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## Information

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:

Visit our website at: [http://www.utc.edu](http://www.utc.edu)

**Admission requirements**—Director of Admissions Phone: (423) 755-4662 or toll-free 1-800-UTC-MOCS

Course offerings—Department offering course or faculty adviser, head of major departments, or dean of college/school. Phone: (423) 755-4111 for department number.

**Fees & tuition**—Bursar Phone: (423) 755-4781

**Financial aid**—Director of Financial Aid Phone: (423) 755-4677

**Graduate admission requirements**—Director of Graduate Studies Phone: (423) 755-4666

**Housing**—Student Affairs Phone: (423)755-4304

**Registration**—Director of Advisement, Records and Registration Phone: (423) 755-4416

The University of Tennessee at Chattanooga does not discriminate on the basis of race, sex, color, religion, national origin, age, handicap, or veteran status in provision of educational opportunities or employment opportunities and benefits. The University 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 Education Amendments of 1972, Pub. L. 92-318; and Section 504 of the Rehabilitation Act of 1973, Pub. L. 93-112; and the Americans With Disabilities Act of 1990, Pub. L. 101-336, respectively. This policy extends to both employment by and admission to the University. Inquiries concerning Title IX, Section 504, and the Americans with Disabilities Act should be directed to the Office of the Director for Affirmative Action, 104 Founders Hall, (423) 755-4124. Charges of violation of the above policy should also be directed to the Office of the Director for Affirmative Action.

EO40222-004-97

**Student Right To Know**

The following information is provided in accordance with the Student Right To Know Act.

By the end of the 1995-96 school year, 39 percent of those students who entered the University of Tennessee at Chattanooga as full-time freshman in fall 1990 had completed baccalaureate degrees at UTC.

Any questions concerning this or similar information on student athletes contact:

Dr. Richard Gruetzemacher
Office of Planning, Research & Institutional Research
615 McCallie Avenue
Chattanooga, TN 37403-2598
(423) 755-4007

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EO40222-004-97
The University

History
When the Methodist Episcopal Church began to explore the possibilities of developing a central university in the South, Chattanoogans came forward to work with the church in this effort. Since its founding as Chattanooga University in 1886, The University of Tennessee at Chattanooga has developed an institutional excellence which rests on an unusual blend of the private and public traditions of American education.

For 83 years the University was a private school. Three years after its founding, the University was consolidated with another church-related school, East Tennessee Wesleyan University at Athens, under the name of Grant University. In 1907 the name University of Chattanooga was adopted.

In 1969 the University of Chattanooga and a junior college, Chattanooga City College, merged with The University of Tennessee, one of the oldest land-grant universities in the nation, to form the UTC campus. Pledged to the service of the entire state, The University of Tennessee has emerged as a statewide system consisting of four primary campuses. The new campus was given the mandate to devote the major portion of its resources to the development of excellence in undergraduate education and in selected areas of graduate study.

The University’s wide diversity of degree programs has attracted a current enrollment of more than 8,300 students who represent 74 Tennessee counties, 41 states and U.S. possessions and 41 foreign countries.

Accreditations and Memberships
The University is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, the Accreditation Council for Education in Journalism and Mass Communication, and the National Association of Schools of Art and Design.

The University is a charter member of the Southern University Conference and is a member of the American Association of Colleges for Teacher Education, American Alumni Council, American Council on Education, Association of American Universities, Association for Continuing Higher Education, American Association of State Colleges and Universities, Council of Graduate Schools in the United States, National University Extension Association, the Tennessee College Association, and the Servicemembers Opportunity Colleges.

Oak Ridge Associated Universities
The University of Tennessee at Chattanooga has been a sponsoring institution of Oak Ridge Associated Universities (ORAU) since 1969. ORAU is a private, not-for-profit consortium of 65 colleges and universities and a management and operating contractor for the U.S. Department of Energy with principal offices located in Oak Ridge, Tenn. Founded in 1946, ORAU provides and develops capabilities critical to the nation’s technology infrastructure, particularly in energy, education, health, and the environment. ORAU works with and for its member institutions to help faculty and students gain access to federal research facilities; to keep members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among our members in areas where their collective strengths can be focused on issues of national importance.

ORAU manages the Oak Ridge Institute for Science and Education (ORISE) for the U.S. Department of Energy. ORISE is responsible for national and international programs in science and engineering education, training and management systems, energy and environment systems, and medical sciences. ORISE's competitive programs bring students at all levels, K-12 through postgraduate, and university faculty members into federal and private laboratories.
ORAU’s office for University, Industry, and Government Alliances seeks opportunities for collaborative alliances among its member universities, private industry, and federal laboratories. Other activities include sponsoring conferences and workshops, the Visiting Scholars program, and the Junior Faculty Enhancement Awards.

Mission
The mission of The University of Tennessee at Chattanooga is the education of students: to assist in the enlightening and disciplining of their minds and their preparation for ethical and active leadership in civic, cultural, and professional life. To achieve this mission, the University engages in the complementary and mutually supportive activities of teaching, research, and service.

The University combines the advantages of a strong private tradition with those of a state-assisted institution. Dedicated to providing quality education to a diverse population of over 8,100 students, UTC seeks to meet its responsibilities as an emerging metropolitan university, actively involved with regional municipalities, schools, business, and industry and offering expanded instructional opportunities that respond to area needs. The University’s ability to fulfill this role is enhanced by continuing support from its alumni, community, and the University of Chattanooga Foundation, a public, nonprofit organization which administers most of UTC’s private endowment.

The hallmark of the University is outstanding teaching by a talented and committed faculty. Full-time and qualified adjunct faculty rather than graduate students teach all classes. Small classes, personalized advising, and frequent opportunities to interact with faculty provide a student-oriented learning experience.

