal conversation with native speaker on contemporary topics. Stresses in class contact rather than outside preparation. Meets two hours a week for one semester credit. Prereq: 342 or 345.

424 Introduction to Descriptive Linguistics (3) Phonetics and phonemics, morphology and syntax. Types of languages, linguistic groups, dialects, and dialectology. Application of descriptive linguistics—field linguistics; dialect study; its practical use in learning languages and in language teaching. Introduction to transformational grammar. Prereq: Six hours of upper division English or six hours of upper division courses in a modern or ancient language (exclusive of German and French 301-302, courses in literature in translation, and general courses in Latin and Greek requiring no knowledge of the classical languages), or consent of department. (Same as German 425, Russian 425, Spanish 425 and Linguistics 425.)

425 Methods of Historical Linguistics (3) (Same as Russian 426, German 426, Spanish 426 and Linguistics 426.)

426 Romance Linguistics (3) Development of Classical Latin through Vulgar Latin into major Romance languages. (Same as Spanish 426 and Linguistics 429.)

430 Theatrical French (2-3) Performance in one or more French plays. Prereq: 212, 218 or equivalent and consent of instructor. Can be applied to major. Can be taken for writing emphasis credit.

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: 212, 218 or equivalent. Writing-emphasis course.

432 Contemporary French Culture (3) French contemporary civilization and culture since World War II. Problems, trends and organization of French society today. Prereq: 212, 218 or equivalent.

433 Literary Portraits of French Women (3) This course is designed to acquaint students with a variety of French women writers. Students will be introduced to women of different social backgrounds and of complex personalities. Not for major or minor credit in French. (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. Reading include explorer and missionary works, such as the Voyages of Champlain and the Journals of the Jesuits. Course to reflect the contemporary Quebec. Prereq: 212, 218 or equivalent.

435 Capstone Experience in French (4) Synthesizing senior colloquium and tutorial in which students reflect on the raison d’etre of the discipline from a multidimensional point of view. Writing-emphasis course.

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 importance. Can be applied for credit toward a geographic point of view, concepts, and techniques. Must be taken in sequence.

107 Honors: World Geography (3) Designed for freshmen and sophomore students of superior ability who are
interested in exploring geographical interpretations of various world problems and issues. Enroll limited. Prereq: Open to freshmen with a composite score or better on the ACT or a verbal score of 540 or better on the SAT; and to sophomores with a cumulative GPA of 3.2 or higher. Geography 107 may be substituted for Geography 101 in the 101-102 sequence. Students must not receive credit for both Geography 101 and 107.

131-132 Geography of the Natural Environment (4, 4) Characteristics and processes of the earth's surface and lower atmosphere; their interaction to produce a world pattern of distinctive environments significant to human activity. 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 Maps, Aerial Photographs, and Cartography (3) Properties, sources, uses, design and production of maps, aerial photographs, and other graphic images for geographical analysis. 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 focusing on cultural landscape, culture regions, cultural ecology, innovation and diffusion, cultural integration, and world patterns of cultural phenomena.

323 Behavioral Geography (3) Types of human behavior, such as shopping, territoriality, commuting, residential mobility, and the consequences of geographically defined boundaries 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, their measurement and analysis over time and space.


351 Regional Geography of the United States and Canada (3) Physical, economic, and social distributions as they interrelate to give distinctive character to regions of the United States and Canada. Writing-emphasis course.

353 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.

355 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, in perspective to 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 the Commonwealth of Independent States (3) Geographical appraisal of Russia and the other successor states to the Soviet Union. Focus on how physical environment, economic patterns, and human resources influence the region's future. Writing-emphasis course. (Same as Russian and East European Studies 375.)

379 Geography of Africa (3) Physical, cultural, and economic characteristics of Africa, with particular emphasis on the area to the south of the Sahara. (Same as African-American Studies 379.) Writing-emphasis course.

411 Computer Mapping and Geographic Information System (GIS) (4) Introduction to geographic information systems, and acquisition and visualization of digital data for spatial analysis. Emphasis on computer systems: data structures, 2 hours lecture and 2 hours lab per week. Prereq: 310 and knowledge of a computer language or consent of instructor.

412 Cartography (3) Cartographic techniques applied to the design, compilation, and reproduction of maps and other graphic material. 2 hours lab per week. Prereq: 310 or consent of instructor.

413 Remote Sensing: Types and Applications (3) Principles and uses of remote sensing imagery, digital data, and spectral data, with particular emphasis on geographic interpretation of remote sensing techniques. Prereq: 310 or consent of instructor.

415 Quantitative Methods in Geography (3) Geographical application of statistical techniques, point pattern analysis, and analysis of aerial units. Prereq: Mathematics 115 or GSE 115.

419 Practicum in Cartography/Remote Sensing (2-6) Supervised practice in design and production of maps and remote sensing materials. Cartographic Services Laboratory or a similar organization. Prereq: Written consent of department prior to registration. S/N or letter grade.

421 Geography of Folk Societies (3) Geographical study of folk culture, emphasizing traditional material culture and rural settlement, with examples drawn from Eastern North America and selected foreign areas. Prereq: 101-102 or 320 or consent of instructor.

425 Historical Geography of the United States (3) Survey of the changing character of the United States, its states, and its regions during four centuries of settlement and development. Emphasis on changing population patterns, development of agricultural regions, and patterns of urban-industrial development. Prereq: 361 or consent of instructor. Writing-emphasis course.

433 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.

434 Climatology (3) General circulation system leading to world pattern of climates. Climatic change and modification, and interrelations of human and natural activity. Prereq: 131-132 or 334 or consent of instructor.

435 Biogeography (3) Study of the changing distribution 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 global biota are emphasized. Prereq: 131-132 or 330 or consent of instructor.

436 Water Resources (3) Global water resources and hydrologic processes, including water availability, flooding, and water quality issues examined from physical and economic geographic perspectives. Prerequisite: 131-132 or 330 or consent of instructor.

439 Plant Geography of North America (3) Characteristics and distribution of major plant communities of Canada, the U.S., Mexico, and Central America. Relationships to climate, soil, fire, and human disturbance. Long-term historical and environmental perspectives. Prereq: 131-132 or course work in botany or consent of instructor.

441 Urban Geography (3) Concepts and theories concerning development and significance of systems of cities and internal morphology of cities. Prereq: 101-102 or 141 or 340 or consent of instructor. (Same as Urban Studies 441.)

443 Cultural Geography (3) Geographical appraisal of rural areas of the United States, including small towns and urban fringes. Problems and potentials of rural America. Prereq: 101-102 or 141 or 340 or consent of instructor.

445 Geography of Resources (3) Factors related to variations in resource availability from time to time and place to place, with particular emphasis upon energy and metallic resources. Prereq: 101-102 or 141 or 340 or consent of instructor.

449 Geography of Transportation (3) Examination of transportation systems, emphasizing their effects on trade patterns, land use, location problems, and development. Prereq: 141 or 340 or consent of instructor.

505 Process Geomorphology (3) (Same as Geology 450.)

491 Foreign Study (1-15) Prereq: Written consent of department required prior to registration. S/N or letter grade.

492 Off-Campus Study (1-15) Prereq: Written consent of department required prior to registration. S/N or letter grade.

493 Independent Study (1-15) Prereq: Written consent of department required prior to registration. S/N or letter grade.

499 Proseminar in Geography (3) Major themes in geography, especially trends over the past 40 years. For majors. Not open to graduate students. Prereq: Senior standing and completion of at least 12 hours of major or minor requirements in geography. Writing-emphasis course.

GEOLOGY (424)

101 The Dynamic Earth (4) Physical processes within and upon the Earth's surface, including the formation of rocks, plate tectonics and earthquakes, and landscapes. Must be taken in sequence. 3 lecture hours and one 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 one 2-hour lab or field period.

103 The Earth's Environments (4) Contemporary problems and solutions related to human disturbance of the earth system. Topics include climate change, pollution, resource depletion. Prereq: 101. 3 lecture hours and one 2-hour lab or field period. Fulfills laboratory science sequence requirement for College of Liberal Arts.

107 Honors: The Dynamic Earth (4) Laboratory and field emphasis to understanding tectonics, evolution, and anomalous 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 101 and 107.

108 Honors: Earth, Life and Time (4) Laboratory and field emphasis to understanding tectonics, evolution, and anomalous 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 how biodiversity has changed through time, especially past mass extinctions and current extinctions 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 influences on urban and rural environments throughout 4.5 billion years of earth history. 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.

203 Geology of National Parks (3) Geologically spectacular landscapes and geologic history of national parks of the world. Human attempts to preserve the Earth's geologic heritage. 3 lecture hours, plus a field trip during the term. May not be applied toward the Geology major.

210 Basic Geology for Engineers (2) Materials and structures of the earth. For College of Engineering students only. 2 lecture hours and one 2-hour lab or field period.

310 Mineralogy (4) Introduction of crystallography, crystal chemistry, x-ray diffraction, optical mineralogy, and the structures of rock-forming minerals. Laboratory introduction to mineral identification, x-ray diffraction techniques, and microscopic identification of minerals. Prereq: 101, Chemistry 120-130 or equivalent. 3 hours lecture and 1 lab.

320 Paleobiology (3) Fossils and their uses in functional morphology, paleoecology, biogeography, biostatigraphy, and evolution. Prereq: 102 or consent of instructor. 2 lecture hours and one 2-hour lab or field period.

325 Geologic History of Land Organisms (3) Origin and development of terrestrial life. Emphasis upon the fossil and present record of land plants and vertebrates. Prereq: Elementary biology sequence or consent of instructor. 2 lecture hours and one 2-hour lab or field period.

Geology/Courses of Instruction
330 Igneous and Metamorphic Petrology (3) Classification and properties of igneous and metamorphic rocks, the processes by which they form, and the geochemical and geophysical environments in which they form. Prereq: 310, 2 lecture hours and one 2-hour lab.

340 Stratigraphy and Sedimentation (3) Stratigraphic principles and practices; physical sedimentary processes and interpretations of depositional environments. Prereq: 101, 102 and 310. 2 lecture hours and one 2-hour lab or field work.

345 Geology of East Tennessee (1) Geology of the Southern Appalachians in Tennessee. Prereq: Completion of core courses or consent of instructor. 1 lecture hour plus field trips.

370 Structural Geology (4) Common geologic structures (folds, faults, cleavage) and their genesis. Laboratory includes map interpretation, cross-sections, projections, stereonets. Prereq: 310; Mathematics 141-142; and one of the following: Physics 151 or Basic Engineering 121. 3 lecture hours and one 2-hour lab.

380 Resources Crises - Minerals and Energy (3) World and United States resources of minerals and energy, price and production trends, future supply of minerals and energy, national mineral and energy policies. Emphasis on appraisal of conventional and alternate energy resources.

401 Quantitative Methods in Geology (3) Applications of calculus and differential equations to problems in the earth sciences. Examples of the diffusion equation in hydrology, the wave equation in geophysics, mechanical modeling and boundary conditions in structural geology and tectonics. Prereq: 101-102 or 107-108, Mathematics 141-142. 3 lecture hours.

410 Advanced Mineralogy (3) Crystal chemistry of the rock-forming minerals. Interaction of electromagnetic radiation and crystalline solids. Optical properties of minerals, visible and infrared spectroscopy, and x-ray diffraction. Laboratory exercises emphasize thin section and x-ray diffraction methods of mineralogy. Prereq: 310. 2 lecture hours, one 2-hour lab.

420 Palaeoecology (4) Principles of ecological analysis as applied to fossils and fossil assemblages with emphasis on data collection and interpretation. Laboratory is designed around preparation of scientific reports based on field and laboratory analysis. Writing emphasis course. 3 lecture hours and one 2-hour lab.

421 Invertebrate Paleontology (3) Survey of invertebrate animal phyla, with emphasis on skeletal structure and preservation, functional morphology, ecology, and stratigraphic distribution. Prereq: 320 or consent of instructor. 2 hours and two 2-hour labs.

440 Field Geology (5) Summer field course for advanced undergraduate geology majors and first-year graduate students interested in the study of igneous and metamorphic rocks. Taught off-campus, and requires the full time of the student for 2 or more weeks. Geophysical investigations applied to the solution of a problem in tectonics, hydrogeology, or the environment. Prereq: 470 or consent of instructor.

471 Fieldwork in Geophysics (2) Summer field course for advanced undergraduate graduate students. Taught off-campus, and requires the full time of the student for 2 or more weeks. Geophysical investigations applied to the solution of a problem in tectonics, hydrogeology, or the environment. Prereq: 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, plate tectonics, geochemistry, 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. Prereq: 16 hours of geology, 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. Prereq: 310 and 330 or equivalents. Recommended: 460. 3 lecture hours and one 2-hour lab.

485 Principles of Geochemistry (3) Ground water flow, aquifer analysis, ground water contamination, and ground water management. Prereq: 101 or equivalent, and consent, Chemistry 120-130 or equivalent, and Mathematics 141-142 or equivalent. (Same as Civil Engineering 495.)

486 Special Problems in Geology (1-3) Directed study or special topics. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

491 Foreign Study (1-15) 1-15 Language Laboratory (0) 111 Language Laboratory (0) 112 Language Laboratory (0)

150 Elementary German Transition (3) This course is designed to prepare students for enrollment in German 201. Prereq: Two years of high school German and a placement score below the level required for admission to German 201.

199 German Language and World Business (2) The course will examine the importance of foreign trade at the local, state, and national level. An interdisciplinary team of instructors in the Language and Business Administration and Liberal Arts will provide an overview of the language study 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.

201-202 Intermediate German (3,3) Must be taken in sequence. Prereq: 102 or 150 or appropriate placement exam score.

301-302 Introduction to German Literature (3,3) Prereq: 202 or equivalent. Need not be taken in sequence.

304 Elementary Dutch (3) Prereq: Reading knowledge of German. Prerequisites: 101 or equivalent. No credit allowed.

305 Readings in German (3) Topics in both literary and non-literary fields. Students or student groups are encouraged to suggest topics for future courses. May be repeated twice with approval of the department. Prereq: 202 or equivalent.

311-312 Conversation and Composition (3,3) Prereq: 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 language competence. Undergraduate credit only. No credit for students who have completed 101-102 or 107. 332 may be repeated only once for credit. A, B, C, no credit grading.

383 Modern German Culture (3) German culture from the eighteenth to the twentieth century to the present: customs, art, music, literature, society, state. Readings in English for non-norms 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) Prereq: 311-332 or equivalent or consent of department.

420 Selected Topics in German Literature from 1750 to the Present (3) Prereq: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

421 German Lyric Poetry (3) Prereq: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

422 German Drama (3) Prereq: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

423 German Narrative Prose (3) Prereq: 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 themes and techniques of each period.

425 Introduction to Descriptive Linguistics (3) (Same as Russian 425, French 425, Spanish 425, and Linguistics 425.)

426 Methods of Historical Linguistics (3) Phonetics, distinctive feature analysis, sound change types, nature of sound 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. Prereq: 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) Contrasts English-German segmental and suprasegmental phonemes, contrastive English-German linguistic structures, selected topics in advanced German grammar and phonetics. 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 High German, Middle High German to 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.)

455 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

121-122 Beginning Greek (3,3) Must be taken in sequence.
History/Courses of Instruction

169

261 Intermediate Greek: Grammar Review and Readings (3) Systematic review of Attic Greek 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.

403-406 Selected Readings from Greek Literature (3) For advanced students in Greek, the study of plays, the historical writings, 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. 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, F, Sp

225 Alcohol/Drugs and the College Student (2) Problems related to use and abuse of substances potentially harmful to health and wellness. Covers alcohol, drugs, tobacco and other substances. Satisfactory/No Credit only, F, Sp

230 Cardiopulmonary Resuscitation (2) Theory and skills to implement basic cardiac life support following cardiac arrest due to such conditions as heart attack, drowning, electrocution, suffocation, poisoning, drug intoxication, and vehicular and other accidents. Educational and preventive aspects of controlling cardiovascular disease. Leads to basic life support certification. F, Sp

300 Health Education, Promotion, and Behavior (3) Health education goals, roles, target populations in school, community and health care settings; health careers and opportunities, health behavior and intervention techniques; health appraisal techniques; health promotion strategies. F

305 Health of Adolescents (3) Profile of health needs, interests, and behaviors of adolescents and attention to the roles and functions of practitioners relating to youth and youth culture.