Research is a priority for the campus. Effective teaching and faculty involvement in scholarship, research, and creative activities are interdependent. These activities foster the intellectual growth of the faculty, provide students with opportunities to participate in the development and application of new knowledge, and enhance the region’s growth. The Center of Excellence for Computer Applications already has enhanced many multidisciplinary initiatives. A program of well-endowed chairs, (including a significant number of Chairs of Excellence), professorships, and centers builds upon a tradition of faculty research.

The University’s programs provide both a firm grounding in the liberal arts and strong professional preparation. Bachelor’s degrees are offered in the liberal arts, sciences, business, education, engineering, fine arts, health, human services, nursing, and physical therapy. Master’s degrees are offered in business, computer science, criminal justice, education, engineering, English, music, nursing, psychology, and public administration. UTC will develop new programs at the master’s level to meet emerging community needs. UTC may develop selected doctoral programs, in areas of existing strength, that meet regional and national needs.

Education at UTC goes beyond the traditional classroom and laboratory as befits an institution where service is also a high priority. UTC faculty members will continue to bring their professional expertise to bear on the concerns of the larger community. Moreover, the University takes advantage of its metropolitan location to provide firsthand learning experiences to students through career-related work experience. Innovative programs such as Brock Scholars and Honors serve exceptionally talented students. Off campus, the University offers credit and noncredit instruction for professional and intellectual development, extending its educational mission to an even broader range of citizens.

As UTC looks to its future and the emerging needs of the metropolitan region, it will continue its commitment to quality education, excellent research, and dedicated service.

As it pursues all activities in support of its mission, the University is committed to affirmative action and other programs which contribute to the cultural and ethnic diversity of the campus.

The Community
The University is located only a few blocks from the urban area of Chattanooga, a city that is both highly industrial and rich in natural beauty. Claiming more than 600 industries, Chattanooga lies at the foot of Lookout and Signal Mountains where the Tennessee River forms Moccasin Bend. These sites possess historical significance as well as beauty in a city steeped in the heritage of the Civil War.

The cultural environment of Chattanooga is enhanced by contributions from the University and the many civic organizations that support the arts through dramatic productions, concerts, and art exhibits. Ten city parks, seven public golf courses, and a 35,400 acre lake provide a variety of recreational activities.

With a population of about 162,170 in a metropolitan statistical area of over 466,647, Chattanooga is easily accessible from all parts of the nation by air and bus.
Admissions and Regulations

UNDERGRADUATE ADMISSIONS

The Admissions Office administers all matters pertaining to undergraduate admission. All requests for information and application forms should be addressed to the Office of Undergraduate Admissions, The University of Tennessee at Chattanooga, Chattanooga, Tennessee 37403. The Admissions Office is located in room 129 Hooper Hall and the telephone number is (423) 755-4662. Completed admissions applications and credentials should be sent to the same office. A $25 non-refundable application fee is required of all candidates who have not previously applied to a University of Tennessee campus or the University of Chattanooga.

New students may be admitted at the beginning of either semester or any summer session. Every effort should be made to submit the completed application and supporting credentials no later than four weeks prior to the beginning of the semester in which admission is desired. Freshmen applying for the fall semester must apply by August 15 for full consideration.

Orientation and Advising

Orientation programs for new freshmen and transfer students are directed by the Orientation Office and combine the services and skills of the Admissions Office, the Advisement Office, the Registration Office, the Student Affairs Office, and the Counseling and Career Planning Center. These programs provide an introduction to the campus and University life. The Student Orientation Council, composed of upperclass student leaders, also has a major role in planning and coordinating new student orientation.

Each orientation program includes a tour of the campus, an explanation of its facilities and academic offerings, small group discussions with faculty and students, advising and registration, plus entertainment and the opportunity to get acquainted with fellow students. In addition, subject placement exams are given to establish the level of proficiency. Students may be placed in the regular or developmental curriculum as a result of the exams.

The Advisement Office coordinates the activities of the Faculty Advisory Council, which is a panel composed of faculty members selected for their expertise in dealing with student-related matters. These advisers assist students in reaching their academic and career goals and provide personal attention for freshmen and all pre-majors. Results of placement and achievement tests as well as copies of the students’ records are made available to the advisers for use in advisement.

Engineering, music, nursing, chemistry, communication, education, human ecology, biological and environmental science, physical therapy, and humanities majors, and students who have completed 30 or more hours are advised by the major departments.

To schedule an appointment with an adviser, the student should go to the Advisement Office, located in 258 Hooper Hall, or call (423) 755-4573.

Applying for Admissions

Requirements for freshmen are described below, followed by special requirements for adult applicants. Requirements for transfer students (students who have attended another college) are on page 6. Transient students and others who are not seeking a degree should refer to special requirements listed on page 8.

Credentials for all Freshman Applicants

The following credentials must be submitted before an applicant can be considered for freshman admission:

1. Application for admission.
2. Official high school transcript. The high school transcript may be sent any time after the completion of the junior year. A final transcript showing all grades must be submitted after high school graduation and must include type of diploma and date of graduation. Applicants with high school equivalency diplomas should submit scores from the General Education Development Test as well as official transcripts of completed high school work.
3. ACT or SAT scores (for freshmen under 21)
4. $25.00 non-refundable application fee.
High School Preparation

Completion of a college preparatory program in high school is expected for admission of freshmen. Minimum high school unit requirements are as follows:

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<th>Subject Area</th>
<th>Units Required</th>
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<td>Algebra</td>
<td>2</td>
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<tr>
<td>Geometry</td>
<td>1</td>
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<tr>
<td>Laboratory Science</td>
<td>2</td>
</tr>
<tr>
<td>American History</td>
<td>1</td>
</tr>
<tr>
<td>World History or World Geography</td>
<td>2</td>
</tr>
<tr>
<td>World History or European History</td>
<td>1</td>
</tr>
<tr>
<td>A single foreign language</td>
<td>2</td>
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<tr>
<td>Visual/Performing Arts</td>
<td>1</td>
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<td>Total</td>
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Applicants who have deficiencies in any of the above areas may be denied admission. Those who are admitted with deficiencies will be required to take courses which will not apply toward their college degrees. For further details, see the section entitled "Conditional Admission."

In addition to the minimum high school unit requirements listed above, students should plan high school courses of study that will prepare them for their specific areas of interest. In particular, four years of college preparatory mathematics are recommended for students considering majors in science, medical technology, engineering and other mathematics related fields. Engineering majors are also advised to take 3 units of science including physics.

After admission, UTC freshmen take placement tests in reading, writing and mathematics to determine whether they will need to enroll in developmental courses prior to college level courses. Taking a strong college preparatory curriculum in high school will help students do well on these placement tests.

Types of Admission

Two categories of admission for applicants under 21 years of age are described below. Special requirements for adult students (21 years of age or older) are described in the section entitled "Adult Freshman Admissions."

Regular Admission

Regular admission will be granted to graduates of approved high schools* who meet one of the following two descriptions:

1. A high school grade point average of at least 2.75 (on a 4-0 scale) and a minimum score of 16 on the Enhanced ACT (750 SAT) and completion of all 14 high school units listed above.

OR

2. A high school grade point average of at least 2.00 (on a 4-0 scale) and a minimum score of 21 on the Enhanced ACT (970 SAT) and completion of all 14 high school units listed above.

Conditional Admission

Students who do not qualify for regular admission are eligible for conditional admission if they meet the following minimal requirements:

1. Completion of the 14 high school units listed above;
2. Minimum high school grade point average of 2.0 (on a 4.0 scale);
3. Minimum score of 16 on the Enhanced ACT (750 SAT);
4. High school graduation or acceptable high school equivalency diploma (45 on the General Education Development test).

Applicants with extenuating circumstances who fail to meet conditional admission requirements will be considered for conditional admission on a case-by-case basis. Students admitted with high school unit deficiencies will be required to remove their deficiencies by taking specified courses within their first 42 hours of enrollment. Credit earned in such courses does not apply toward any degree requirements, including general education, major or elective requirements. Students admitted with a high school deficiency in American history are required by Tennessee law to complete 6 semester hours of college-level American history (Tennessee Code Annotated 549-3253).

Freshmen admitted on condition must earn at least 1.0 GPA during their first semester at UTC or suspension will result. If a student is placed in developmental courses, the institutional grade point average will be used to determine continuation. The cumulative grade point average will be used for continuation standards of all other students. In addition, they may be subject to one or more of the following conditions:

a) reduced course credit load;
b) specific course requirements;
c) specific academic advisor;
d) specific program of developmental studies;
e) enrollment in summer programs designed to improve academic skills.

Adult Freshman Admission

The University of Tennessee at Chattanooga encourages applications from adults who are 21 years of age or older. Adult freshmen applicants are expected to submit official high school transcripts, including type of diploma and date of graduation, but do not need to submit ACT or SAT scores. Applicants may be asked to take UTC placement examinations to help demonstrate their academic preparedness for college. Applicants with high school equivalency diplomas are expected to present a score of at least 45 on the General Education Development test.

Admission decisions will be made on a case-by-case basis using all available evidence, including applicant's post-high school experiences.

Transfer Students

Applicants for admission as degree seeking students who have been registered in another college or university are classified as transfer students. They must submit to the Undergraduate Admissions Office complete official transcripts from each previously attended college. Students who graduated from high school in 1989 or after and are transferring less than 60 hours of semester credit and who are under 21 years of age must also submit an official high school transcript. Transfers applying for the fall semester must have all supporting credentials listed above on file in the Admissions Office by August 1. Transfers applying for the spring semester must do so by December 1.

* Approved high schools are those approved by the State Department of Education or by the regional accreditation association. In the case of graduates of high schools which have not been so approved, regular admission will be granted to applicants with high school grade point average of at least 2.75 and a score of 21 on the Enhanced ACT (970 SAT) and completion of all 14 high school units.
Chattanooga's continuation standards (see page 18 for standards). Grades for all courses attempted will be used in determining the continuation standards. Students who graduated from high school in 1989 or after and are transferring fewer than 60 hours of semester credit, must also meet the minimum high school unit requirements and are required to take UTC's placement exams unless an exemption is granted. Refer to page 6 for high school unit and placement exam requirements.

Students whose records do not meet the standards required by the University for admission will be denied admission unless, in the opinion of the Associate Provost for Academic Administration or his designate, acceptance on scholastic probation is justified. If admitted on probation, students will be required to remove high school unit deficiencies within their first 30 hours of enrollment at UTC. Credits earned in such courses do not apply toward any degree requirements, including general education, major or elective requirements.

The University will usually accept, by transfer, courses completed at regionally accredited colleges and universities. Courses submitted for transfer are equated on a course-by-course basis with the awarding of equivalent or elective credit. Credit will not be given to courses that are not appropriate to the curriculum of UTC. Transfer students from senior institutions must complete at least their last 30 academic semester hours of work at The University of Tennessee at Chattanooga. Transfer students from two-year institutions must complete their last 60 semester credit hours at a senior institution. A student who earns credit at a two-year college during his last 60 hours at UTC may choose not to apply the credit toward graduation. Transfer courses are usually accepted at full credit value as either specific course equivalents or electives.

Students wishing to transfer to The University of Tennessee at Chattanooga from regionally unaccredited colleges and universities must meet UTC's admissions requirements. Information concerning the acceptance of credit from such institutions will be furnished at the time of application.