306 Health Instruction in Elementary Grades (3) School health program for the child in elementary grades. Teachers become familiar with organizing and presenting health information, interpreting the data and results of health instruction, using community resources, and communicating healthful lifestyle. Prereq: Admission to Teacher Education Program, F, Sp

310 Advanced First Aid and Emergency Care (3) Theory and practice of first aid and emergency care. Provides essential information for developing functional first aid capabilities of lay persons. Course leads to Advanced First Aid and Emergency Care certification. Applicant must be at least 18 years old for certification. E

325 Health Education Program Planning (3) Principles of curriculum development, administration, implementation, methodology, and evaluation. F

330 Wellness Through Health, Leisure and Physical Activity (3) Emphasis on taking personal responsibility for one's health. Includes topics related to the healthy lifestyle, and provides specific guidelines of how to change inappropriate behaviors. (Same as Physical Education 330). Sp

375 Health Communications (3) Communication strategies for health educators in various settings. Emphasis on interpersonal relationships, public relations, leadership, small group processes, health teams, and effective use of media. Sp

380 Research and Grant Writing (2) Study and application of research methods and grant writing techniques for health education programs. Skills for reading and interpreting journal and research articles. Exercises and student projects to develop a research or grant proposal. Emphasis on development and review processes.

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

410 Pre-Internship Seminar (1) Objectives and policies of the internship program. Must be completed the term immediately preceding the internship. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only, Sp, Su

414 Fitness Testing and Exercise Prescription (3) (Same as HPS 414)

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

423 Women's Health (3) Factors influencing women's health and how they are consumers in our nation's health service delivery systems. Focus on the health care concerns of women and techniques for prevention, maintenance and/or correction. (Same as Women's Studies 423). F, Sp

430 Suicide and Crisis Intervention (3) Factors which make suicide a serious health problem. Assessment, intervention, and prevention techniques. Sp

433 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 well-being of the aged. F, Sp

470 Special Topics (1-3) For advanced students, teachers, school administrators, nurses and other para-medi-cal personnel. Emphasis on selected topics. May be repeated for credit. Maximum 12 hours.

475 Selected Independent Studies (1-3) Individual identification and study of special health/wellness or health promotion problems/issies. Prereq: Consent of instructor. May be repeated. Maximum 12 hours.

481 Internship I: Grades 7-12 (3-6) Methods and theories of teaching. Internship is completed in local public school settings. Prereq: Consent of instructor. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only, Sp.

482 Internship II: Grades 7-12 (3-6) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools. Prereq: 481 and admission to Teacher Education Program. Satisfactory/No Credit only, Sp.

483 Field Practice (10) Off-campus health internship or field practice in an educational or other agency with qualified professional. Prereq: Consent of instructor. Satisfactory/No Credit only, E

**HISTORY (462)**

151-152 Development of Western Civilization (3,3) Historical survey of the civilization of the western world. 151-Ancient world to 1715. 152-1715 to present. Writing-emphasis course.

157-158 Honors: Development of Western Civilization (3,3) Consent of department required. 157-F; 158-S. Writing-emphasis course. Students will attend the appropriate 151-152 lectures and the designated honors discussion section.

162-161 A History of World Civilization (3,3) Historical survey of world civilization. 161-Orgins to 1500. 162-1500 to present. 161-F; 162-S. Writing-emphasis course.

185 African-American History: An Introduction (3,3) African-American experience to 1890. Traditional African societies from which African-Americans emerged; evolution of prejudice and racism in America; institution of slavery; free Negroes; Civil War and Reconstruction; African-American experience from 1890. The African-American struggle for political, civil, and social equality; leaders of the struggle; their philosophies and programs; responses of Black community institutions to the challenges of the 20th century; the rise of the urban ghetto; the Civil Rights and Black Power movements.

251-252 History of the United States (3,3) 251-Settlement to 1817. 252-1817 to present. E

257-258 Honors: History of the United States (3,3) Honors: History of the United States. Application for internship should be made upon admission to the Teacher Education Program. Satisfactory/No Credit only. Prereq: Consent of the department. E

310-311 The Ancient World (3,3) 310-Development of Athenian democracy: its successes and failures; roles 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 Military History I (3,3) 312-Early Military Ages: 1000 B.C. to 1600 A.D. Formation of military states/militia. 313-Later Military Ages 1100-1400. Height of medieval civilization, and its waning in the fourteenth century. (Same as Military 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 diversity, economic dislocation and insecurity, political centralization, intellectual ekphrasis, the origins of modern science, 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 (3,3) Political, industrial and intellectual revolutions against traditions. Topics range from the emergence of the "modern" state, the problems of evidence, interpretation and objectivity. The mass of opinion and frames of reference and the boundaries of opinion. May be repeated for credit. Maximum 12 hours.

425 Internship to Teacher Education Program. Satisfactory/No Credit only. F

470 Speciale Topics (1-3) For advanced students, teachers, school administrators, nurses and other para-medi-cal personnel. Emphasis on selected topics. May be repeated for credit. Maximum 12 hours.

481 Internship I: Grades 7-12 (3-6) Methods and theories of teaching. Internship is completed in local public school settings. Prereq: Consent of instructor. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only, Sp.

482 Internship II: Grades 7-12 (3-6) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools. Prereq: 481 and admission to Teacher Education Program. Satisfactory/No Credit only, Sp.

483 Field Practice (10) Off-campus health internship or field practice in an educational or other agency with qualified professional. Prereq: Consent of instructor. Satisfactory/No Credit only, E

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 depression and the consequent political and social instability; totalitarianism; decolonization; the impact of Freud, Einstein and existentialism; welfare states; and the problems of European unification. Writing-emphasis course.

321 New Testament Origins (3) (Same as Religious Studies 321)

322 Christian Thought (3) (Same as Religious Studies 322)

330-331 History of England (3,3) 330-to 1668. 331-1669 to the present. Medieval state, church, and society; origins of Anglo-American law, the monarchy, and parliamentary government, the Reformation, 17th Century revolutions, commercial, agricultural and industrial revolution, empire, the welfare state, world wars, economic crisis.

332-333 History of France (3,3) 332-The emergence of modern France from the Renaissance to 1793. 333-France since the Revolution, 1789 to present.

334-335 History of Germany (3,3) 334-Germany I, to 1815. The economic rise of the German lands, from the medieval empire to its disintegration, through dynastic and religious rea-
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 techniques of research and 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) Examiners the ideology and practice of U.S. international relations since World War II.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

HOTEL AND RESTAURANT ADMINISTRATION (551)

120 Introduction to Hotel and Restaurant Administration (2) History and place of industry in national economy; basic operating systems, organization structure, and pricing. Prereq: 120; progression into HRA program or consent of the instructor.

125 Front Office Management (3) Front office procedures within context of overall operation of the hotel/motel; includes reservation systems, equipment, accounting procedures, settlement procedures, public relations, and management.

220 Foodservice Systems Administration (3) Management concepts, processes, resources in foodservice systems; decision-making and problem-solving principles.

300 Food and Lodging Cost Control (3) Budget, cost agencies. Prereq: 120; progression into HRA program or consent of the instructor. Coreq: 321 or 322.

301 Food and Lodging Cost Control (3) Budget, cost agencies. Prereq: 120; progression into HRA program or consent of the instructor. Coreq: 320.

320 Food Procurement, Production and Service System (3) Principles for determining needs, procuring, storing, serving and producing food in volume. Prereq: 120, 220, NTR 100 or 107, NTR 101, Micro 210 or PH 310; progression into HRA program or consent of the instructor. Coreq: 321 or 322.

321 Food Service Procurement, Production and Service Laboratory (1) Application of principles in determining needs, procuring, storing, serving and producing food in volume. Prereq: 120, 220, NTR 100 or 107, NTR 101, Micro 210 or PH 310; progression into HRA program or consent of the instructor. Coreq: 320.

322 Food Service Procurement, Production and Service Observation (1) Application of principles in determining needs, procuring, storing, serving and producing food in volume. Prereq: 120, 220, NTR 100 or 107, NTR 101, Micro 210 or PH 310; progression into HRA program or consent of the instructor. Coreq: 320.

325 Tourism and Travel Administration (3) Economic and social forces influencing domestic and international tourism, services, functions of retail, wholesale travel agencies. Prereq: 120; progression into HRA program or consent of the instructor.

326 Food and Lodging Cost Control (3) Budget, cost analysis, computer, financial statement use in decision-making in lodging and foodservice systems. Prereq: 320, 321 or 322; Accounting 302 or consent of instructor.

400 Field Experience in Hotel and Restaurant Administration (6) Supervised educational experiences in selected tourism, food and lodging operations followed by a two-day seminar. Students enrolled in this course may not enroll in any other courses. Prereq: 320, 321 or 322, Accounting 302; Economics 201, Marketing 301; Business Law 301; 100 hours of verifiable work experience. Satisfactory/No Credit only.

420 Food and Lodging Personnel Development (3) Training programs; personnel management procedures and policies involving human resource analysis for lodging and foodservice systems. Prereq: 320, 321 or 322, Accounting 202; Economics 201, Marketing 301; Business Law 301; 100 hours of verifiable work experience.

425 Hospitality Law (3) Legal rights and responsibilities of staff, management, and guests. Prereq: 320, 321, or 322, Bus. Law 301 or consent of the instructor.

426 Convention Management (3) Scope and segments of convention management including require-ment meeting individual needs; methods and techniques for outstanding service. Prereq: 320, 321, 322 or consent of the instructor.

440 Special Topics: Hotel and Restaurant Adminis-tration (1-3) Developments, issues and problems in Hotel and Restaurant Administration. Prereq: Junior or Senior Standing in Hotel and Restau- rant Administration Program or consent of the instructor. May be repeated. Maximum 3 credits.

494 Directed Study: Hotel and Restaurant Admini-stration (1-3) Individual study: 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.

201 Field Experience in Family Life School-based Programs (1-3) May be repeated. Maximum 3 hours. Satisfactory/No Credit only.

210 Microcomputer Applications (3) Introduction to microcomputers and related programs operating systems, word processing systems, data base systems, spreadsheet programs and graphics programs; design of a management information system; spreadsheets, word processing, and databases. Prereq: Declared major in College of Human Ecology.

225 Strategies for Facilitating Learning (4) Methods and techniques for facilitating learning, developing individual plans, and disseminating information. Includes field experience. Prereq: CFS 205.


445 Field Experience in Community-Based Programs (1-15) Placement in community-based programs or businesses. Includes seminar. May be repeated. Maximum 15 hours. Prereq: Consent of instructor. Satisfactory/No Credit only.

460 Directed Study: Human Ecology (1-3) Topic area. Prereq: Individual student under supervision of faculty. May be repeated with different topic. Maximum 6 hours. Prereq: Junior or Senior standing in a major in the College of Human Ecology and consent of instructor.

497 Honors: Home Ecology (3-6) Issues or topics affecting areas within Human Ecology. Designed to meet particular interests of the student. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

HUMAN PERFORMANCE AND SPORT STUDIES (526)

100 Orientation to Physical Education (2) Overview of the professional and disciplinary areas in physical education with special emphasis on introductory field experiences. Prereq: Taken the first semester in the student's major.

102 PE Major: Basketball (1) Fundamentals of basketball, including individual and team skills with considera-tion of techniques for effective teaching of these funda-mentals.

103 PE Major: Tennis (1) Development of skills, rules and game strategies in tennis, applying skill analysis and various styles of teaching.

104 PE Education Major: Gymnastics (1) Beginning skills in tumbling and on selected men's and women's gymnastics apparatus. Tumbling skills include forward, backward, and balance skills. Apparatus include vault, balance beam, and pommel horse. Special empha-sis on teaching techniques, safety, progression, and spotting.

105 PE Major: Folk and Square Dance (2) Basic folk and square dance steps. Partner and group patterns and designs with emphasis on skill development, terminology, etiquette and teaching techniques.

106 PE Major: Track and Field (1) Basic skills of track and field with consideration of techniques for effective teaching.

260 Exercise Science Practicum I (1) First practical experience to support and clarify career goals. Satisfactory/No Credit grading only. Prereq: 100.

271 PE Major: Soccer/Softball (1) Basic fundamen-tals, including individual and team skills with considera-tion of techniques for effective teaching.

272 PE Major: Volleyball (1) Elementary and interme-diate volleyball skills, general rules, and strategy related to the game of volleyball with particular emphasis on teaching techniques and skill development.

273 PE Major: Golf (1) Fundamental skills, general rules, and strategies related to the game of golf with emphasis on skill development and teaching techniques.

274 PE Major: Gymnastics II (1) Beginning skills in tumbling and on selected men's and women's gymnastics apparatus. Tumbling skills will include twisting skills, kips, and combinations of previous skills. Apparatus will include uneven bars, horizontal bar, parallel bars, and still rings.

275 PE Major: Ballroom Dance (2) Basic ballroom dance patterns and designs, terminology and etiquette with application to the various styles of teaching.

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 PE 276.)

290 Human Motor Behavior (3) Theories and prin-ciples 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 soci-ety from a sociological perspective. (Same as Sociology 291.)

292 Field Studies (1-2) Peer teaching, using selected styles, and systematic observation of motor behaviors of physical education students in elementary, middle, and high school settings. Prereq: 100.

311 Coaching Football (1) Theoretical and practical applications of various coaching techniques in football for the prospective secondary/colege coach. Includes analysis and selection of appropriate game plans, specific conditioning and training programs, practice organization, player evaluation, scouting, individual and team offensive and defensive. Prereq: Consent of instructor.

312 Coaching of Basketball (1) Individual and team fundamentals for the high school coach; conditioning, skill development, and other business arrangements. Prereq: Consent of instructor.

313 Coaching of Track and Field (1) Coaching meth-ods and training techniques for various track and field events, including experience observing and working at meets and practices. Prereq: Consent of instructor.

314 Coaching of Gymnastics (1) Fundamentals used in the coaching and judging of competitive men's and women's gymnastics. Emphasis on the safety and spot-ting of competitive gymnastics skills. Prereq: Consent of instructor.

315 Coaching of Baseball/Sofball (1) Theoretical and practical application of various coaching techniques in baseball/softball for the secondary/colege coach. Top- ics include analysis and selection of appropriate game plans, conditioning and training techniques, force, prac-tice organization, player evaluation, scouting, individual and team offensive and defensive strategies. Prereq: Consent of instructor.
3) Historical survey of the development of sport and physical education from ancient primitive to twentieth century civilization. Prereq: Progression to the major or consent of instructor.

322 Fitness Activities (2) Methods of instructing and leading students in health activities, including swimming, exercise, dance, music, water activities, and fitness games. 1 hour lecture; 3 hour lab. Prereq: At least junior standing and progression to the major.

325 Athletic Training Techniques (2) Prevention of athletic injuries, including injury prevention and practices associated within the broad perspective of the sport enterprise. Prereq: Progression to Sport Management Major, Admission to Sport Management Major, Sport Management 250 & 270, or consent of instructor. (Same as Sport Management 350). S, P

356 Motor Development (3) Evolution of human motor behavior within the context of structural/functional changes, and with the respect to psychological, sociological, and biological 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.

372 Philosophy of Sport and Physical Education (3) Theories of reality and values 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 coaching, with practical implications and applications to teaching and coaching. Prereq: Progression to major or consent of instructor.

405 Sociology of Sport (3) Social meaning, organization and process of sport. Difference between sport and play and games. Application and sport, sport as an occupation, place of sport in mass culture, sport subcultures, and reciprocal influences of sport and cultural milieu. Prereq: 291 or Sociology 285, or permission of instructor. (Same as Sociology 405.)

410 Pre-Internship Seminar (1) Objectives and policies of the internship program. Must be completed the term immediately preceding the internship. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. Sp, Su

411 Applied Physical Education (3) Developmental disabilities, other physical/motor handicaps and various/innovative characteristics of specific syndromes. Emphasis on moral development, educational programming, and special education needs.

412 Practicum in Adapted Physical Education (1) Teaching those with special education needs. Observation and assistance to physical education teachers who teach in schools for the handicapped and/or in which many handicapped individuals are mainstreamed. Prereq: Progression to the major. Coreq: 411.

413 Special Practicum in Adapted Physical Education (1-2) A section including an on-campus lab program with one-on-one with a 2-5 year-old child who is a high-educational risk and a section with experiences relevant to student needs with a physical education teacher: physical or occupational therapist, at a school for the handicapped. May be repeated. Maximum 3 hours.

414 Physical Testing and Exercise Prescription (3) Relationship of exercise to cardiorespiratory function, body composition, strength and flexibility. Measurement and evaluation of fitness in normal populations. (Same as Health 414.)

416 Athletic Coaching Field Experience (1) Practical experience in coaching and related responsibilities. May be repeated. Maximum 2 hours. Prereq: Approval of instructor.


422 Applied Kinesiology (3) Study and emphasis of human movement with emphasis on biomechanical principles and their application to movement and neuromuscular fitness. Prereq: 332.

423 Readings in Physical Education (2) Current and classic literature in physical education.

425 Administration and Evaluation in Physical Activity and Sport (3) Fundamental principles of organization, administration, and supervision in the areas of physical activity and sport. Prereq: Admission to Teacher Education Program. Coreq: 450 for teacher education students.

426 Exercise Science Practicum II (1-6) Supervised experiences in exercise science areas may be repeated for a maximum of 10 hours. Satisfactory/No Credit grading only. Prereq: 260, 322, 332, 414, progression to the major and consent of instructor.