Transfer credits accepted by The University of Tennessee at Chattanooga will be entered on the academic record only after the student has registered for classes at The University of Tennessee at Chattanooga. Applicants who fail to declare previous college attendance and to submit transcripts of such records will be subject to dismissal from the University.

Special Cases

Adult Special Status
An applicant 21 years of age or older who wishes to take undergraduate courses, but who does not plan to work toward a degree from The University of Tennessee at Chattanooga, may be admitted as an adult special student. The applicant must give satisfactory evidence of preparedness to take the courses open to him or her. An adult special student must meet the same course requirements as regular students since the special student's work is graded at the completion of the course. An adult special student may subsequently apply for regular student status at the University. In such a case the student's grades will be reviewed and up to 60 semester hours of credit may be counted toward fulfillment of degree requirements. Students who have previously been suspended or dismissed from the University of Chattanooga or The University of Tennessee may not enroll as adult special students. Students with college credit from another institution may not enroll as adult special students.

Audit Student Status
Adults who wish to attend undergraduate classes without earning credit or receiving grades may register as auditors only if the space is available in the class desired and if the instructor approves the registration. Any adult student entering under audit classification who subsequently wishes to take courses for credit must meet all requirements for admission to the University. Those under 21 may have this privilege only if they have fulfilled the admission requirements of the University.

Auditors are under no obligation of regular attendance, preparation, recitation, or examination. They receive no grades and no credit. The degree of their participation in class discussion, laboratory, or field work shall be determined by the instructor of the class.

The tuition and fee charge is the same for audit registration as for credit registration. Academic records are maintained only for audited courses in which the student attends at least 75 percent of the class sessions.

College Challenge Program
The College Challenge Program is designed to give outstanding high school students an opportunity to preview college through taking selected college courses. Courses are offered during the summer or the regular academic year at convenient times on the UTC campus. Special sections of regular college courses may be offered or high school students will be permitted to enroll along with college students in regular courses. The admission to the College Challenge Program requires the following:
1. Enrollment in high school or intention to return to high school in order to complete requirements for a diploma,
2. A grade point average of at least a 3.0 (B),
3. Recommendation of high school principal or guidance counselor, and
4. Permission of UTC teacher and/or department head.

Students will be permitted to earn up to 24 semester hours in the program and may take a maximum of 12 hours in the summer and no more than two courses during the fall and spring semester. The credits will be applicable to a degree at UTC or may be transferred.

Early Admission
The University has a program of early admission for exceptionally gifted students. In order to be eligible for the early admission program, a student at the end of the junior year in high school should have a 3.5 high school average and score in the 95th percentile or above of University norms on the ACT or the SAT examination. A student may apply for early admission with the consent of his or her parents and the approval of the student's principal or guidance counselor. Assuming the student meets the previously listed requirements, he or she will be admitted only if in the opinion of the Associate Provost for Academic Administration the student will clearly profit from this kind of placement. In most cases a personal interview with the student is required.

Such students may be considered for admission as full-time students, summer session students, or on a dual enrollment basis while completing secondary school.
GED Applicants

A high school equivalency diploma will be accepted in place of high school graduation if the applicant has scored at least 45 on the General Education Development test (GED). Applicants who are 21 years of age or older should refer to the section entitled “Adult Freshman Admissions” for further requirements. Applicants less than 21 years of age should refer to the section entitled “Freshman Admission Requirements” for further requirements. Please note that applicants with extenuating circumstances who fail to meet admission requirements will be considered for conditional admission on a case-by-case basis.

International Students

In making application for admission to undergraduate study, each international student will be required to provide the following:

1. A completed application for undergraduate admission accompanied by the $25 application fee.
2. Authenticated copies of the applicant's 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. These documents must be interpreted in English.
3. A minimum score of 500 on the Test of English as a Foreign Language for applicants whose native language is not English. Information about this test is obtained from the Educational Testing Service, Box 899, Princeton, New Jersey 08540.
4. A medical record, filled out and submitted no earlier than six months prior to proposed entrance. All international students must submit evidence of a negative tuberculin test prior to being given permission to enroll.
5. Evidence dated no earlier than six months prior to registration that the applicant has adequate financial resources to meet the expenses of attending the University, and that such resources will be available to the applicant in the United States prior to the date of his or her registration at the University.
6. Students must date and sign an estimate of expense forms showing they are aware of the costs in attending the University.
7. Transfer students must supply a letter of good standing from their Foreign Student Adviser or dean of students and must meet the requirements for admission to the University as a transfer and an international student. These requirements are stated in the section on Transfer Students.
8. All international students are required to enroll in Plan II insurance program for UT students. All application materials must be submitted and processed by August 1 for the fall semester, December 1 for the spring semester. All admission materials should be sent to the Office of Undergraduate Admissions.

Post-baccalaureate Admission

See Graduate Studies, page 29

Students desiring a second bachelor's degree should contact the Adult Services Center.

Readmission

Former students in good standing who have been away from the University for one semester or more (excluding the summer) must apply for readmission. If they have attended any other college or university during their absence, they must also meet the requirements for admission to the University as transfer students as stated on page 6, with the exception that no application fee is required for readmission. Students who have been suspended or dismissed from the University are referred to the section on Continuation Standards for the conditions under which they may be readmitted.

Special Audit and Special Fee Students

Tennessee residents who are at least sixty years of age may audit classes on a space available basis at the University without paying a fee. Similar arrangements are available for Tennessee residents who are 100 percent disabled.

Tennessee residents who are 65 years of age or older and persons totally disabled who meet admission requirements may enroll for credit for a fee of $7.50 per semester hour to a maximum of $75 per semester.

Persons wishing to participate in any of the above programs should call the Adult Services Center (615) 755-4485.

Transient Students

Students who are enrolled in another college or university and do not wish to transfer to UTC and seek a degree may enroll as transient students. Enrollment under this condition is usually for one semester and students are usually enrolled in courses that will transfer to another institution and apply toward degree requirements. A letter indicating that the student is in "good standing" (eligible to return) must be sent to the Office of Undergraduate Admissions from either the registrar or academic dean of their present institution. A transient student cannot be on any type of academic or disciplinary restriction, warning or action such as probation, suspension or dismissal. If a transient student wishes to continue enrollment past the initial semester, an additional letter of good standing may be required.

 Appeals for Admission

Students who are denied admission have the right to appeal the decision to the chancellor of UTC. Appeals must be submitted in writing by the end of the first five class days of the fall and spring semesters and the first two class days of any summer term. Students granted admission by appeal may be required to meet the same conditions as stated above.

Residency Appeals Procedure

All residency appeals for a given semester must be submitted along with all necessary supporting evidence to the appropriate admissions office (Undergraduate or Graduate) on or before 5:00 p.m. of the fifth day of classes counting from the first official day of classes. Those appealing for a five-week summer term have until 5:00 p.m. of the third day of classes. These deadlines also apply to students seeking to pay in-state fees due to their full-time employment in the state of Tennessee. Decisions on appeals made before the deadline will be effective for that semester. Appeals received after the deadline, if granted, will be effective the following semester.

The Associate Director of Admissions serves as the primary classification officer for undergraduate students enrolled at The University of Tennessee at Chattanooga. Residence classification appeals should be made in writing (on the appropriate form which can be obtained from the Admissions Office) to the Associate Director of Admissions, 129 Hooper Hall. Appeals should include appropriate evidence to support the student's establishment of domicile in the state of Tennessee.

The decision of the Associate Director of Admissions may be appealed to the chairman of the Residency Appeals Committee by making this request in writing to the Associate Director. The
chairman of the committee will schedule a hearing to review the student’s request and, following the hearing, the committee will make a decision on the appeal. The student may be present at the committee’s hearing and may bring to the hearing any materials or other individuals (including legal counsel) that he or she believes will support the appeal.

The student may appeal the committee’s decision to the chancellor of UTC in writing. The student has the right to appeal the chancellor’s decision to the president of the University of Tennessee in writing. Final appeals are decided by the Board of Trustees for the University of Tennessee.

Measles Immunization Requirement

In an attempt to maintain a healthy campus environment, the University of Tennessee campuses now require that all new entering students, born after 1956, furnish documented proof of having immunity or having been immunized with a live measles vaccine after January 1, 1980 unless contraindicated because of pregnancy, allergy to a vaccine component, or other valid medical reasons. A verification of immunization, signed by a health care provider, should be returned to Health Services. An official copy of the "Permanent Tennessee Certificate of Immunization" (form PH-24H) or a comparable immunization form from another state will also be acceptable.

Special Credit

Advanced Placement

In addition to advanced standing by transfer work, students admitted to the University may obtain advanced placement by any of several examinations.

The University participates in the advanced placement program of the College Entrance Examination Board (CEEB). Applicants who have taken the advanced placement examinations may submit the results to the Undergraduate Admissions Office, 129 Hooper Hall, for consideration.

The University may grant credit and advanced placement in the subject of the examinations to those entering students who earn scores of three, four, or five. Some departments will exercise their option to require a minimum score of four. Such students may then begin their college study at the level for which their advanced preparation has qualified them. Examinations with grades of three or two will be referred to the appropriate department, which will determine whether credit or advanced placement can be granted.

Credit earned through advanced placement will be entered on the student’s academic record at the University but will not be computed in the grade point average.

College Level Examination Program

Students will be allowed 15 elective hours for successfully passing CLEP general examinations. They may earn three hours of elective credit by successfully passing the CLEP general examination in English Composition with a score of 530-610. Students may earn three hours of elective credit per exam by passing CLEP general examinations in mathematics, humanities, natural sciences, social sciences, and history with a score of 421-500. These credits will not satisfy UTC general education requirements.

UTC also recognizes and accepts credit derived from several of the subject area examinations of the College Level Examination Program of CEEB. The CLEP subject examinations measure achievement in a number of specific undergraduate courses. A report of test scores should be sent directly to the Undergraduate Admissions Office, 129 Hooper Hall, for consideration. Individual academic departments set standards for the acceptance of CLEP credits. Therefore, the required percentile grade for credit at UTC varies. Some departments accept no credit via CLEP.

Credit earned will be entered on the student's academic record but will not be computed in the grade point average.

Cooperative Education Program

The Cooperative Education Program provides students with the opportunity to gain practical work experience in their majors. Students will be placed in work experience settings which closely relates to their academic majors. The students will be placed on an alternating schedule which requires that they work full time one semester and attend school full time the next semester, or on a parallel schedule which requires the students to work a minimum of 15 hours/maximum of 20 hours per week and attend school full time during the same semester.

Students placed in co-op should register with a major department for course 001 at the beginning of each semester they are employed. Only students who have advanced approval of the Office of Cooperative Education and their major department can be enrolled in this course.

Correspondence and Extension Credit

Up to one-fourth of the hours (excluding physical education) required for an undergraduate degree may be earned by correspondence or by correspondence and extension combined. The same limitations apply to hours in the major. All such courses must meet degree requirements at The University of Tennessee at Chattanooga. Correspondence and extension courses may not be taken within the last 30 hours of degree credit work unless advanced approval has been granted by the Petitions Committee.

The University of Tennessee correspondence program provides over 100 UT college credit courses in Arts and Sciences, Business Management, Agriculture, Education, Human Ecology and Criminal Justice. Catalogs of correspondence study offered through The University of Tennessee are available in the Office of Continuing Education.