430 Approaches to Physical Education for Children (3) Contemporary approaches with emphasis upon movement education. Prereq: Admission to Teacher Education Program.

450 Field Experience I (3) This course continues to develop instructional skills from HPSS 292 and is designed to provide opportunities for students to teach in K-12 physical education settings. Prereq: 232, 435 and Admission to Teacher Education Program. Coreq: 451, 452, 465, 496.

465 Movement Education (2) Educational games, sports, dance, and gymnastics for children. Prereq: 356, 435, and admission to Teacher Education Program.

466 Motor Development Laboratory (3) Application of selected perceptual-motor development, movement education, and pedagogical concepts to performance assessment and motor planning and self-assessment to normally developing preschool or primary grade children. Participation in intra- or inter-disciplinary research projects. Prereq: Progression to major or consent of instructor.

480 Physiology of Exercise (3) Lecture and lab class dealing with functions of the body in muscle work. Topics include physiological aspects of fatigue, training and rehabilitation to environment. Prereq: Zoology 220 or 440, 2 lectures and 1 lab. (Same as Zoology 480.)

491 Internship I: Grades K-12 (3-4) Methods and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

492 Internship II: Grades K-12 (3-5) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools. Prereq: 481 and admission to Teacher Education Program. Satisfactory/No Credit only. Sp

490 Exercise Physiology/Health Fitness Internship (12-15) Full-time practice in exercise fitness at approved agency. Satisfactory/No Credit grading only. Prereq: 442, 480, 480 and 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 advisor and progression to the major. Satisfactory/No Credit or letter grade.

499 Exercise Physiology/Health Fitness Internship (12-15) Full-time practice in exercise fitness at approved agency. Satisfactory/No Credit grading only. Prereq: 442, 480, 480 and consent of instructor.

502 Job Analysis Techniques and Curriculum Development (3) A greater emphasis on the practical applications of job analysis and curriculum development, with a focus on the development of instructional materials. Prereq: Principles of Education 300 and consent of instructor. Satisfactory/No Credit only.
business, and industry. Implications and impact of microcomputers on occupations and everyday living. Open lab for required hands-on experience in operations and programming. F

386 Lab Organization, Management, Maintenance, and Safety (3) Procedures and laboratory organization, maintenance, safety, and management in educational and technical laboratories. Sp

361 Graphic Reproduction Processes (3) Principles of printing, duplicating, photography, and other forms of graphic communication; includes laboratory experiences in SLR camera applications, camera copy preparation, line and halftone photography, layout, stripping, platemaking, and presswork. F

363 Applications of Integrated Electronics (3) Electrical circuit analysis and IC applications; including amplifiers, switching and timing circuit, oscillator and the basic principles and applications of digital electronics through lecture and laboratory experiments and projects. F

365 Manufacture of Wood Products (3) Design and construction of case and carcass furniture and built-ins. Emphasizing use of wood as material. Prereq: Consent of instructor. F

366 Manufacturing Technology (3) Manufacturing system, including research and developing products, preparing to produce, marketing, and servicing. Prereq: 165, 166. Sp

368 Plastic Technology (3) Characteristics and applications of thermoplastic and thermosetting materials. Plastics production equipment related product design and processing. Prereq: 165 and admission to Teacher Education Program. Sp

372 Job Analysis (3) Applied techniques of job analysis to determine job description, training requirements, performance standards and sequence of training technical personnel. F

373 Instructional Techniques in Industrial Education (3) Application of learning theories, motivational techniques, and instructional strategies to technical and related subjects. F

374 Planning Instruction for Human Resource Development (3) Selection, design, and development of performance-based training programs. Prereq: 372 or consent of instructor. F

401 Utilization of Community Resources (3) Strategies of developing linkages between vocational education and the private sector through advisory committees, councils and working partnerships. Development and management of public relations programs. Prereq: Three years of teaching experience. A

410 Pre-Student Teaching Seminar (1) Objectives and policies of the student teaching program. Must be completed the semester immediately preceding student teaching. Prereq: Admission to Teacher Education Program. Sp, Fall, Spring

413 Special Topics in Technological and Adult Education (1-3) Topics to be assigned. May be repeated. Maximum 6 hours. E

414 Individual Study in Technological and Adult Education (3) Prereq: Consent of supervising instructor with approval form filed in the office of the department head. May be repeated. Maximum 6 hours. E

415 Introduction to Adult Education (3) Breadth of adult education activities and the diversity of adult clientele, including opportunities for professional development practice apart from traditional instructional settings. A

421 Adult Education Program Design and Management (3) Processes of program development and special application to adult training programs. Sp

422 Adult Development and Training (3) Application of adult development concepts to design and management of training programs for adults. Sp

430 Principles and Organization of Business Marketing Education (3) Historical background and development needs. Principles of vocational education in business areas with implications, establishing, evaluating, and improving the programs. Prereq: Admission to Teacher Education Program. F

431 Word Processing and Office Technology (3) Word processing concepts and applications, methodology for teaching word processing and machines. Prereq: Advanced typewriting skill and permission of instructor. F

432 Methods and Materials in Business and Marketing Education (3) Teaching techniques, aids and evaluation in subject matter fields. Prereq: Admission to Teacher Education Program. Sp

433 Methods in Office Technology (3) Materials, methods, evaluation procedures, and recent research in office technology. Prereq: Typewriting, shorthand, and other office procedures. Sp

434 Methods in Accounting and Data Processing (3) Methods, materials, evaluation procedures, and recent developments in accounting and data processing. Prereq: Admission to Teacher Education Program. F

436 Supervised Occupational Experience (3-9) Practical field experience in business and marketing settings under the supervision of practitioner and departmental representative. May be repeated to a maximum of 9 credits. E

439 Areas of Marketing (3) Marketing personnel development, operations and management as these affect the instructional leadership program in marketing education. Prereq: Admission to Teacher Education Program. F

440 Special Topics in Business and Marketing Education (1-3) Topics to be assigned. May be repeated. Maximum 9 hours. E

450 Seminar in Industrial Education (1-3) Current issues, innovations, problems, and other topics associated with technical programs. May be repeated. Maximum 6 hours. A

454 Training Aids Development (3) Study and preparation of instructional aids and non-print media commonly used by technical instructors and trainers. F

455 Performance-Based Evaluation (3) Assessing the effectiveness of training through the development of performance-based measures; evaluation of incumbent worker job performance. Sp

456 Organization and Operation of VICA/HOSA (3) Planning, organizing and implementing youth-club activities in vocational-technical programs. A

459 New Developments in Industrial Education (3) Developments, significant problems and recent trends in industrial education presented by coordinating instructor in conjunction with knowledgeable resource personnel. May be repeated. Maximum 6 hours. E

464 Methods and Mediation in Technology Education (3) Methods and mediation used in teaching technology education in the secondary public schools. Prereq: Admission to Teacher Education Program. F

465 Materials and Processes (3) Materials relative to specifications, testing, and methods to classify and categorize materials for determining correct procurement match industrial product needs. Prereq: Consent of instructor. F

466 Course Construction in Technology Education (3) Selection and arrangement of course content; planning, instructional objectives, project/product selection, assignments and evaluation. Prereq: Admission to Teacher Education Program. Sp

470 Training and Personnel Development (3) Organization and management of training, including roles and functions performed and the needs, costs, benefits, and productivity of training systems. F

471 Principles of Supervision (2) Problems of motivation, communication, interpersonal relationships and leadership. Sp

479 Internship in Human Resource Development (5-10) Assessment, planning, implementing, and evaluating the effectiveness of training programs in an industrial setting. May be repeated to a maximum of 10 semester hours. Satisfactory/No Credit only. E

481 Student Teaching: Grades 7-12 and Adults (10) Full-time experience in classroom and laboratory teaching and related responsibilities under the direct supervision of a master teacher in the content area. Satisfactory/No Credit only. Prereq: Admission to Teacher Education Program. F

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. F

330 Thinking About People (3) Development of thoughtful, informed and empathic attitudes toward human beings. Those providing services as they receive service. Prereq: Progression to the major. F

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 depth in relation 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

420 Human Services Methodologies II (3) Includes reality therapy, behavior modification, family systems, client-centered and rational emotive therapy. Discussion and role playing of methods and skills that will be used during the field experience. Prereq: Progression to the major. 230, 235, Coreq: 420.

430 Working Within The System (3) Capstone Experience. Context within which the need for human services arises and analysis of the process through which services are provided. Prereq: Progression to the major. 330, 335, senior standing or consent of instructor. Coreq: 420. Satisfactory/No Credit only.

441 Human Services Field Work I (3) Practical field experiences in appropriately organized and directed human services settings. Develops specific helping skills: involvement in roles and function of social services, and provides direct services in a supervised learning situation. For majors only. Prereq: Progression to the major or consent of instructor. Coreq: 420. Satisfactory/No Credit only. Sp

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 of human services. May be repeated. Maximum 6 hours.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

INTERDISCIPLINARY PROGRAMS (270)

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, as determined by 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/N grading.

401 Foreign Study (1-15) Registration by permission of the Director of Interdisciplinary Studies.

402 Off-Campus Study (1-15) Registration by permission of the Director of Interdisciplinary Studies.

403 Independent Study (1-15) Registration by permission of the Director of Interdisciplinary Studies.

INTERIOR DESIGN (582)

140 Introduction to Interior Design (2) Orientation to the profession; relationship to allied fields; contempo-
250 Fundamentals of Interior Design II (4) Problem solving, spatial organization of micro environments, increasingly larger scale; communication of total design solution through visual and oral presentation techniques; emphasis on the use of color. One hour lecture and three hour studio. Prereq: 250.

260 Materials and Resources for Interiors (2) The development and application of materials and resources used in interior architectural space. Prereq: RCS 120.

265 Micro-Computers for Interior Design (3) Introduction to computer-based spreadsheets, drawing, desktop publishing, database and other software applications in various aspects of project design and management, including cost estimating and budget constraints, optimizing design criteria, Pro/Engineer analysis and information and resource management. One hour lecture and two hour studio. Prereq: or Coreq: 240. Interior Design majors only.

301 Survey of Interior Design (3) Planning and organizing interior spaces, rooms, apartments, residences to meet personal and family housing needs; relation of furnishings to architectural space. Open to interior design majors. Enrollment preference given to Home Economics Education and Hotel Restaurant Administration majors.

315 Hospitality Interiors (3) Planning and organizing interior spaces for restaurants and lodging facilities; relation of furnishings to architectural space. Open only to Hotel and Restaurant Administration majors.

340 Intermediate Interior Design I (5) Studio problems of intermediate complexity with emphasis on programmatic and schematic design phases; in-depth analysis of current programming methods; integrates and extends previous knowledge of working drawings, materials and sources, design methods, spatial organization and planning of micro and macro environments. Two hour lecture and three hour studio. Coreq: Third year standing in Interior Design.

350 Intermediate Interior Design II (5) Studio problems of intermediate complexity; integrates and extends previous knowledge of working drawings, materials and sources, design methods, spatial organization and planning of micro and macro environments. Two hour lecture and three hour studio. Prereq: or Coreq: 280, 340, 460, Physics 122.


370 History of Interior Architecture I (4) Interior architecture, decoration and decorative arts within cultural context, ancient through nineteenth centuries, emphasizing history and form of selected interiors. Prereq: History 172 and 173 or consent of instructor.

400 Proxemics (3) Analysis of space and behavior; within a cultural context; Application to design and the design process. Examination of theoretical foundations and concepts with emphasis on human behavior and culture. Simulation techniques and methods for identifying behavioral design requirements. Prereq: 200, 280, 440, or consent of instructor.

417 Honors: Interior Design (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 (12) Supervised experience in a professional design firm; business practices, project management and design philosophy. Prereq: 280. Coreq: Fourth year standing in Interior Design.


440 Advanced Interior Design I (5) Residential studio problems of advanced complexity; integrates and extends previous experiences utilizing systematic design methodologies. Two hour lecture and three hour studio. Prereq: 350; Coreq: 400, or consent of the instructor.

450 Advanced Interior Design II (5) Comprehensive studio problems of advanced complexity; integrates and extends previous experiences utilizing systematic design methodologies. Two hour lecture and three hour studio. Prereq: 440 or consent of instructor.

460 Lighting for Interior Designers (3) Application of elements and principles of lighting and wiring design to visual environment. Prereq. or Coreq: 350; Physics 122 or consent of instructor.

470 History of the Contemporary Interior Architecture (3) Theoretical developments in interior architecture and decorative arts within cultural context, colonial era through nineteenth century. Prereq: 370 or consent of instructor.

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. One hour lecture and two hour studio. Coreq: Fourth year standing in interior design program or consent of instructor.

485 Interior Design Synthesis (5) Advanced integrated design/research experience. Prereq. 450 or consent of instructor.

491 International Study (1-15) Individual or group studio and/or study abroad; academic research, field investigations, 420 for 420 in student's professional curriculum. Determination of credit based on particular international experience. Prereq: Consent of instructor.

493 Directed Studies in Interior Design (1-4) Student or staff initiated research or studio investigation of special topic. Elective credit only. May be repeated. Maximum 8 hours. Prereq: Consent of instructor.

ITALIAN CULTURE (ITALIAN 584)

111-112 Elementary Italian (1,3,3) Introduction to Italian. Must be taken in sequence. Language Laboratory required. F, SP

199 Italian Language and World Business (2) This course will examine the importance of foreign trade at the local, state, and national levels. An interdisciplinary teamwork approach including lectures, simulations, and a trip to Italy. This course offers an opportunity to see how the literature, art and culture of Italy can provide an overview of the value of language study and international cultural awareness in world business. Restricted to students majoring in Language and World Business. See the Director for further information. F

211-212 Intermediate Italian (3,3) Sequence stresses reading, writing, listening and speaking Italian to prepare for upper division courses in the language. Must be taken in sequence. Language Laboratory required. F, SP

311-312 History of Italian Literature (3,3) Chronological view of Italian Literature in relation to the specific historical developments that have influenced it. Prereq: 212 or equivalent.

314 Highlights of Italian Civilization (3) Survey of Italian civilization with special attention to major social,
412 Opinion Writing (3) Analysis of editorial positions, practices, and pages. Writing editorials and columns for newspapers, magazines, and company publications, with emphasis on the use of rhetoric, rhetoric devices, and logic. Prereq: 203 or consent of instructor.

414 Magazine Article Writing (3) Techniques of writing in-depth articles for mass circulation and specialized magazines. Organizing the presenting material, with attention to problems in areas such as business, science, agriculture, the humanities. Prereq: 203 or consent of instructor.

416 Issues in Journalism (3) Topics vary. May be repeated. Maximum credit 6 hours. Prereq: Consent of instructor.

420 Print Media Management (3) Current business practice among print news media, especially newspapers. Problems in management and production, and the outlook for new technologies. Prereq: 6 hours math and/or accounting, and senior standing. Sp


433 Advanced Editing (3) Primary focus is on sensitivity to language and editing skills. Includes headline writing, layout and production. Prereq: 203.

444 Journalism as Literature (3) Study of writers from the 17th century to the modern era whose works have endured as both journalism and literature. An emerging genre called critical journalism will be examined as a means of cultural reporting with a personal narrative style. Prereq: Consent of instructor.

450 Writing about Science, Technology, and Medicine (3) Writing workshop in which students analyze examples of successful scientific writing and write articles for the general public based on scientific journals, news conferences, technical meetings, and interviews. Prereq: Consent of instructor. F, Sp

451 Environmental Reporting (3) Writing for newspapers on environmental issues such as strip-mining, water pollution, air pollution, allergens, nuclear power, fossil fuel power, and solid wastes. Students hear presentations from and interview experts in environmental science and reporting. Exemplary popular literature in environmental reporting is reviewed. Prereq: 203 for majors; consent of instructor for non-majors.

455 Issues in Science Communications (3) May be repeated. Topics vary. Prereq: Consent of instructor.

458 Science Writing as Literature (3) Survey of important scientific 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. Prereq: Consent of instructor. F, Sp

461 Environmental Reporting (3) Writing for newspapers on environmental issues such as strip-mining, water pollution, air pollution, allergens, nuclear power, fossil fuel power, and solid wastes. Students hear presentations from and interview experts in environmental science and reporting. Exemplary popular literature in environmental reporting is reviewed. Prereq: 203 for majors; consent of instructor for non-majors.

475 Utilization of Instructional Media (3) Same as Educational Curriculum and Instruction 475. E

471 Latin American Civilization (3) (Same as Spanish 471.)

473-474 Survey of Spanish American Literature (3) (Same as Spanish 473-474.)

475 Studies in Latin American History (3) (Same as History 475.)

479 Social Protest Literature of Latin America (3) (Same as Spanish 479.)

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

LIBRARY AND INFORMATION SCIENCE (620)

101 Information Foundations (3) Nature of information: sources, value, creation, organizing principles, transfer, uses in society. Issues: ethics, privacy, copyright, preservation, national information policy, equity of access. Information oriented careers. Undergraduate credit only.