Credit for Experience

Individuals who have not earned a baccalaureate degree may be eligible to receive credit for work experience, inservice training, and certified professional programs through the UTC Individualized Education Program. Information concerning the IEP is available in the Office of Cooperative Education. (423) 755-4735. A fee of $47 will be charged for each semester hour of undergraduate credit awarded. A fee of $66 will be charged for each semester hour of graduate credit awarded.

Credit by Special Examination (Undergraduate)

Any student who has been admitted to the University is eligible to receive credit by special examination for competence gained through study or experience primarily independent of University class activities. Credit by special examination may be given for courses offered in the catalog with the exception of:

1. courses described as directed research, tutorial, or directed independent study;
2. any course from which the student has been exempted by placement examination or which the student has presented for admission purposes;
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3. any course in any education teaching block; or
4. courses in which the student has received a final grade.

A fee of $47 will be charged for each undergraduate semester hour of credit.

Students seeking credit by special examination shall, on forms provided by the director of records, request approval from the permanent committee on special examinations established by the department under which the course is described in the catalog. The departmental committee will grant or deny the request pursuant to the standards stated in the request form. The departmental committee shall deny the request if it determines that the student would realize substantial benefits only from participating in the activities of the course in question.

The method for designing, administering, and evaluating the special examination will be determined by the departmental committee on special examinations. The examination shall in all circumstances be comparable in scope and difficulty to a comprehensive final examination in that course. No student will be allowed to repeat a special examination in a given course within one year.

The student will receive credit, to be recorded as S (Satisfactory) on the academic record, upon demonstrating the development of the abilities and attitudes of students who have taken the course and upon passing the examination with a minimum equivalent grade of C. Examination results judged inadequate will be recorded as NC (No Credit) on the student's academic record. Neither S nor NC grades will be used in computing the grade point average.

Limitations on Nontraditional Credit: CLEP, IEP, Military Service, Special Examinations (Proficiency or Challenge Examinations), Competency Based Programs, ACT-PEP (Nursing majors only).

The maximum undergraduate credit that may be earned by these means is 60 semester hours. The limit for special or nontraditional credit is 30 hours for any one of these categories. Normally, nontraditional credit will not apply toward the last 30 hours of residency; however, students who have completed 30 hours of traditional course work at UTC and have not yet attempted the last 30 hours may petition to apply a maximum of 15 hours of these types of credit toward the last 30 hours. Application for IEP credit must be initiated no later than the semester preceding graduation.

Except for credit by special examination (undergraduate) most credit earned by these nontraditional means is elective. Exceptions to this principle may be made only with the written approval of the respective departments, indicating specifically the amount and type of credit to be applied to a major degree program.

Military Service Credit

The University may grant credit for military science to students with six or more months of honorable active service in the armed services of the United States or in a service academy. A total of 30 semester hours of elective credit, including basic military service, may be accepted from the Community College of the Air Force. University policy permits and encourages granting credit for appropriate educational experience in the armed services in accordance with their evaluation in the American Council on Education's 1986 *Guide to the Evaluation of Education Experiences in the Armed Services* or by the Commission on the Accreditation of Service Experiences evaluation service. Veterans requesting military service credit should submit a copy of their DD Form 214 to the Records Office for evaluation. The University Tennessee at Chattanooga is a member of Servicemembers Opportunity Colleges.

International Education Program

The University offers a range of opportunities to study abroad while earning academic credit. Through the university’s membership in the International Student Exchange Program (ISEP) and the council on International Educational Exchange (CIEE) UTC students may participate in special exchange programs of a semester or more throughout most of the world UTC’s membership in the Cooperative Center for Study in Britain (CCSB) allows our students study opportunities ranging from two weeks to a full semester in Australia Britain Ireland and Scotland taught by faculty from UTC and other consortium universities. UTC also has bilateral exchange agreements that allow our students to spend one or two semesters at Masaryk University in Brno Czech Republic and Haifa University in Israel. Other opportunities are offer available.

Students interested in study abroad are encouraged to contact the UTC Office of International Education by visiting 233 University Center or calling (423) 755-4735.
In the belief that educational opportunities of qualified students should not be controlled by their financial resources, The University of Tennessee at Chattanooga offers a comprehensive program of student financial assistance. UTC uses a variety of resources to assist students who otherwise might find the costs of a college education prohibitive. Through federal, state, and university financial programs a student may receive one or more different types of assistance to cover educational costs.

There are four basic types of financial aid for UTC students: scholarships, grants, loans, and part-time employment. These are awarded individually or in combination, depending on the student's financial need.

Financial need is the difference between the student's cost of attendance at the University and the family's computed contribution to that cost. To assist in determining the student's financial need, the University uses the needs analysis system of the U.S. Department of Education. Through the use of the Free Application for Federal Student Aid (FAFSA), the Financial Aid Office determines the amount the student and the student's family can be expected to contribute toward meeting educational expenses. A student's financial need is then met with the various types of financial aid. The Free Application for Federal Student Aid is available in the UTC Financial Aid Office or a high school's guidance counselor's office.

Scholarships

The University of Tennessee at Chattanooga scholarship program for new and currently enrolled students is made possible through funds provided by the University, outside foundations, estates, private businesses, civic groups, individuals, and alumni.

Most scholarships are awarded to students who demonstrate strong academic achievement and proven need for financial assistance. There is, however, an academic merit scholarship program based solely on academic achievement. Unless otherwise stated, to compete for merit scholarships only, a student currently enrolled at UTC must submit a UTC Application for Scholarship. New first-time freshmen and transfer students may apply via the Application for Undergraduate Admissions and Academic Scholarship. A financial statement is not necessary. Academic achievement is judged for entering freshmen by the applicant's secondary school academic record and scores on the American College Testing (ACT) or Scholastic Aptitude Testing (SAT) admissions tests. Academic achievement for currently enrolled and transfer students is judged by the applicant's cumulative grade point average and earned credit hours from colleges attended.