102 Technologies for Information Retrieval (3) Principles, selection, and use of computer-based information management applications; software identification and task appropriate uses; telecommunications, utilites, and memory management systems; multiple operating systems and technology for national network connections; information services via computers. Undergraduate credit only.

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.

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.

430 History of the Book (3) History of writing and various methods of bookmaking.

450 Writing About Science, Technology and Medicine (3) (Same as Journalism 450.)

475 Utilization of Instructional Media (3) Same as Educational Curriculum and Instruction 475. E

485 Electronic Communication and Information Resources on Internet (3) Exploration of worldwide information and communication resources including e-mail, gopher, Archie, Veronica, WAIS, WWW, and newsgroups.

490 Information Environment (3) Generation, production, management, dissemination, and use of information. Roles of information in society, information seeking and use behavior, information industry, economics of information products and services, technological and organizational change, information professions, and issues.

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.)

420 The Development of Historical Linguistics as a Science (3) Development of the scientific understanding of language change. Emergence of the Neogrammarians paradigm from 19th century intellectual trends. Impact of synchronic, descriptive, structural and transformational generative linguistics on contemporary diachronic theory. Prereq: 6 hours of courses required for Linguistics concentration 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 428, Russian 426, and Spanish 426.)

429 Romance Linguistics (3) (Same as French 429 and Spanish 429.)


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.)

485 Special Topics in Language (3) (Same as English 485.)

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 functional area within the firm and as a strategic element of the marketing mix. Roles of materials management and physical distribution, and activities such as customer service, order processing and information flow, transportation, warehousing, purchasing, inventory, and system design and organization.

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 these demands. Prereq: Econ 201.

300 Special Topic in Logistics and Transportation (3) 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.

401 Materials and Traffic Management (3) Planning and management of logistics activities including purchasing, transportation, storage and control, and supply strategies. Materials management tools and organizational structures for various industries. Prereq: 301-302.

402 Transportation Operations and Cost Management (3) Planning and control of carrier costs and their load considerations by each mode individually and in coordination with each other. Prereq: 301-302.


450 Computer Information Systems Analysis and Design (3) Design of operational/functional and logistical information systems for organizations based on evolving microcomputer hardware networks, data base design theory, procedural and standards-based languages/software. Analysis of both operational and decision support requirements. Prereq: Management 303.

461 Seminar in Logistics Strategy (3) Senior seminar in development of strategy in logistics management. Major writing requirement. Prereq: 301, 302 and senior standing.

462 Seminar in Transportation Strategy (3) Senior seminar in development of strategy in transportation management. Major writing requirement. Prereq: 301, 302 and 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.

497 Honors: Executive-in-Residence in Transportation and Logistics (3) Student interaction with top-level logistics and transportation executives. Focus on the strategic decision-making process. Prereq: Consent of instructor.

MANAGEMENT (625)

301 Principles of General and Operations Management (3) Basic functional management theory. Analysis of the concepts and techniques used in operations management. Includes lectures and discussion/problem solving sessions. Prereq: Stats 201.

303 Management Information Systems (3) Management information needs, management decisions relating to technology and systems design. Data base management systems and applications development software. Prereq: Computer Science 102.


312 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.

313 Organizational Behavior I (3) Design of operation systems. Process and methods analysis and measurement, location and layout, project management, operational forecasting. Prereq: 301, Statistics 201.

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 strategies 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.

421 Business Strategy Formulation and Implementation (3) General business simulation used by teams which formulate and implement business strategy. Application of strategic planning and group management skills. Prereq: 311, 331, 341.

431 Personnel Management (3) Theory, methods and issues pertaining to successful personnel management. Prereq: 301, senior standing.

432 Implementation and Evaluation of Personnel Programs (3) Methods of identifying, developing, implementing and evaluating various personnel programs. Prereq: 431, senior standing.

440 Organizational Psychology (3) (Same as Psychology 440.)

441 Operations Management I (3) Planning and control of operations systems. Aggregate planning; scheduling systems, materials management. Prereq: 341.

471 International Management (3) Factors significant to the manager in international business activities. Prereq: 301.

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) Introduction to quantitative decision models and their integration into microcomputer based decision support systems. Includes linear dynamic and network programming, as well as decision analysis, Markov, inventory and queuing models. Prereq: Mathematics 121, 122 and Statistics 201.

MARKETING (632)

301 Marketing Management (3) Institutions comprising the marketing system; opportunities and constraints facing the marketing manager. Prereq: Accounting 201-202, Economics 201, and Statistics 201.

310 Buyer Behavior - Analysis for Marketing (3) Comprehensive framework of consumer behavior concepts and processes. Application to market analysis, design and control of marketing programs. Prereq: 301.

320 Marketing Research and Information Planning (3) Marketing Research process from its inception to implementation of the study's results. Student should be able to critically evaluate the merit of a research project as well as possess the ability to design a sound marketing research project and write a report. Prereq: 301 and 320.

420 Promotion Management (3) Principles and practices of promotion management and their relationship to overall marketing program. Managerial focus emphasizing top management's continually confronting promotion executives. Prereq: 301.


493 Independent Study (1-6) Directed research on subjects of mutual interest to student and staff member. May be repeated. Maximum 6 credit hours. Prereq: Consent of instructor.

497 Honors I (3) Topics may include non-business marketing applications, microenvironmental 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 carry the total of 48 semester hours required for graduation, does not fulfill any mathematics requirement. A, B, C, NC grading.

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 121 should take 119 instead of 110. Prereq: Two years of algebra and one year of geometry in high school 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 121 but whose placement test scores indicated additional preparation is necessary. Students who receive a grade of C or better in any course numbered 121 or higher 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.
121 Calculus A (3) For students not planning to major in the physical sciences, engineering, mathematics, or computer science. Calculus of algebraic, exponential, and logarithmic functions, with applications. No student who has received credit for Math 141 or 151 with a grade of C or better may subsequently receive credit for 121. Prereq: Two years of algebra and one year of geometry in high school, plus satisfactory placement test scores of 110 or 130.

122 Calculus B (3) Sequel to 121, including elementary matrix algebra, multivariable calculus, and optimization. No student who has received credit for 142 or 152 may subsequently receive credit for 122. Prereq: 121, or 141, or 151.

130 Precalculus I (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 have earned 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 half a 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, especially for students of science, engineering, mathematics, and computer science. Differential and integral calculus with applications. Prereq: Two years of algebra, a year of geometry, and half a year of trigonometry in high school, plus satisfactory placement test scores, or Math 130.

143-144 Microcomputer Laboratory (1,1) Optional supplement to the calculus courses, featuring computer demonstrations and projects. Coreq: Students registering for 143 must also be registered for 141 or 142; students registering for 144 must also be registered for 142 or 145.

147-148 Honors: Calculus I, II, (4,4) Honors version of 141-142 for well-prepared students. Qualified students are usually invited to enroll, but inquiries from other students having excellent high school mathematics backgrounds are welcome. Credit will not be given for 147 and 141 or 148.

151-152 Biocalculus I, II, (3,3) For students majoring in the life sciences. Topics from calculus of algebraic, logarithmic, and exponential functions, probability and statistics, with emphasis on applications to the life sciences. Prereq: Two years of algebra, a year of geometry, and half a year of trigonometry in high school, plus satisfactory placement test scores, or 130.

200 Matrix Computations (1) Introduction to matrix calculations, including determinants, eigenvalues and eigenvectors. For students in the College of Engineering and College of Business Statistics majors only. Students who have received credit for 230 or better in 251 may not subsequently receive credit for 200. Prereq: 142 or 148.

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 scores.

202 Probability, Statistics, and Euclidean Geometry (3) Probabilities in simple experiments, measures of central tendency and variation, basic probability and three-space geometry, congruence and similarity, constructions with compass and straightedge, transformations, area and volume measurements. Turtle graphics. Prereq: Two years of algebra and one year of geometry in high school and satisfactory placement test score.

221-222 Discrete Mathematics I, II, (3,3) Logic, sets, combinatorics and probability, functions and relations, induction and recursion, elementary number theory. Prereq: 141 or 151.

231 Differential Equations I (3) First course, emphasizing solution techniques. Includes first-order equations and applications, theory of linear equations, equations with constant coefficients, replace transforms, and series solutions. Prereq: 142 or 148.

241 Calculus III (4) Calculus of functions in two or more dimensions. Includes solid analytic geometry, partial differentiation, multiple integration, and selected topics in vector calculus. Prereq: 142 or 148.

243 Microcomputer Laboratory (1) Optional supplement to 201, featuring computer demonstrations and projects. Coreq: 241 or 247.

247 Honors: Calculus III (4) Prereq: 147-148 or invitation of the department.

250 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.

253 Microcomputer Laboratory (1) Optional supplement to 251, featuring computer demonstrations and projects. Coreq: 252 or 257.

257 Honors: Matrix Algebra I (3) Prereq: 148 or invitation of the department.

323 Probability and Statistics (2) Discrete and continuous random variables; conditional probability, expectation, moment generating functions; law of large numbers and the central limit theorem. Elements of statistical inference, estimation, and hypothesis testing. Prereq: 221, 241.

414 Analysis I (3) Introduction to the theory of the real number system, limits of sequences, and functions of a real variable. Prereq: 241 or 257, and 221.

421 Combinatorics(3) Introduction to problemsof countingand enumerationfordiscretestructures. Projectsemphasized. Prereq: 231, 241, and 251 or 257.

423 Probability I (3) Axiomatic probability, multivariate distributions, conditional probability, expectation, moment generating functions; law of large numbers and the central limit theorem. Elements of statistical inference, estimation, and hypothesis testing. Prereq: 221, 241.

425 Probability and Statistics (2) Discrete and continuous random variables; conditional probability, expectation, moment generating functions; law of large numbers and the central limit theorem. Elements of statistical inference, estimation, and hypothesis testing. Prereq: 221, 241.


443 Complex Variables I (3) Introduction to the theory of functions of a complex variable, including residue theory and contour integrals. Prereq: 241 or 247.

444 Complex Variables II (3) Applications of complex variables to steady-state temperatures, electrostatics, and fluid flow. Prereq: 443.

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: 341 or consent of instructor.

447-448 Honors: Advanced Calculus I, II, (3,3) Honors version of 445-446. Prereq: 341 or consent of instructor.

451 Topics in Algebra (3) Topics chosen from number theory and the theory of polynomial equations, such as the quadratic reciprocity law and Sturm separation. Prereq: 351 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: 351 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 geometry. Prereq: 142 or 148, and 221, or consent of instructor.

461 Topology (#) Includes topology of line and plane, separation properties, compactness, connectedness, continuous functions, homeomorphisms, continuity, and topological invariants. Prereq: 341 or consent of instructor.

471 Numerical Analysis (3) Introduction to computation, instabilities, and rounding. Interpolation and approximation by polynomials and piecewise polynomials. Quadrature and numerical solution of initial and boundary value problems of ordinary differential equations, including stiff systems. Prereq: 271 or consent of instructor. (Same as Computer Science 471.)

472 Numerical Analysis (3) Direct and iterative methods for systems of linear equations. Solution of a single nonlinear equation and nonlinear systems. Orthogonal decompositions, least squares and the singular value problem. Prereq: 371 or consent of instructor. Recommended: 453. (Same as Computer Science 472.)

490 Readings in Mathematics (1-3) Open to superior students with consent of department head. Independent study under the supervision of a faculty member. Prereq: Agreement of faculty mentor to supervise independent work.

499 Seminar in Mathematics (1-3) Topics will vary. Will require out-of-class projects and in-class presentations by students. Students may elect to receive credit for up to 9 hours with consent of department head. Prereq: Consent of instructor.

MEDICAL BIOLOGY (661)

410 Laboratory Safety Education (2) Preparation for undergraduate laboratory safety. Topics covered include equipment hazards, corrosive chemicals, isotoxins, pathogens, poisons, and equipment will be discussed. Techniques of safe operation and handling will be presented.

411 Undergraduate Research Participation (1-3) Experience in research projects under supervision of faculty. Students in pre-medical and
MEDICAL TECHNOLOGY (669)

410-411 Microbiology (4,4) Laboratory work in bacteriology, mycology, and parasitology. Emphasis on pathogenic bacteria and fungi, their sources, methods of culture, techniques of identification, and evaluation of antibiotic sensitivity. General and qualitative examination of cultures and examination of sections. Includes identification of bacteria and fungi, and study of blood cultures, sputum, body fluids, and tissues. Prereq: Consent of instructor. 4 credit hours. Laboratory 4 hours. 160. 4 hours maximum credit for any combination of 410 and 411.

420-421 Clinical Chemistry (5,5) Clinical aspects of biochemical analysis including: plasma proteins; nucleic acids; enzymes; lipids; carbohydrates; amino acids; vitamins; minerals. Techniques emphasis on an introduction to clinical laboratory instrumentation and application of analytical procedures, specimen collection and handling, significance of results, and quality assurance. Includes blood gas analysis, including radiomimutant theory, and analysis of blood and other body fluids for enzymes, hormones, and other constituents of clinical interest, utilizing both automated and manual techniques. Prereq: Consent of instructor. 5 credit hours. Laboratory 5 hours. 160. 5 hours maximum credit for any combination of 420 and 421.

430-431 Hematology and Clinical Microscopy (4,4) Principles, techniques and instrumentation related to qualitative and quantitative evaluation of cellular elements of blood and other body fluids; factors of hemostasis, quantitative chemical analysis of urine, and renal function studies. Emphasis on microscopic identification of cells and the significance and correlation of laboratory data. Prereq: Consent of instructor. 4 credit hours. Laboratory 4 hours. 160. 4 hours maximum credit for any combination of 430 and 431.

440-441 Immunohematology (3,3) Theory and practice in blood bank operation. Erythrocyte antigens and their normal and abnormal distribution. Immunology. Standard technical practices used in evaluating blood typing, cross matching, antibody detection, and preparation of blood components for transfusion. Safety control methods. Standard blood bank techniques. Prereq: Consent of instructor. 3 credit hours. Laboratory 3 hours. 160. 3 hours maximum credit for any combination of 440 and 441.

450 Clinical Serology and Immunology (2) Performance and interpretation of broad range of clinical serological and immunological procedures with emphasis on principles and clinical correlation. Formal lecture series included.

470 Orientation and Basic Techniques (1) For facilities 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 instruments, review of laboratory math, and introduction to record keeping. Prereq: Consent of instructor. 1 credit hour. Laboratory 1 hour. 160.

480 Principles of Supervision and Education in Medicine (1) Seminar in basic principles of management, supervision, and education theories and methods. Comprehensive examination covers entire course.

MEDIEVAL STUDIES (674)

201-202 Medieval Civilization (3,3) Introduction to basic themes in the medieval experience through the study of selected works from the early medieval period. Focuses on major types of literature produced during the period 500-1000 A.D., e.g., cultural, religious, rhetorical, lyric, epic, biographical. Includes Augustine's Confessions, Boethius' Consoles, St. Gregory's Life of St. Benedict, The Life of Charlemagne, etc. Writing emphasis course.

261 Medieval Culture: Readings from the Early Middle Ages, 500-1000 AD (3) Critical analysis and interpretation of selected works from the early medieval period. Focuses on major types of literature produced during the period 500-1000 A.D., e.g., cultural, religious, rhetorical, lyric, epic, biographical. Includes Augustine's Confessions, Boethius' Consolation, St. Gregory's Life of St. Benedict, The Life of Charlemagne, etc. Writing emphasis course.

262 Medieval Culture: Readings from the Later Middle Ages, 1000-1500 AD (3) Critical analysis and interpretation of selected works from the later medieval period. Focuses on major types of literature produced during the period 1000-1500 AD, e.g., the Song of the Nibelungen, the Romance of the Rose, St. Bernard's Commentary on the Song of Songs, Peter Abelard's History of My Calamities. Should be taken in sequence with 261. Writing emphasis course.

312-313 Medieval History (3,3) (Same as History 312-313)

322 Medieval Philosophy (3) (Same as Philosophy 322)

371 Early Christian and Byzantine Art, to 1350 (3) (Same as Art 371)

372 Northern European Painting, 1350-1600 (3) (Same as Art 372)

381 Medieval Art of the West, 800-1400 (3) (Same as Art 381)

382 The Art of Italy, 1250-1450 (3) (Same as Art 382)

355 Dante and Medieval Culture (3) (Same as Italian 401)

402 Petrarch and Boccaccio (3) (Same as Italian 402)

403 Seminar in Medieval Studies (3) Interdisciplinary treatment of selected topics. Content varies. May be repeated. Writing emphasis course.