All scholarships, including merit scholarships, are highly competitive. Despite the generosity of University friends and alumni, there are not enough funds to provide aid to all qualified students. Early application is advised.

The University guarantees in the fall of each year scholarships to first-time freshmen who present certain minimum high school grade point averages and ACT or SAT scores. New freshmen who are admitted by February 1 and have a 3.5 grade point average and a 26 ACT (1160 SAT) will receive an amount that will cover in-state maintenance fees (approximately $2,100). Applicants with a 4.0 grade point average and 31 ACT (1350 SAT) will receive a $5,000 annual award. Scholarships are renewed for up to four years based on the student's academic performance and the funds available. All university controlled scholarships are used to fund the guaranteed program. A renewal scale, approved by the Scholarship Committee, is published each year.

Each year 20 outstanding freshmen entering the University Honors Program are selected to receive William E. Brock Scholarships. These scholars receive four year stipends of $3,500. Brock Scholars living on campus also receive a housing stipend. Selection is based on scholarship, leadership, and service. Application is made directly to the University Honors Program, must be received by December 15 of the applicant's senior year. For further information see the William E. Brock Scholars section of the catalog.

In addition to the Brock Scholars, twelve prestigious merit scholarships are awarded each year to incoming freshmen: two Andy Holt scholarships (sponsored by the UT National Alumni Association) for $3,000 each and renewable for four years; five Chancellor's and five Leadership scholarships (sponsored by the UC Foundation) of $1,500 each and renewable for four years. Priority goes to top academic students who exhibit excellent leadership abilities and are admitted to the university by February 1.

UT alumni valedictorian scholarships are available to the valedictorians of Tennessee high schools. UT alumni community college scholarships are available to the top two students of each of the Tennessee community colleges. These one-year $1,500 awards are available at all campuses of The University of Tennessee and are awarded by the UT National Alumni Association.

To be considered for scholarships, transfer and continuing students without scholarships should complete the UTC Application for Scholarship. This form must be received in the Financial Aid Office no later than March 1. Applicants will be considered for all scholarships coordinated by the University Financial Aid Office.

Music and athletic performance scholarship applicants should contact the director of their program of interest.

Students interested in Army ROTC should contact the UTC Military Science Department for information on two-, three-, and four-year scholarships. These scholarships pay the cost of all tuition, textbooks, and laboratory fees. Additionally, the scholarship student receives $100 per month (up to 40 months) subsistence pay during the academic year for the duration of the scholarship.

Minority Scholarships

In addition to the regular scholarships program, the University has a special program of scholarship awards for African-American students. Awards range from the amount of in-state fees to in-state fees, dorm and books. These scholarships are awarded to entering freshmen from Tennessee who have at least a 3.0 grade point average and at least a 17 on the Enhanced ACT admissions test (800 SAT) and meet the February 1 priority deadline. Scholarships will be renewed based on the student's academic credentials and the funds available.
Grants

Federal Pell Grants
All undergraduate students applying for institutional assistance based on a financial need should apply for this federal grant program. Other forms of financial assistance will not be extended to a student until eligibility for the Pell Grant has been determined. To apply, the student submits the Free Application for Federal Student Aid to the U.S. Department of Education. Approximately six weeks after the Free Application for Federal Student Aid is mailed, the student should receive the Student Aid Report. Because the Student Aid Report indicates eligibility for Pell Grant and other Federal aid, it must be sent to the Financial Aid Office before an award can be processed.

Pell Grant awards range from a maximum of $2700 to a minimum of $400. The amount of the award is based on financial need and the number of hours enrolled. Regulations and provisions of the Pell Grant Program are subject to change by federal legislative action.

Federal Supplemental Educational Opportunity Grants
This is a program of federal grants available to entering freshman, transfer, and enrolled undergraduate students with high financial need as determined by the Free Application for Federal Student Aid. Awards range from $200 to $500.

Student Employment
The University participates in the Federal Work-Study Program administered by the U.S. Department of Education. To be eligible for the Federal Work-Study Program, a student must be accepted for admission or be in good standing if currently enrolled. A student's eligibility further depends upon the need for employment to defray college expenses. On-campus part-time work opportunities are available in the various departments, offices, and agencies of the University. Off-campus work in community service organizations may also be available through the Federal Community Service Learning Program. The Free Application for Federal Student Aid is required.

Employment opportunities provided under the institutional student employment program are offered to students who indicate a desire to work and who do not meet the financial need requirements for the Federal Work-Study Program. The UTC Placement and Student Employment Center maintains vacant position information for this type of on-campus student employment. Institutional work is funded by the University.

Part-time employment, handled by the Job Location and Development Program in the Financial Aid Office and the UTC Placement and Student Employment Center, is also available in private businesses, corporations, and industries in the Chattanooga area. To be eligible for this part-time employment, the student must meet the requirements established by the employing agency.

The Chattanooga Symphony offers an orchestral apprentice program for a limited number of qualified performers. Eligible students receive wages equal to the prevailing union contract. Interested students should contact the head of the music department.

Student Loans

Federal Robert Stafford Student Loans (Formerly Guaranteed Student Loans)
Subsidized Stafford loans may be available through banks, credit unions and savings and loan associations to help meet educational expenses. Students should contact their bank or the UTC Financial Aid Office to obtain a loan application. To establish need for these loans, students must file the Free Application for Federal Student Aid. To receive the loan, a student must be admitted to or in regular attendance and in good standing at the University and in good standing for financial aid. Interest on such loans is paid by the federal government while the student is in school. During the repayment period, which begins six months after graduation or withdrawal from UTC, new borrowers pay a variable simple interest. The maximum amount of a loan to an undergraduate in a 12-month period is $2,625 for freshmen, $3,500 for sophomores, $5,500 for juniors and seniors, and $8,500 per year for graduate study.