410 Medieval French Literature (3) (Same as French 410)

415 Medieval Architecture (3) (Same as Architecture 415)

475 Ancient and Medieval Political Thought (3) (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 lab.

310 Introduction to Microbiology (3) Introduction to bacteria and viruses including physiology, metabolism, and genetics of bacteria and replication and expression of viruses; bacterial and viral pathogenicity; mechanisms of resistance to disease. Prereq: Biology 210. Coreq: Biology 220. F

319 Introductory Microbiology Laboratory (3) Basic techniques for the examination, cultivation, and identification of microorganisms. Coreq: 310. F

320 Advanced Microbiology (3) Cell and molecular biology of microorganisms, principles and applications in modern biotechnology. Intended for Microbiology majors. Prereq: 310. Sp

329 Advanced Microbiology Laboratory (2) Laboratory exercises designed to accompany 329. Prereq: 319. Coreq: 320. Sp

400 Laboratory Problems in Microbiology (2-4) Research projects under the direction of a faculty member. May not be used for credit toward requirements for a major. May be repeated. Maximum 9 hours. Satisfactory/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, minimum grade point average of 3.0, 2.5 minimum grade point average in all course work, consent of department head. Prereq: Consent of instructor. E

402 Microbiology Senior Honors Thesis (4) Supervised research, preparation, and presentation of the senior honors thesis. Prereq: Senior standing, 401, 3.0 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. F

411 Bacterial Genetics (3) Transmission and expression of genetic information by bacteria. Prereq: 310. Sp

420 Medical Microbiology (3) Disease producing microorganisms including bacteria, rickettsias, chlamydia and fungi. Prereq: 310. Sp

429 Medical Microbiology Laboratory (2) Laboratory exercises designed to accompany 420. Prereq: 319. Coreq: 420. Sp

430 Immunology (3) Principles of inflammation and immunity. Immunoglobulins: theories of formation and diversity; complement; hypersensitivities; cell cooperation and recognition in immune mechanisms; clinical applications. Prereq: Biology 220. (Same as Zoology 430). F

439 Immunochemistry Laboratory (2) Laboratory exercises designed to accompany 430. Coreq: 430. (Same as Zoology 430). 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 microbiological 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 judgments. Written reports required. A capstone course. Prereq: Senior standing. Writing emphasis course. May be repeated. Maximum 6 hours. Only 3 hours may be counted toward the major. E

MILITARY SCIENCE (688)

110 Basic Military Science I (3) Formation and functioning of the American defense establishment and its relationship with American society, customs and traditions of the army, aspects of military physical fitness techniques related to the Army's role in world affairs; challenges facing the military in the future. Adventure 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 (3) Introduction of basic leadership theory, principles, and skills, with emphasis on effective oral communication. Students present a military skills subject briefing. Skills taught include rifle marksmanship, small unit communications, and land navigation. This course requires an additional course work, cumulative GPA 2.0 or above; legally qualified. Letter grade only. 2 hour class and 1 hour lab. Sp

130 Army Conditioning Program (1) Challenging instruction that concentrates on students' individual weaknesses and directly applies exercises designed to increase flexibility, muscular strength, and cardiorespiratory endurance. Student also develops the ability to design and lead a fitness program. May be repeated.

200 Basic Military Science - Practicum (4) 240 contact hours of instruction and evaluation at Fort Knox, Kentucky over a six-week period during the summer. Prereq: United States citizen; physically qualified; at least sophomore standing with two years remaining at the University (either one full year or two full semesters). May be repeated for up to 8 additional course work hours; cumulative GPA 2.0 or above; legally qualified. Letter grade only. Sp

210 Basic Officer Skills I (3) The study of American Military History from 1775 to present. Study includes the development of military forces in peace and war and focuses on the history of military art, armies, military history, technical history, and the relationship of armed forces with society. Focus techniques include small unit training, physical training, drill and ceremony, and historical field trips. Prereq: US citizen, freshman or sophomore standing; 3 years remaining to complete degree. Letter grade only. 2 hour class and 1 hour lab. Sp

220 Basic Officer Skills II (3) Practical application of small unit operating techniques to include first aid, marksmanship and weapons familiarization, map reading and land navigation, drill and ceremony, procedures of enemy prisoners of war (EPW), execution of indivi-
vidual/unit movement techniques, and the exercise of leadership. Prereq: 210 or consent of the Professor of Military Science. Letter grade only. Sp

310 Advanced Military Studies I (4) Discussion and practical exercise of leadership including operation of the military team, land navigation, small unit patrolling, and physical fitness. Tactical and administrative roles in leadership are developed in the classroom and applied during actual field training. Prereq: United States citizen; minimum of 55 credit hours passed and have at least two years remaining to complete degree (undergraduate or physically qualified), cumulative GPA 2.00 or higher; legally qualified; 3 or 4 years of JTROTC (or 110, 120, 210, 220 completion (or) 200 completion (or) basic training completion. Letter grade only. F, Sp

320 Advanced 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 510 and refines small unit leadership skills, map reading, tactics, oral and written communication skills, and physical fitness. Includes three field exercises and a leadership laboratory. Prereq: 310. Letter grade only. 3 hours and 1 hour lab. Sp

400 Advanced Camp-Practicum (4) 246 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 or 320 or 400 or 300. Letter grade only. Sp

410 Command and Staff Functions (4) Command and staff duties and relationships including logistics, personnel systems, efficiency reports, correspondence, training management, briefings, communications, strategic force positioning, tactics, modified officer relations. Prereq: 310 and 320, 400 or consent of instructor. Letter grade only. 4 hours and 1 hour lab. F

420 Military Ethics and Law (4) Military profession, ethical reasoning, staff functions, military briefings and leadership, military justice system, individual leadership, Law of Land Warfare. Prereq: 310, 320 and 400, 410 or 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.)

MUSIC EDUCATION (707)

200 Choral Laboratory (1) A laboratory choir designed to afford conducting opportunities for student conductors and to acquaint students with a variety of choral literature. May be repeated. Can be taken as elective credit by any major. May be applied for MUS ED 310 and 320. This class cannot be used to meet any requirement must be completed and submitted to the Department of Music Head. Prereq: 210 or consent of the student’s advisor, and the Department of Music Head.

210 Class Woodwind Methods (2) Structure, use, techniques of playing, care and repair of principal instruments 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. Maximum 4 hours. Letter grade only. F

220 Class Brass Methods (2) Structure, use, techniques of playing, care and repair of principal instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. Letter grade only. F

230 Class Percussion Methods (2) Structure, use, techniques of playing, care and repair of principal instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. Letter grade only. F

240 Class String Methods (2) Structure, use, techniques of playing, care and repair of principal instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. Letter grade only. F, S

250 Functional Piano for Teachers (1) Practical piano skills for the pre-service teacher who does not have a keyboard instrument as the applied principal. Transcription, improvisation, reading open vocal scores, simple accompaniments. May be repeated once for credit. F, Sp

260 Euthymatics (1) Principles and practices of euthymatics, as developed by Emile Jaques-Dalcroze. Prereq: Consent of instructor. May be repeated once for credit. Maximum 2 hours. Letter grade only. F, S

300 Music for Elementary Teachers (2) Singing, rhythmic movement, improvisational and instrumental, learning, analyzing, reading, and creative activities appropriate for the elementary grades. For elementary education majors only. Prereq: Consent of instructor to Teacher Education Program. Letter grade only. E

310 Conducting I (3) Basic skills of conducting: baton, time beating of traditional patterns, preparatory beat, cut-offs, cueing. Development of the left hand, fermata, subdividing, Mechanics of full score, Video tapes of great conductors. Conducting “live” groups. Video tapes of each student conductor. Prereq: Two years of music theory or consent of instructor and admission to Teacher Education Program. Letter grade only. F

320 Conducting II (3) 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. Video tapes of all student conductors. Prereq: Conducting I or consent of instructor and admission to Teacher Education Program. Letter grade only. F

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

350 Field Experience in Music Education I (1) Prereq: Consent of instructor and admission to Teacher Education Program. May be repeated. Maximum 3 hours. Satisfactory/No Credit only. E

410 Pre-Internship Seminar (1) Objectives and policies of the internship program. Must be completed in the term immediately preceding the internship. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. F, Sp, Su

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. Sp

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. F

481 Internship I: Grades K-12 (3-5) Methods and techniques in field internship completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: Consent of instructor to Teacher Education Program. Satisfactory/No Credit only. F

482 Internship II: Grades K-12 (3-5) Demonstration of professional competence in planning, instruction and classroom management. Internship is completed in local public schools. Prereq: 481 and admission to Teacher Education Program. Satisfactory/No Credit only. F

490 Special Topics in Music Education (1-3) Prereq: Consent of instructor. May be repeated. Maximum 9 hours. Letter grade only. E

492 Independent Study in Music Education (1-5) Prereq: Consent of instructor. May be repeated. Maximum 5 hours. Letter grade only. E

495 Advanced Music Methods for Elementary Teachers (3) Continuation and amplification of the concepts and skills covered in Music Education 300. Intended for Elementary Education majors. Prereq: 300 or consent of instructor. Letter grade only. Sp

MUSIC ENSEMBLE (708)

301-501 Woodwind Choir (1,1) May be repeated.

302-503 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.

332-532 Collegium (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 Campus Band (1,1) May be repeated.

354-554 Varady 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.

382-582 University Chorus (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 (607)

100 Fundamentals of Music (3) Theory and practice of basic elements of music. Writing-emphasis course.

110 Music Appreciation (3) Developing listening skills and understanding of Western music from the ancient world through the 20th century. 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.

130 Music Performance (3) Individualized course of study combining participation in a University musical ensemble with collateral study of an instrument or voice. One hour of applied study (Music Performance 103-440) and ensemble rehearsals as scheduled (Music Ensembe 301-389). May be repeated once for credit. Requires payment of Applied Music fee. For non-majors only. Prereq: Performing ability on an instrument or voice.

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 enrollment in Music Performance 103-185. Cannot be used to satisfy applied music requirements or as the principal level in the B.M. or the B.A. degree in Music. May be taken for a maximum of 4 credit hours per semester. Admission by audition. A, B, C, NC. Requires payment of Applied Music fee. F, Sp

200 Solo Class (0)

301 Junior Recital (0)

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)

200 Introduction to Music Literature (3) Basic forms of music and accepted masterworks through chronological approach. For music majors and minors only.

210-220 History of Music I, II (3,3) 210 to 1750, 220 to 1750 to present. Prereq: 200. Must be taken in sequence.

310 Introduction to African-American Music (3) History of African music, gospel music, and jazz with emphasis on Black artists and their contributions. (Same as 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.)

350 History of Jazz (3) Origin, development, and styles of jazz music and its exponents. Cultivation of special listening techniques. (Same as African-American Studies 350.) Writing-emphasis course. Prereq: Consent of instructor.

390 Introduction to Folk and Popular Musics (3) Study of musics other than Western European classical music. Emphasis on musical structure. Examples will be drawn from folk, pop, rock, jazz, and non-Western repertories. Prereq: 210-220.

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 patterns, 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 may vary. May be repeated for credit. Maximum 8 hours.

420 History of Opera (3) Dramatic, vocal, and orchestral elements in operas of Italian, French, and German schools. 1600-present.

430 Symphonic Literature (3) Survey of survey literature for orchestra from Baroque to the present, with emphasis on the evolution of the symphony.

440 Music of North America (3) Folk and art music of the United States and Canada from colonial times to the present. Writing-emphasis course.

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 artist in society. Aesthetic viewpoint of individuals and historical eras through selected writings. Writing-emphasis course.

470 Music in Christian Worship (3) Hymnody, liturgies, and liturgical music.

490 Church Music Methods and Administration (3) History, principles, administration, and total musical experiences in church music. Prereq: Consent of instructor.

490-491 Internship (2,2) Opportunity for music education students to gain experience in teaching pre-college students under the supervision of experienced instructors. Prereq: Consent of instructor.

MUSIC JAZZ (711)

110 Jazz Theory (2) Fundamentals of the jazz language, including terminology, chord symbols, chord scales, and chord progressions, plus ear-training lab. Prereq: Music Theory 110.

120 Analysis of Jazz Styles (2) Individual improvisatory styles through analysis of their transcribed solos. Must be taken in sequence.

130-140 Jazz Piano I, II, (1,1) Harmonic language of jazz. Interpretation of chord symbols, formulation of voicing chords, collective improvisation. (Same as Women's Studies 330.)

160 Introduction to Styles in Jazz Drumming (2) Examination of major composers and performers who have contributed significantly to 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, methods of development, and scales. Prereq: 110.

310 Jazz Composition and Arranging (2) Prereq: Consent of instructor.

320 Jazz Band Arranging (2) Arranging and scoring for the Big Band. Prereq: Consent of instructor.

340-350 Jazz Pedagogy (1) Methods and materials relating to teaching of jazz. Prereq: Consent of instructor.

370-380 Jazz Guitar (1-4) May be repeated. Prereq: Consent of instructor.

390-391 Internship (2,2) Opportunity for music education students to gain experience under the supervision of experienced instructors. Prereq: Consent of instructor.

MUSIC KEYBOARD (712)

110-120 Class Piano I, II, (1,1) Development of keyboard skills in reading, technique, repertoire, harmonization, and transcription. Must be taken in sequence.

210-220 Class Piano III, IV, (1,1) Continuation of 110-120; 220 completes 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.


330 Sight Reading at the Keyboard (1) Prereq: Consent of instructor.


120 Vocal Techniques in Popular Music (1) Development of performance techniques in Broadway and other contemporary music styles. Prereq: Consent of instructor. May be repeated for credit. Maximum 4 hours.


140 Ear Training I (1) Development of proficiency in identifying and notating melodic, harmonic and rhythmic models. Includes computer lab. Should be taken concurrently with 120. A, B, C, NC grading.

210-220 Advanced Ear Training I, II, (1, 1) Development of skill in identifying and notating complex melodic, harmonic and rhythmic models. Includes computer lab. Must be taken in sequence. Prereq: 120 or consent of instructor.

230-240 Advanced Ear Training I, II, III, IV, (1, 1, 1, 1) Development of skill in identifying and notating complex melodic, harmonic and rhythmic models. Includes computer lab. Must be taken in sequence. Prereq: 120 or consent of instructor. May be repeated for credit. Maximum 4 hours.

250 Composition (2) Writing short vocal and instrumental compositions using conventional and new forms of notation. Prereq: 220 or consent of instructor. May be repeated for credit. Maximum 4 hours.

250 Sound Recording Techniques (3) Theory and application of fundamental sound recording, sound reproduction and reinforcement systems. Topics include room acoustics, audio measurements, microphones, studio and real-time processing, noise reduction, mixing, editing, monitors, system wiring, and maintenance.

310 Form and Analysis (3) Study and practice in analysis of forms of music from smallest structural units to large compound forms. Prereq: 220.

320 Instrumentation (3) Basic techniques in scoring for voice, brass, woodwind and string choirs and percussion. To be taken by jazz and music education majors.

340 Introduction to Computer Music Transcription (3) Exercise in notation, publishing and playback including incorporation of elements of word processing, graphic design, sequencing and page layout. Study of Music Instrument Digital Interface protocol as it applies to computer analysis and music work station design. Prereq: consent of instructor.

390 Sound Synthesis Techniques (3) Studio and real-time applications of synthesizers. Historical background, theoretical study, equipment interface and usage, analysis of sounds and compositions. Prereq: 290 or consent of instructor.

400 Survey of Music Theory (3) Emphasis on harmonic practice of Baroque, Classical, and Romantic periods. Examination of literary, theoretical and technical aspects of music. Open to all students. Offered 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: 220. Prereq or equivalent. Required of entering graduate students with a deficiency in ear-training.

420 Orchestration (3) Advanced techniques in instrumental writing with emphasis on scoring for the concert orchestra. To be taken by theory and composition majors.

430 Counterpoint I, II (3, 3) 430-Specifies species counterpoint in modal and tonal styles with emphasis on works of Palestrina and J.S. Bach. Prereq: 220. 440-Writing of contrapuntal material at the 18th century and fugue analysis of works from the 18th through the 20th centuries. Prereq: 430.

450 Choral Arranging (2) Analysis of scores and writing of arrangements for choirs. Prereq: 220 or consent of instructor.

483 Independent Study in Music Theory (1-15) May be repeated for credit. Prereq: Consent of department head.

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.

130 Fundamentals of Acting for Singers I, II, (1, 1) Development of basic techniques for dramatic presentation of music on stage; introduction to history of opera and musical theatre. Prereq: Vocal major or consent of instructor. Must be taken in sequence.
Ethical Theory and Its Applications (3)

A study of ethics in the philosophy of science: scientific method, nature of laws and theories, problem of induction, explanation, measurement. No background in logic is presupposed.

Introduction to Philosophy of Science (3)

Standard topics in philosophy of science: scientific method, nature of laws and theories, problem of induction, explanation, measurement. No background in logic is presupposed.

Philosophy of Religion (3)

Analyzes basic issues in the philosophy of religion. (Same as Religious Studies 370.)

Philosophy and Religion of India (3)

(Same as Religious Studies 374.)

Buddhist Philosophy and Religion (3)

(Same as Religious Studies 376.)

Religion and Philosophy in China (3)

(Same as Religious Studies 379.)

The Concept of Woman (3)

The nature of women as that which has been conceived by major Western philosophers from Plato to Simone de Beauvoir. (Same as Women's Studies 382.)

Philosophical Foundations of Democracy (3)

Philosophical problems relating to the nature and justification of the central values, principles, and concepts of democratic society. Writing-emphasis course.

Marxism (3)

Basic philosophical issues in Marxist thought: ideology, dialectics, praxis, the critique of modern society. (Same as Russian and East European Studies 393.)

Existentialism (3)

Themes related to freedom and finitude in the tradition that begins with Kierkegaard and Nietzsche, and extends to Heidegger and Jaspers, Sartre and Merleau-Ponty.

Special Topics (3)

When content varies, may be repeated. Maximum 6 hours.

Ancient Religious Philosophies (3)

(Same as Religious Studies 411.)

Classical Indian Systems of Philosophy: The Moksha Tradition (3)

(Same as Religious Studies 412.)

Topics in History of Philosophy (3)

One or more major periods or movements from antiquity through mid-twentieth century. Prereq: 6 hours of philosophy or consent of instructor. When content varies, may be repeated. Maximum 9 hours.

American Philosophy (3)

Colonial to early 20th Century. Prereq: 6 hours of philosophy or consent of instructor. Writing-emphasis course.

Contemporary Ethical Theory (3)

Topics in metaethics or ethics. Prereq: 6 hours of philosophy or consent of instructor.

Theoretical Issues in Medical Ethics (3)

Prereq: 240 or 345 or consent of instructor. (Same as Religious Studies 446.)

Philosophy of Science (3)

Methodological and conceptual issues in the natural and social sciences: patterns of theory modification and replacement, the nature of explanation and causation, the status of theoretical entities. Prereq: 350 and one year of natural or social science, or consent of instructor.

Philosophy of History (3)

Speculative and critical aspects of philosophy of history. Prereq: 6 hours of philosophy or consent of instructor.

Philosophy of Mind (3)

Problems of mind and body in relation to consciousness and personal identity. Prereq: 6 hours of philosophy or consent of instructor.
PHYSICS (773)

121-122 Introductory Physics (3,3) For students whose major is outside the physical sciences. Concepts of physics developed by observation of phenomena and logic, using a minimum of mathematical analysis. 121: Description of motion, forces, energy and momentum, properties of matter. 122: Electricity, magnetism, light, topics from modern physics. Instructing properties of atoms and nuclei. Must be taken in sequence. Prereq: Coreq or Coreq for 311; 231 or 138 and Mathematics 231. Coreq for 312: Mathematics 241.

321 Thermal Physics (3) Concepts of temperature and heat, laws of thermodynamics; elementary statistical mechanics; applications to physical and chemical properties of matter. Prereq: 311, or 231 and consent of instructor.

341 Introduction to Nuclear Physics (3) Introductory theoretical nuclear physics with emphasis on applied aspects. Prereq: 240 or 232.


361-362 Electronics Laboratory (3,3) Electronic devices and instrumentation techniques in the physics laboratory. 361-362: Analog and digital electronics, including elementary building blocks of relevance to data acquisition systems, operation 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. Selected experiments including noise, power, Fourier analysis and synthesis, nonlinear circuit dynamics. Prereq: 138 or 232. 2 hours lab per week.

401 A Survey of Physics (3) A survey of physics from earliest times to the present, emphasizing the unity of philosophical and mathematical principles. Classical theories of gravitation, electromagnetism, and relativity; various forms of quantum mechanics, quantum electrodynamics, and recent theories of particles, fields, and their interactions. Consideration of the effects of physics on modern society and the practice of physics from a value-oriented perspective. Written reports on important original papers, thought-provoking 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.

411-412 Introduction to Quantum Mechanics (3,3) Fundamental principles of quantum mechanics and methods of calculation. Solution of the Schroedinger equation for simple systems. Applications to atomic, molecular, nuclear, and condensed matter physics. Must be taken in sequence. Prereq: 240 or equivalent, Mathematics 435.

421 Modern Optics (4) Transmission of light in uniform, isotropic media, interference and diffraction at interfaces; mathematical theories of wave motion and interference effects. Rudiments of Fourier optics and holography. Prereq: 431, or either 232 or 138, and consent of instructor. 3 hours lecture, 2 hours lab.

425 Principles of Non-Destructive Testing (3) (Same as Engineering Science and Mechanics 425.)

431-432 Electricity and Magnetism (3,3) Electrostatics, magnetostatics, coupled electric and magnetic fields, Maxwell's Equations, electromagnetic waves and radiation. Prereq: 226 or 138.

461-462 Modern Physics Laboratory (3,3) 461: Introduction to fundamental and modern techniques in experimental physics. 462: Further development of experimental techniques in modern physics; experimental team work. Through quantum mechanical interpretation of the results and preparation of scientific reports. Prereq: 461. 5 hours lab per week.

472-473 Health Physics (3,3) Radioactivity, interaction of electromagnetic radiation with matter, radiation quantities and units, point kernel and extended sources, x-rays and gamma rays, nuclear reactor physics, radiation protection of charged particles with matter, stopping power, range-energy relations, counting statistics, shielding, dosimetry, waste disposal, criticality prevention, radiation biology and ecology. Prereq: consent of instructor.

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.

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, the process, the comprehensive plan, implementation devices. Planning issues in society. Not for credit for M.S.P. degree. (Same as Urban Studies 406.)


PLANT AND SOIL SCIENCE (792)

200 Current Topics in Environmental Science (1) Lectures and invited presentations on current environmental issues and careers in Environmental Science. Sp

210 Introduction to Soil Science (3) Differences in soils; soil genesis; physical, chemical, and biological properties of soil; relation of soils to land use and pollution; soil management relative to soil fertility, organic matter, erosion, drainage, moisture supply, temperature, aeration, fertility, and plant nutrition. Introduction to fertilizer chemistry and use. Prereq: Chemistry 130 or equivalent. 3 hours and 1 lab. F, Sp

211 Introduction to Soil Science Laboratory (1) Experiments on topics covered in 210. Coreq: 210, 2 hours.

230 Introduction to Crop Science (3) Fundamentals of crop and soil science; classification, growth and reproduction of higher plants; use of plants, problems of irrigated and dryland agriculture. Principles and methods of growing several of the world's important agricultural, fruit and vegetable crops, dealing with their origin and cultural requirements. 2 hours lecture and 1 hour and 2 lab hours. Prereq: Botany or Biology 110, 120 or 210, 110, 120, F

292 Soil Morphology (3) Intensive course involving describing, classifying and interpreting soils in preparation for regional and national soil judging contests. Prereq: 210 and consent of instructor. May be repeated. Maximum 4 hours. 1 hour and 1 lab. F, Sp

311 Soil Fertility (3) Influence of soil properties on plant nutrient availability and uptake, Principles of fertilizer use and their reactions in soils. Prereq: 210, 2 hours and 1 lab. Sp

312 Soil and Water Conservation (2) Hydrologic, agronomic, and engineering principles applied to resource management problems including flood and erosion control, drainage and water quality. Prereq: 210. Coreq: 313. S

313 Soil and Water Conservation Laboratory (1) Laboratory on topics covered in 312. Coreq: 312.

331 Field and Forage Crops (3) Agronomic principles of crop production and management. Crop improvement, crop systems, tillage, soil judging, pest management, harvest and utilization of major field and forage crops. Prereq: 210 or 230. 2 hours and 1 lab. Sp

332 Fruit Crops (3) Fundamentals of site selection. Fruit propagation, tree training, pest control and related management factors for deciduous fruit crops will be emphasized. Prereq: 230. 2 hours and 1 lab. F-A

333 Vegetable Crops (3) Characteristics, economic importance, adaptability and production of vegetables
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 Liberal Arts will provide an overview of the value of language study and international cultural awareness in world business. Restricted to students majoring in the Language & World Business major or consent of instructor. 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

300 Portuguese for Spanish Speakers (3) Accelerated class for beginning students of Portuguese with a strong background in another Romance language. Introduction to reading, writing, and culture of Portugal and Brazil. Prereq: 3 hours at 300 level in another Romance language or equivalent.

301-302 Literature, Culture & Civilization of the Portuguese-Speaking World (3,3) A course for students who have completed an introductory course in Portuguese and wish to enhance their knowledge of language and culture through the medium of literature. Taught in Portuguese. Prereq: 212, 300 or equivalent.

305 Intermediate Conversation & Composition (3) Designed to improve proficiency in oral and written communication in Portuguese. Prereq: 212, 300 or equivalent.

315-316 Aspects of Luso-Brazilian Literature (3,3) Luso-Brazilian literature through literary theory and history of literature. Prereq: At least one course at the 300 level or the equivalent. (Same as Latin American Studies 315-316.)

409 Advanced Conversation & Composition (3) Involves structured conversation on contemporary topics (business, economics, religion, an culture) and formal writing practice at an advanced level. Prereq: 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. Maximum 12 hours. Prereq: 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) May be repeated. Maximum 12 hours in 399, 489, 491, 492, and 493 combined may be applied toward the major.

493 Independent Study (1-15) May be repeated. Maximum 12 hours in 399, 489, 491, 492, and 493 combined may be applied toward the major.

499 Supervised Research (1-9) Prereq: Consent of instructor. May be repeated. Maximum 12 hours in 399, 489, 491, 492, and 493 combined may be applied toward the major.

498 Topics in Language Learning (3) May be repeated. Maximum 12 hours in 399, 489, 491, and 492 combined may be applied toward the major.

490 Supervised Research (1-9) Prereq: Consent of instructor. May be repeated. Maximum 12 hours in 399, 489, 491, 492, and 493 combined may be applied toward the major.

493 Independent Study (1-15) Prereq: Consent of instructor. May be repeated. Maximum 12 hours in 399, 489, 491, 492, and 493 combined may be applied toward the major.

496 Senior Seminar: Great Ideas in Psychology (3) Key Ideas that have shaped conceptions of human mind. Exploration of historical development, scientific evolution, and larger social context. Prereq: Consent of instructor and senior standing. Writing-emphasis course. F, Sp

498 Topics in Language Learning (3) May be repeated. Maximum 12 hours in 399, 489, 491, and 492 combined may be applied toward the major.

499 Supervised Research (1-9) Prereq: Consent of instructor. May be repeated. Maximum 12 hours in 399, 489, 491, 492, and 493 combined may be applied toward the major.

500 Introduction to Public Health (3) Aspects of public health including discussion of contemporary and controversial health issues. E

505 Communicable and Noncommunicable Diseases (3) Modern concepts of diseases; etiology of common communicable and non-communicable diseases. Prereq: 1 year of biological science or consent of instructor. F

510 Environmental Management and Control (3) Contemporary practices of control of disease-producing agents in our environment. Emphasizes concepts for effective application of control principles to vocational endeavors and daily living activities. Includes: Drinking water quality (chemical, physical, and biological), waste management (liquid, solid, and hazardous), vector control, safe food management, recreational sanitation and safety, and pool management. Prereq: 400 Consumer Health (Same as Health 400.)
462-463 Intermediate Sanskrit I/Intermediate Sanskrit II (3,3) 462: Advanced grammatical constructions and reading of epic and classical religious and narrative texts (e.g., Bhagavata Gita, Mokshadharma, Ramayana, and Mahabharata). Prereq: Consent of instructor. 463: Continued reading of classical religious and narrative texts. Introduction to classical Sanskrit poetry (e.g., Kalidasa's Shakuntala or Meghaduta). Prereq: 462 or consent of instructor.

469 Readings in Selected Languages Related to Religious Studies (1-3) Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

490 Readings and Research in Religious Studies (3) Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

491 Foreign Study (1-15) May be repeated. Maximum 6 hours.

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

499 seminar in Religious Studies (3) For advanced students in Religious Studies; required for major. Includes historical, theoretical, and philosophical approaches to the study of major religious traditions, including Hinduism, Buddhism, and Daoism. Prereq: Consent of instructor.

499 seminar in Religion and Philosophy in India (3) A seminar for advanced students in Religion and Philosophy in India; required for major. Includes historical, theoretical, and philosophical approaches to the study of major religious traditions, including Hinduism, Buddhism, and Daoism. Prereq: Consent of instructor.

500 Modern Jewish Thought (3) Historical, philosophical, and cultural aspects of modern Jewish thought. Prereq: 202 or consent of instructor. May be repeated. Maximum 6 hours.

510 Jewish History (3) Survey of the history of the Jewish people from the time of the Babylonian Exile to the present. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

511 Jewish Civilization (3) Study of the culture, society, and history of the Jewish people from the time of the Babylonian Exile to the present. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

512 Jewish Thought (3) Study of the development of Jewish thought from the time of the Babylonian Exile to the present. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

525 Palestinian Studies (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

526 Israeli Studies (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

527 Jewish Literature (3) Study of the literature of the Jewish people from the time of the Babylonian Exile to the present. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

528 Jewish History and Society (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

529 Jewish Politics (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

530 Jewish Religion (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

531 Jewish Ethics (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

532 Jewish Sociology (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

533 Jewish Philosophy (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

534 Jewish Art (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

535 Jewish Music (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

536 Jewish Law (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

537 Jewish Philosophy (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

538 Jewish Theology (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

539 Jewish Psychology (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

540 Jewish Economics (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

541 Jewish Politics (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

542 Jewish Sociology (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

543 Jewish Art (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

544 Jewish Music (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

545 Jewish Literature (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

546 Jewish History (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

547 Jewish Thought (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

548 Jewish Religion (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

549 Jewish Ethics (3) An examination of the history, culture, and politics of the Israeli-Palestinian conflict. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.
401-402 Advanced Grammar, Conversation, and Composition (3,3) Prereq: 312 or equivalent. (Same as Russian and East European Studies 401-402.)

425 Introduction to Descriptive Linguistics (3) (Same as German 425, French 425, Spanish 425, and Linguistics 425.)

426 Introduction to Historical and Comparative Linguistics (3) (Same as German 426, French 426, Spanish 426 and Linguistics 426.)

451-452 Senior Seminar (3,3) For majors in Russian; minors admitted at the discretion of the instructor. Intensive study of a language, literary style, and literary criticism based on selected major novels. (Same as Russian and East European Studies 451-452.)

460 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)

493 Independent Study (1-15)

RUSSIAN AND EAST EUROPEAN STUDIES (887)

301-302 Introduction to Russian Literature (3,3) (Same as Russian 301-302.)

321 Works of Dostoevsky in English Translation (3) (Same as Russian 321.)

322 Works of Tolstoy in English Translation (3) (Same as Russian 322.)

340-341 History of Russia (3,3) (Same as History 340-341.)

375 Geography of the Soviet Union (3) (Same as Geography 375.)

393 Marxism (3) (Same as Philosophy 393.)

401-402 Advanced Russian Grammar, Conversation and Composition (3,3) (Same as Russian 401-402.)

410 Selected Topics in Russian and East European Studies (3) Interdisciplinary seminar on a selected topic using a comparative approach. Requires research using Russian language sources, regardless of country, and a paper of 25-30 pages. Writing-emphasis course.

451-452 Senior Seminar (3,3) (Same as Russian 451-452.)

469 Soviet Foreign Policy (3) (Same as Political Science 469.)

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

SAFETY (890)

400 Directed Independent Study (1-3) Individual identification and study of safety or safety education problem/issue. Specific proposal must be made to instructor before registration. May be repeated. Maximum 12 hours. Prereq: Consent of instructor.

441 Driver and Traffic Safety Education (3) Preparation of traffic safety instructors for schools, colleges, industry and commercial agencies. Each participant required to teach at least two non-drivers to drive. Valid driver's license required. 3 hours lecture and 2 hours lab.

442 Advanced Driver and Traffic Safety Education (3) Teaching driver education through use of simulation, multimedia, and multiple-car driving range. Emphasis placed on teaching skills and supervision. 2 hours and 2 labs.

443 Sports and Recreational Safety (3) Accident prevention and injury control in sports activities; philosophy of sports safety; human environmental factors and interpersonal aspects of injury control; risk-taking and decision-making strategies; and contributions of sports medicine to safety. 3 hours and 2 labs. Sp

452 General Safety (3) Principles, practices, and procedures in general safety. Safety problems in school, traffic, recreation, industry, home, and other public areas. F, Su

470 Special Topics (1-3) Study in selected disciplinary or professional areas of safety. May be repeated. Maximum 12 hours.

SOCIAL WORK (905)

400 Introduction to Social Work (3) Emergence of the social work profession; professional mission; knowledge, skills and values; practice settings; client groups; helping services; career patterns; practice methods. Designed to assist students to consider their ability for careers in social work.

450 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, ethno-sensitive assumptions, and the worker as consumer-encounter configuration. Concurrent skills laboratory. Prereq: Initial progression. Pre or Coreq: 314.


314 Human Behavior and the Social Environment (3) Interrelatedness of biological, social, cultural, environmental and psychological factors in human behavior. Person-in-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: 416 and 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.

SOCIOLOGY (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. May be taken instead of 100.

120 General Sociology (3) Major concepts and theoretical approaches of sociology with emphasis on cultural, socialization, social organization, and social stratification.

200 Sociological Analysis (3) Selected set of contemporary issues emphasizing theoretical and logical structure of the issues and development of data needed to enter informed debate on the issues. Students are expected to develop their own analytical arguments. Prereq: English 102 and either Sociology 100 or consent of instructor.

220 Interpersonal Communication (3) (Same as Speech 220.)

291 Sociological Theory (3) (Same as Sociology 291.)

310 American Society (3) Institutional organization of contemporary American society with particular attention to major social values. Writing-emphasis course.

311 Family (3) Theoretical frameworks and methodological approaches; their application in the sociological study of past and present family forms.

319 Sociology of Religion (3) Interrelationship of society, culture, and religion. (Same as Religious Studies 319.)

320 Interpersonal Communication Processes (3) (Same as Speech 320.)

321 Sociological Theory (3) Survey of contemporary issues and problems in sociological theory with an emphasis on their historical development and their importance for the field. Students are required to form critical awareness of the topics addressed. Prereq: 200 or consent of instructor.

330 Computers and Society (3) History of computing and computer systems; capabilities of computer applications in various fields; social, cultural, and economic impacts.

331 Sociological Research (3) Selected issues in philosophy of social sciences, research design, sampling, methods of data collection, and interpretation. Requires written research report. Prereq: 200 or consent of instructor.

334 Social Stratification (3) Social structure, stratification, and mobility. The significance of class, race, gender, and ethnicity in the United States. Writing-emphasis course.

340 Class Structure (3) Social structure, stratification, and mobility. The significance of class, race, gender, and ethnicity in the United States. Writing-emphasis course.

343 Race and Ethnicity (3) Social sources of racial and ethnic cleavages and social, economic and political consequences. Emphasis on race and ethnicity in the United States. (Same as African-American Studies 343.)


345 Collective Behavior and Social Movements (3) Collective 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.)

346 Sociology of Occupations (3) Occupations and professions as interest groupings in work settings and the wider community.

350 Criminology (3) Systemic inquiry into alternative definitions of crime, statistical distribution of different types of crime, and responses to crime, primarily by the police.


352 Deviance and Social Control (3) Deviance, its causes, and control, including 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.
SPANISH (924)

111-112 Elementary Spanish (3,3) Language laboratory required. Must be taken as co-rece. Not available to students eligible for Spanish 150. E

115 Honors: Elementary Spanish (3) An introductory course for students with a special interest in Spanish. Ideal for students with knowledge of another foreign language or for those who have had some previous (but not extensive) experience with Spanish. An enriched program with emphasis on basic skills of listening, speaking, writing, and reading Spanish. Special attention given to those skills needed for communication with Spanish speakers in real life situations. Grading scale and workload the same as regular elementary level. Students with two years of high school Spanish or one year of college Spanish may not take the course for credit. Courses must be taken in sequence. Students receiving a grade of A or B in 115 will not be allowed to take the 110 transition course. Class size limited to 15 students.

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 admittance to Spanish 211. This class will not count toward the College of Liberal Arts intermediate-level foreign language requirement. For elective credit only. F, S

199 Spanish Language and World Business (2) The course will examine the foreign trade and investment activities of the local, state, and national levels. An interdisciplinary focus of team from the Colleges of Business and Liberal Arts will provide an overview of the language, culture, and international cultural awareness in world business. Restricted to students majoring 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 classes from high school will receive six hours of elementary Spanish credit. E

217-218 Honors: Intermediate Spanish (3,3) Honors course for students of superior ability in Spanish. Incom- ing freshmen are admitted on the basis of a diagnostic test. High school and transfer students with recommendations from high school or university representatives. Classes normally held to a maximum of 16 students. Students follow enriched program with continuing emphasis upon speaking ability and with an introduction to reading literary selections. Students who earn an A or B in 218 receive credit for 300. Prereq: 111-112 or equivalent. F, S

291 Spanish Literature in English Translation (3) From the Golden Age to the early 20th century, the picaresque novel, and St. John of the Cross and Unamuno. No foreign language or major credit. Writing emphasis course.

300 Spanish Transition (3) Development of linguistic skills necessary for courses above 300. Recommended for students who would benefit from additional training beyond 212 in the skills of speaking, reading and writing Spanish. Special attention for preparation to read Spanish literature and other advanced-level material. F

301 Spanish for Students of Other Romance Languages (3) Accelerated class for beginning students of Spanish with strong background in another Romance language. Introduction to grammar, reading, and culture of Spain and Spanish America. Prereq: 3 hours at 300 level in another Romance language or equivalent.

323-324 Intermediate Conversation and Composition (3,3) Designed to improve proficiency in oral and written communication in Spanish. Prereq: 291. 323, 218, or equivalent. Prereq: for 324: 323, or equivalent.

335 Aspects of Spanish Literature (3) Introduction to Spanish literature, using selections from prose, drama and poetry of the medieval, Golden Age, and modern periods. Required of all majors. Prereq: 333 or equivalent.

336 Aspects of Spanish American Literature (3) (Same as Latin American Studies 336.) Prereq: 333 or equivalent.

421 Phonetics (3) Prereq: 333 or permission of instructor.

422 Advanced Grammar (3) Further grammatical structures. Required of all majors. Native speakers must receive permission from the instructor to take this course. Prereq: 323 or permission of instructor.

424-425 Advanced Conversation and Composition (3,3) Advanced conversation and written work in Spanish. Prereqs: Written work in Spanish and reading and composition skills in Spanish for pre-professionals. Native speakers must receive permission from the instructor to take this course. Prereqs: 324 or 424 or permission of instructor.

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.)

431 Spanish Civilization (3) Major social, political, and cultural achievements of the Spanish people from the origins of their civilization until today. Prereq: 311, 312 or equivalent. Writing emphasis course.

435-436 Survey of Spanish Literature (3,3) 435-Spanish literature in the 18th century, Voltaire and Rousseau. 436-Spanish literature since 1700. Prereq: 311, 312.

450 Hispanic Drama (3) Emphasis on major 20th century Spanish American dramatists. Prereq: 335 and 336, or equivalent. (Same as Latin American Studies 450.)

451 Hispanic Prose (3) Close reading and analysis of representative works by selected dramatists of Spain and Spanish America. Topics vary. May be repeated with consent of department. Maximum 6 hours. Prereq: 335 and 336, or equivalent.

452 Hispanic Poetry (3) Emphasis on the major poets of each period, either Spanish or Spanish American. Topics vary. May be repeated with consent of department. Maximum 6 hours. Prereq: 335 and 336, or equivalent.

468 Capstone Colloquium in Spanish (3) An integrative experience focusing on a broad range of issues and topics that affect much of the Spanish-speaking world and also involve those who specialize in Hispanic Studies. Prereq: 311, 312 or equivalent. Writing-emphasis course.

461 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. Prereq: 335 and 336, or equivalent.

471 Latin American Civilization (3) Latin America's diverse heritage and major social and political institutions. Prereq: 311, 312 or equivalent. (Same as Latin American Studies 471.) Writing emphasis course.

473-474 Survey of Spanish American Literature (3,3) 473-Historical survey from the Conquest to the late 19th century. 474-Major literary movements, writers and works of the 20th century. Prereq: 311, 312, or equivalent. (Same as Latin American Studies 473-474.)

479 Social Protest Literature of Latin America (3) Literature as a means of unmasking social life that have traditionally been left to Latin America. Among major themes: indigenismo, Black literature, women writers, the role of the white in the Latin American society. Prereq: 311, 312, or equivalent. (Same as Latin American Studies 479.)

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)

493 Independent Study (1-15)

SPECIAL EDUCATION (933)

310 Special Education Principles (3) Introduction to the field of special education, including the nature and causative factors of exceptionalities, the history and nature of the law, the field, and current policies. Prereq: Admission to Teacher Education Program.
320 Special Education Strategies (3) Introduction to basic special education procedures, including formal and informal assessment, development of Individual Education Plans, applied behavioral analysis, appropriate medical procedures, and effective instructional strategies. Prereq: 310, Admission to Teacher Education Program.

331 Articulation Disorders (3) Prereq: Admission to Teacher Education Program. (Same as Audiology and Speech Pathology 331.)

340 Voice Disorders (3) Prereq: Admission to Teacher Education Program. (Same as Audiology and Speech Pathology 404.)

404 Pre-Internship Seminar (1) Objectives and policies of the internship program. Must be completed the term immediately preceding the internship. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. Sp

415 Language Development for the Hearing Impaired I (3) Language problems of hearing impaired contrasted with scope and sequence of normal language development. Formal linguistic systems used to describe language development problems.

416 Language Development for the Hearing Impaired II (3) Developmental and remedial systems of teaching language to hearing impaired children. Comprehension and production differences, idiomatic and figurative structures.

419 Speech Development of Hearing Impaired (4) Theories of speech development, approaches in training perception and production of speech, and aural habilitation. PracLab experiences.

420 Psychology and Education of Students with Mild Disabilities (6) Nature and characteristics of persons with mild handicaps and the educational strategies appropriate for these persons. Prereq: 310, 320, Educational Curriculum & Instruction 422 and Admission to Teacher Education Program. Coreq: 421.

421 Field Experience in Modified Programs (3) Practicum in teaching in modified programs: planning, developing, implementing, and evaluating instruction. Prereq: 310, 320, Educational Curriculum and Instruction 422 and Admission to Teacher Education Program. Coreq: 420. Satisfactory/No Credit only. F

423 Communication Processes for the Hearing Impaired (3) Expressive and receptive vocabulary development in children with hearing impairments. Fingerspelling and educational applications of sign language.

424 Nature of Hearing Impairments (3) Anatomy and physiology of hearing; nature and causes of hearing loss; methods and instrumentation for assessment of hearing level. Prereq: Consent of instructor. May be repeated; maximum 6 hours. Major credit limited to 3 hours.

425 Introduction to the Psychology and Education of the Hearing Impaired (3) Primarily for those planning to teach the hearing impaired. Research related to psychology, social adjustment, communication methodology, language development and education of the hearing impaired. Survey of literature. Visits to programs.

430 Psychology and Education of Students with Moderate Disabilities (6) Nature and characteristics of persons with moderate/severe disabilities and the educational strategies appropriate for these persons. Prereq: 310, 320, Educational Curriculum & Instruction 422 and Admission to Teacher Education Program.

431 Field Experience in Comprehensive Programs (3) On-site teaching experience with moderately and severely handicapped children and youth. Prereq: 310, 320, Educational Curriculum & Instruction 422 and Admission to Teacher Education Program. Coreq: 430. Satisfactory/No Credit only. Sp

434-433 Clinical Practice in Speech Pathology (1-4) (Same as Audiology and Speech Pathology 434-433.)

440 Voice Disorders (3) (Same as Audiology and Speech Pathology 440.)

454 Education of the Gifted and Talented Children (3) Psychometric and behavioral studies of giftedness. Analysis of past and present school practices in reference to curriculum and program implementation. Prereq: Admission to Teacher Education Program.

456 Speech and Language Basis of Learning Disabilities in the Classroom (3) Normal communication development; understanding of speech and language impairments in school-age students; integration of oral/written communication skills into existing curriculum, especially for high incidence special education students. Sp

470 Psychology of the Exceptional Child (3) General characteristics and educational needs of exceptional children. Implications of developmental variations for functioning as adults. Enrollment limited to non-education majors.

471 Internship I: Special Education (3-10) Testing methods and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

473 Audiology II (3) (Same as Audiology and Speech Pathology 473.)

482 Speech and Language Services in the Schools (3) Organization and implementation of speech and language programs. Emphasis on the IEP process as it affects assessment, case-selection, and programming for students age 4-21. Professional materials, group intervention, and classroom consultation. Prereq: Admission to Teacher Education Program.

483 Clinical Practice in Communication Disorders in Schools (3) Practicum in teaching children with communication disorders. Prereq: Audiology and Speech Pathology 433, 434 (80-100 clinical contact hours) and admission to Teacher Education Program.

484 Internship with Hearing Impaired Children (6) Practicum prior to internship with school aged children who are hearing impaired. Prereq: Admission to Teacher Education Program.

485 Internship (1-3) Supervised career-related experience. Field experience is the goal for the completion of this internship. Prereq: Admission to Teacher Education Program. Coreq: Admission to Teacher Education Program, permission of mentor, and admission to Teacher Education Program.

486 Communication Practice in Speech Pathology (3) Organization and implementation of speech and language programs. Emphasis on the IEP process as it affects assessment, case-selection, and programming for students age 4-21. Professional materials, group intervention, and classroom consultation. Prereq: Admission to Teacher Education Program.

487 Internship II: Special Education (3-10) Testing methods and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

493 Directed Independent Study (1-3) Tutorial and investigation to a specialized area. Prereq: Consent of instructor. May be repeated. Maximum 6 hours. S/NC or letter grade.

494 Aural Habilitation/Rehabilitation of the Hearing Impaired (3) (Same as Audiology and Speech Pathology 494.)

495 Internship (1-3) Supervised career-related experience. Field experience is the goal for the completion of this internship. Prereq: Admission to Teacher Education Program. Coreq: Admission to Teacher Education Program, permission of mentor, and admission to Teacher Education Program.

Speech Communication (943)

100 Introduction to Speech Communication (3) Fundamental theories and practices with particular reference to interpersonal, intergroup, group, organizational, and public communication.

200 Developing Speech Confidence (1) Principles and techniques for coping with apprehension about communicating. Recommended for students who are concurrently enrolled in 200 level speech courses and desire additional work in dealing with their anxiety about speaking.

210 Public Speaking (3) Preparation and delivery of informative and persuasive speeches. Topics include research, organization, adapting to an audience, topic selection, reasoning, and evaluating the discourse of others.

220 Interpersonal Communication (3) Process by which thoughts, feelings, and actions affect and are affected by the face-to-face communication situation. (Same as Sociology 220.)

230 Listening (3) A study of principles and techniques of listening. Focuses on theoretical and practical listening skills.

240 Business and Professional Speaking (3) Basic principles of oral communication in the workplace. Topics include such topics as organizational/communication theory, group problem solving, formal presentations, and interviewing.

260 Communication and Society (3) Study of communication strategies and public opinion, with emphasis on communication methods of advertising, film, songs, demonstrations, drama, and public address.

270 Argumentation and Debate (3) Reasoned decision-making with emphasis on analysis, evidence, reasoning, constructing and refraining 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.

295 Communication Research Methods (3) Survey of contemporary methods used for research in Speech Communication. Emphasis on designing and evaluating communication research reports.

300 Nonverbal Communication (3) Explanation of nonverbal communication from human communication perspective; origins and research, usage and coding of nonverbal behavior, research strategies, and theoretical approaches.

310 Persuasion (3) Methods which contribute to effective and ineffective persuasion. Topics include credibility, message construction, receiver variables.

320 Interpersonal Communication Processes (3) Social dimensions of interpersonal communication and relationships. Prereq: Speech Communication 220 or consent of instructor. (Same as Sociology 320.)

330 Group Communication (3) Small group decision-making, evidence, argumentation, leadership, roles, and conflict resolution as they affect the communication of a group.

350 Communication Theory (3) Survey of social science approach to theorizing about communication.

360 Topics in Communication and Society (3) Content varies. Studies in social function of such communication forms as posters, speeches, songs, plays, demonstrations. May be repeated with consent of department. Maximum 6 hours.

370 Evidence and Argumentation (3) Concept of evidence in public controversies, uses and sources of evidence, and conditions affecting credibility.

380 Advanced Oral Interpretation (3) Individual and group performances of prose literature and poetry. Prereq: 280 or consent of instructor. Writing-emphasis course.

390 History of Rhetorical Theory (3) Western rhetorical theory from Plato to the present.

400 Topics in Speech Communication (3) Variable content course offering opportunity to offer subject matter not covered in an existing course. Topics, scope 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 significant factor in the development, management, and resolution of conflict at the interpersonal, small group, organizational, or societal levels.

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: Child and Family Studies 220 or Speech Communication 320 or consent of instructor.

440 Organizational Communication (3) Organizational setting and those variables of the communication process which affect the quality of interaction both within and outside the organization.

445 Internship (1-3) Supervised career-related experience. May be taken for credit in at least 3 GPA, or by special permission of internship Director. S/NC only. May be repeated: maximum 6 hours. Major credit limited to 3 hours.

450 Propaganda (3) Study of political communication, and social propaganda in United States: World War I to present. Writing-emphasis course.

465 Studies in Rhetorical History and Criticism (3) May be repeated. Maximum 6 hours.
466 Rhetoric of the Women'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 1830s to the 1920s. (Same as Women’s Studies 466.) Writing-emphasis course.

469 Freedom of Speech (3) Historical and philosophi- cal perspectives on freedom of expression; legal issues in free speech controversies in the U.S. Writing emphasis course. (Same as American 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 the present. (Same as Women’s Studies 476.) Writing-emphasis course.

480 Ensemble Interpretation (3) Study and presentation of literary texts through group performance.

485 Topics in Rhetorical Theory (3) Content varies. Emphasis on a particular period, such as Greek, eighteenth century, or contemporary. May be repeated. Maximum 6 hours.

511 Foreign Study (1-15) See description of major concentration. Prereq: Senior/Senior standing with at least a 3.0 GPA or by special permission of the Department; consent of supervising faculty member and Department prior to registration.

522 Off-Campus Study (1-15) See description of major concentration. Prereq: Senior/Senior standing with at least a 3.0 GPA or by special permission of the Department; consent of supervising faculty member and Department prior to registration.

532 Independent Study (1-15) See description of major concentration. Selected readings/research in an area of speech communication to 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: Senior/Senior standing with at least a 3.0 GPA or by special permission of the Department; consent of supervising faculty member and Department prior to registration.

536 Proseminar in Speech Communication (3) Major theoretical perspectives on speech communication, their interrelationships and applications; consideration 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 at least 12 hours of major requirements in speech communication. Writing-emphasis course.

SPORT MANAGEMENT (957)

250 Foundations of Sport Management (3) An introduction to the discipline of sport management including why business is involved in sport and an overall evaluation of sport management as a profession. F

290 Practicum 1 (2-3) Supervised part-time experience at approved sites for purposes of supporting and clarifying career goals. Each hour of credit requires 40 clock hours per semester. For Pre-Sport Management majors only. SNC only. Prereq: HPSS 100 or Recreation 110 and 210 or consent of instructor.

350 Sport Management: Theory to Practice (3) (Same as HPSS 350.)

370 Event Management (1-3) Study of the various principles involved in the organization, promotion, and management of special events. Students will combine theory and practice through experience with assigned special events. Prereq: HPSS 250 or consent of instructor. Sp

380 Special Topics (1-3) Study in selected disciplinary or professional areas of Sport Management. May be repeated.

390 Practicum II (3) Supervised part-time experience at approved site of sport management opportunities. Each hour of credit requires 40 clock hours per semester. For Sport Management majors only. SNC only. Prereq: Progression to Sport Management Major and Sport Management 290 E.

415 Managing Leisure/Sport & Related Facilities (3) (Same as Recreation 415)

480 Sport Management Internship (1-15) Full time experience at approved sport management site. Emphasis on managerial tasks and administrative proce- dures. For Sport Management majors only. Prereq: Completed all 300 level Sport Management requirements, Senior/Senior standing, Progression to Sport Management Major (Admitted to major) E

493 Directed Independent Studies (1-3) Independent study in a specialized area of sport management. May be repeated. Minimum 9 hours. Prereq: Progression to Sport Management Major. E

STATISTICS (962)

201 Introduction to Statistics (3) Data collection; descriptive statistics, simple regression, and time series analysis; concepts of probability and probability distributions. Binomial and normal distributions; procedures for estimation of means; confidence intervals; contingency tables. Prereq: Mathematics 121. E


253 Probability and Statistics for Scientists and Engineers II (3) Hypothesis testing; analysis of vari- ances, nonparametric, simple linear regression, mul- tiple linear regression, statistical process control. Prereq: or Coreq: Statistics 201 and permission of instructor. Students must also have a working knowledge of the UCTG VAX System or Coreq: 261 SP.

261 Introduction to Statistical Software (3) Use of computer operating system commands and packaged programs for statistical data analysis and related data management tasks. Use of UCTC computing facilities. Coreq: 252 SP.

302 Statistical Methods I (3) Linear regression and correlation; multiple regression, diagnostic summary variable; analysis of data. Emphasis on data analysis and interpretation. Use of computer facilities required. Not counted toward a major or minor in statistics. Not available for credit with credit in 461. Prereq: 201 or equivalent. E


350 Industrial Statistics (3) Introduction to statistical process control. Concepts for attributive vari- able data. Process capability analysis. Subgrouping and measurement issues. Prereq: 201 or 251 E.

411 Introduction to Statistical Computing (3) Use of computer operating systems commands and packaged programs for statistical analysis and data management. Not acceptable for credit for statistics majors. Prereq: 201 or 251 E.

416 Applied Regression Analysis (3) Linear regression and correlation, multiple regression, polynomial regression, selection of variables, use of dummy variables, analysis of residuals, Logistic regression and its applications. Use of standard computer packages. Major writing requirement. Prereq: 252 and 261 or graduate status and consent of instructor. F. Sp

420 Analysis of Variance and Experimental Design I (3) Analysis of variance techniques for single and multifactor models, post hoc procedures. Design consider- ations for completely randomized, randomized block, and split-plot experiments, balanced incomplete block and designs, response surface methodology. Major writing requirement. Prereq: 252 and 261 or graduate status and consent of instructor. Sp

471 Random Processes and Probability Models (3) Functions of random variables, multivariate distributions, conditional expectations, waiting time distributions, random processes, Markov chains, queuing theory. Prereq: 251 F.

483 Special Topics in Statistics (1-3) Topics vary. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

485 Principles of Statistical Process Management (3) Control charts and other statistical techniques ap- plied to management of business processes. Prereq: Consent of department head. E

492 Internship (1-6) Supervised off-campus experience in application of statistical principles and methods in business, industry, or government in a written and oral report. Prereq: Permission of the Chair- person of the Statistics Department Undergraduate Affairs Committee. Letter grade or Satisfactory/No credit only. May be repeated. Maximum 6 hours.

493 Independent Study (2-6) Faculty directed reading and investigation of specified topic in probability or statistics culminating in a written report. Prereq: Two courses in statistics and permission of Chairperson of the Statistics Department Undergraduate Affairs Committee. Letter grade or Satisfactory/No credit. May be repeated. Maximum 6 hours.

THEATRE (976)

100 Introduction to Theatre (3) Understanding theatre; thought, philosophy, and aesthetic, and production prac- tices. Writing-emphasis course.

220-221 Acting (3,3) 220-Basic Acting techniques. 221-Further exploration and development of acting techniques through exercises and beginning scene work. Prereq: 220. Writing-emphasis courses. Prereq: to 221: 220.

226 Voice and Diction (3) Voice production; attention to individual student needs. Writing-emphasis course.

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 electricity, physics, psychology, and instrument engineering as it relates to stage lighting and sound production. Empha- ses on hands-on skills in lab. Writing-emphasis course.

310 Theatre History and Dramatic Literature I (3) History and literature of theatre. Drama in performance with particular emphasis on major trends and movements of European, Eastern and non- Mainstream Theatre from Antiquity to the Italian and French Renaissance.

311 Theatre History and Dramatic Literature II (3) History and literature of theatre. Drama in performance with particular emphasis on major trends and movements of European, Eastern and non- Mainstream Theatre from Antiquity to the Italian and French Renaissance.

312 Theatre History and Dramatic Literature III (3) History and literature of theatre. Drama in performance with particular emphasis on major trends and movements of contemporary international theatre from develop- ment of realism to present.

313 American Theatre (3) Development of theatre from origins to 20th century with emphasis on the evolution of plays, playwrights and major innovators.

320 Advanced Acting (3) Characterization and scene study in realistic plays. Prereq: 220-221 and consent of instructor. May be repeated. Maximum 6 hours.

323 Stage Movement (2) Introduction to and appli- cation of theatre movement techniques.

324 Theatre Dance I (2) Dance techniques incorporating elements of musical theatre. Prereq: 323 or consent of instructor.

340 Introduction to Costume Design (3) Development of research and rendering skills. Prereq: 245 or consent of instructor.

356 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.

405 Stage Make-Up (2) Problems in make-up design and application, character analysis, physiognomy and chirocuro. Prereq: 100.
practice of stagelighting design with emphasis on the aesthetic of lighting design (3) theory and of instructor. Lighting software for preparation of lighting plots and advanced techniques in computer assisted design (3) computer assisted design for stage lighting and cued for production.

Periodic Movement and Dance (2) Movement styles and dances from the Renaissance to the 20th Century. Prereq: 323 or consent of instructor.

Theatre Dance II (2) Advanced dance technique incorporating elements of musical theatre. Prereq: 324 or consent of instructor. May be repeated. Maximum 9 hours.

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.

Applied Phonetics (3) Development of skills in transcription and reproduction of the principal varieties of the English Language in North America and Great Britain and selected foreign dialects in North America. Prereq: Consent of instructor.


Costume Patternmaking (3) Draping patterns for period costumes. Includes corsetry and the study of historic patterns 1500-1900. Prereq: 345 or consent of instructor.

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.

Advanced Scenery Technology II (3) Study and practice of metalworking and plastics for theatrical productions; production participation will be required. Prereq: 250. Graduate credit available to theatre M.F.A. students only.

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.

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.


Rendering (3) Techniques in monochrome and full color illustration of space and form. Some acquaintance with basic mechanical perspective and freehand sketching is assumed.

Advanced Lighting and Sound Technology (3) Projects in lighting and sound coordination. May include opera, dance, musical theatre, and rock video. Final projects will be live productions. Emphasis on developing artistic sensitivity and subtletie in control. Prereq: 260.

Advanced Lighting Design (3) Advanced problems in lighting design and theory including areas such as lighting musicals, operas, and dance. Prereq: 382 or consent of instructor.

Sound Design (3) Sound design for the performing arts. Review of equipment and acoustical factors that affect sound production. May be taken from selected plays. Final projects will be mixed, edited, and cued for production.

Computer Assisted Design for Stage Lighting (3) Advanced techniques in computer assisted design for stage lighting. Work with CAD, and other stage lighting software for preparation of lighting plots and associated paperwork. Prereq: Theatre 362 or consent of instructor.

Aesthetics of Lighting Design (3) Theory and practice of stage lighting design with emphasis on the relationship between designer and non-design practitioners such as directors, actors, chorographes, architects, etc.

470-471 Playwriting (3,3) Advanced instruction in the writing of plays. Prereq: Consent of instructor.

481 Applied Theatre: Costumes (2) Laboratory in costuming for departmental productions. Credit available to Theatre majors only or with consent of instructor. 90 hours of work required.

482 Applied Theatre: Scenery (2) Laboratory in scenery for departmental productions. Credit available to Theatre majors only or with consent of instructor. 90 hours of work required.

483 Applied Theatre: Lighting (2) Laboratory in lighting for departmental productions. Credit available to Theatre majors only or with consent of instructor. 90 hours of work required.

484 Applied Theatre: Performance (2) Laboratory in performance for departmental productions. Credit available to Theatre majors only or with consent of instructor. 90 hours of work required.

491 Foreign Study (1-15) Study abroad.

492 Off-Campus Study (1-15) Study abroad.

493 Independent Study (1-15) Individual study under departmental supervision.

UNIVERSITY HONORS (983)

118-128 Whittle Scholars Seminar (1,1) Limited to and required of all Whittle Scholars in their freshman year. 118 concentrates on contemporary issues; 128 concentrates on aspects of leadership. Satisfaction/No Credit grading only.

237, 337, 437 Honors: Concentration in the Humanities (3,3,3) Small group studies of selected topics, issues or problems with a concentration in the humanities. Open to all students with a GPA of 3.25 or greater. Topics vary. May be repeated.

247, 347, 447 Honors: Concentration in the Social Sciences (3,3,3) Small group studies 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.

338-348 Tennessean Scholars Seminar (1,1) Limited to and required of all Tennessee Scholars each year. May be repeated. Maximum 8 hours. Satisfaction/No Credit grading only.

356-366 Chancellor’s Scholars Seminar (1,1) Limited to and required of all Chancellor’s Scholars each year. May be repeated. Maximum 8 hours. Satisfaction/No Credit grading only.

416-428 Seminar on International Travel/Study/Work Overseas (1,1) Seminar course for all Whittle Scholars and must be taken prior to their international experience. Open to all students who intend to travel, study or work abroad. Satisfaction/No Credit grading only.

491 Honors: Foreign Study (3-15) 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 (3-15) 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 (3-15) 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 Freshman University Seminar (3) Introduction to the University as an adventure in personal growth and professional development. A/B/C/GC grading. Open only to freshmen, transfer students, and re-entry students, or by permission of instructor.

310-320 Special Topics in University Studies (3) Limited to 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). Extensive use of films, field trips, student discussion. May be repeated. Maximum: 9 hours.

311 AIDS and Society (3) Speakers from across the spectrum of scientific, social, medical, emotional and financial aspects of acquired immunodeficiency syndrome. Students are required to participate in some AIDS related community activity and to describe that activity in writing.

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) Exploration of technological and ethical issues 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). Extensive use of films, field trips, student discussion. May be repeated. Maximum: 9 hours.

URBAN STUDIES (985)

200 Human-Environment Systems (3) (Same as Interior Design 200.)

250 Introduction to Urban Studies (3) Multidimensional nature of urban studies. Includes lectures by specialists presenting the approach of their disciplines to Urban Studies; application of general approaches to a specific issue; and collaborative teaching involving most faculty of Urban Studies.

321 Urban Politics and Process (3) (Same as Political Science 321.)

323 Behavioral Geography (3) (Same as Geography 323.)

350 Practicum in Urban Studies (3-4) Student and faculty member team, in conjunction with the East Tennessee Design Center, study a selected problem or aspect of the modern city.

410 The City in the United States (3) (Same as Planning 410.)

402 Survey of Planning (3) (Same as Planning 402.)

441 Urban Geography (3) (Same as Geography 441.)

450 Directed Field Work (3-15) Participant observation and directed field research. Project results are presented to Urban Studies students and faculty.

454 Cities and Urban American History (3) (Same as History 454.)

460 Senior Seminar (3) Variety of disciplines used to approach student selected problem. Prereq: 250, 350 and senior status. Student may not take 460 prior to having taken 450, except upon recommendation of the University Studies Committee. 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.)
WILDLIFE AND FISHERIES SCIENCE (993)

341 Law Enforcement and Public Relations (3) Fundamentals and general principles of local, state and federal laws and regulations governing public resources and their management. Principles and practices of interacting with the public. P

440 Wildlife Techniques (2) Methods in wildlife damage control, forest, farmland, wetland wildlife 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 (2) Active and passive sampling techniques for fish and aquatic organisms; population estimation; methods of 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 organisms - eutrophication, population estimation, age, growth, biological assessment; and stocking. Prereq: Forestry, Wildlife and Fisheries 317 or Biology 230, and 6 hours of mathematics. 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: Forestry, Wildlife and Fisheries 317 and Biology 230, or permission 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: Forestry, Wildlife and Fisheries 317 and Biology 230, or permission of instructor. 2 hours and 1 lab. One weekend field trip required. Sp

490 Ethics in Wildlife and Fisheries Management (1) Ethical cases 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 the diverse perspective of ethical behavior in the practices of wildlife and fisheries management. Prereq: Consent of instructor. 1 hour and 1 lab. Sr

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

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) Analysis of the study of women through the forms 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 Sociology 230) Historical and critical study of current research on family, marriage, gender and sexuality. Prereq: Consent of instructor. 2 hours and 1 lab. Sr

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)
449 Laboratory in Physiology (2) Prereq or Coreq: 440 or 445.

450 Comparative Animal Behavior (3) Principles and methods of ethology with emphasis on ecological, developmental, physiological and evolutionary aspects. (Same as Psychology 450.)

459 Comparative Animal Behavior Laboratory (3) Introduction to observational and experimental research in ethology. Coreq: 450. (Same as Psychology 459.)

460 Evolution (3) Modern concepts of animal evolution. Prereq: Biology 220.

465 Human Genetics (3) Genetic and molecular principles and problems of human inheritance. Prereq: Biology 220.

470 Aquatic Ecology (3) Introduction to the physiochemical nature of inland waters with description of biotic communities and their interrelationships. Prereq: Chemistry 120-130 and Biology 230. 2 hours and 1 lab.

472 Arachnology (3) Biology of spiders, mites, scorpions and relatives. Prereq: 450 or 459. 2 hours and 1 lab.

473 Herpetology (3) Biology of amphibians and reptiles with emphasis on ecology and adaptive radiation. Prereq: Biology 230. 2 hours and 1 lab.

474 Ichthyology (4) Evolution, classification, collection and identification, distribution and biology of fishes with emphasis on freshwater faunas of Eastern North America. Prereq: Biology 230 or consent of instructor. 2 hours and 2 labs.

475 Ornithology (3) Behavior, ecology, populations, evolution and field identification of birds. Prereq: Biology 230. 2 hours and 1 lab.

476 Mammalogy (3) Evolution, classification, biogeography, ecology, behavior and functional anatomy of mammals. Prereq: Biology 230 or equivalent. 2 hours and 1 lab.

480 Physiology of Exercise (3) (Same as Physical Education 480.)

490 Comparative Endocrinology (3) Comparative analysis of physiology and morphology of endocrine glands in vertebrates and invertebrates, their role and interaction in maintenance of the organism and species. Prereq: 440 or equivalent.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

Bon Voyage!
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