Students may also borrow through non-need-based Stafford Loan. The annual maximum amounts are the same as with the need based loans. These unsubsidized Stafford Loans require the student to be responsible for the interest during in-school and deferment periods. Total loans outstanding may not exceed $23,000 for the undergraduate or $138,500 for the undergraduate, graduate and professional student.

Complete information is available at most financial institutions. If you are unable to secure a guaranteed student loan from your hometown bank or credit union, contact the UTC Financial Aid Office for further information.

Federal Parents Loan for Undergraduate Students (PLUS)
Federal PLUS loans enable parents with good credit histories to borrow for each child who is enrolled at least half-time and is a dependent student. These loans, like Federal Stafford Loans, are made by a lender such as a bank, credit union, or saving and loan association. The yearly loan limit is the student's cost of education minus any estimated financial aid you're eligible for.

For PLUS loans first disbursed on or after July 1, 1994, the interest rate will be variable, but not higher than 9 percent. This rate for the 1996-97 academic year was 8.72 percent.

Federal Perkins Loans (formerly National Direct Student Loans)
Long term loans at five percent interest are available. This program is funded through the U.S. Department of Education. Proven financial need determines eligibility. To establish need for this loan, the student must file the Free Application for Federal Student Aid. Loan repayment and interest on Perkins Student Loans are deferred until after graduation or as long as the individual remains in half-time attendance at an accredited institution of higher education in the United States. Repayment may also be deferred for up to three years for special circumstances as outlined in the Higher Education Amendments of 1992. The maximum repayment period is normally 10 years with the current minimum annual repayment $360 or 10 percent of the accumulated loans, whichever is greater.

If upon graduation the borrower becomes a full-time teacher in a public or nonprofit school that is designated by the U.S. Commissioner of Education as having a high enrollment of low income families or becomes a teacher of the handicapped, 15 percent of the total principal plus interest is cancelled for the first and second year of teaching, 20 percent for the third and fourth
years, and 30 percent for the fifth year. If after graduation the student becomes a staff member in a Title I preschool program that is operated for a period comparable to a full school year, 15 percent of principal plus interest will be cancelled for each year of service. Cancellation provisions are also available for law enforcement/correctional officers.

An undergraduate may be extended a maximum loan of $3,000 per year up to an accumulated loan total of $15,000. Graduate or professional students may borrow up to $5,000 per year for an accumulated loan total of $30,000. The above regulations and provisions of the Federal Perkins Loan Program are subject to change by federal legislative action.

The UTC, Underwood, and Ansbach Loan Funds
Student loans from University sources are available to currently enrolled students with a 2.5 or above cumulative grade point average. A loan of up to $1,500 a year can be offered. One surety or co-signer is required for each promissory note. The student is responsible for payment of interest only while in school. Repayment of principal and unpaid accrued interest shall be made over a period commencing the first of the fourth month following graduation, withdrawal, or transfer from the University, or following the date on which the borrower ceases to carry at least one-half time academic course load. Repayment of principal and interest is made in monthly or quarterly installments (as agreed to between the borrower and the University) at the rate of not less than $30 per month plus accumulated interest or 1/36 of the amount of this note, plus accumulated interest, whichever is greater. The interest is six percent per annum. The borrower may, without penalty, pay all or part of the loan at any time before the maturity date.

Other Assistance
Tennessee Student Assistance Corporation (TSAC) Grants
Grants are made by the Tennessee Student Assistance Corporation to residents of the state of Tennessee who show a financial need as supported by the Free Application for Federal Student Aid. TSAC awards range from a maximum of $1,026 to a minimum of $252. Students should apply before March 1. The Free Application for Federal Student Aid is used to apply for this grant.

Georgia Tuition Equalization Grant
Grants are made by the Georgia Finance Authority for approximately $500 per semester to Georgia residents who are juniors or seniors at UTC. Students must live within 50 miles of UTC and more than 50 miles from a four-year Georgia educational institution. Full-time enrollment at UTC is required and the student must have completed sixty credit hours. Applications are available in the UTC Financial Aid Office and must be filed by the last day to register for classes in any term. The Free Application for Federal Student Aids is used to apply for this Grant.

Eligibility for Continuation of Financial Assistance
As a general rule students are eligible to continue on financial assistance at UTC if they meet UTC continuation standards (published in the UTC catalog), do not abuse their right to receive financial assistance and make satisfactory progress in their program of study. A separate continuation scale for guaranteed and minority scholarships is published each year.

Students are suspended from financial assistance immediately in any term that they make no progress or are academically suspended or dismissed. Students who are enrolled full time must earn at least 20 hours per academic year to be considered making satisfactory progress in a program. Scholarship students must complete 24 hours. The required hours of progress are prorated for part-time students and students in graduate programs. Students who do not make progress will not be awarded or disbursed financial aid. Also, students who have attempted more than 150% of the hours required for graduation in their program are not eligible for financial aid. For complete details on suspension, non-renewal and appeal, contact the Financial Aid Office.

Application Procedures
Because a student’s family resources can decrease and increase significantly from year to year, the University requires each student to apply annually for need-based financial aid. Students currently receiving scholarships will be automatically reviewed for renewal according to the specific scholarship renewal criteria.

1. Although applications will be processed throughout the year, students should complete and submit the Free Application for Federal Student Aid no later than February 15 in order to meet the April 1 priority deadline for fall semester.

2. Entering freshmen applying for scholarships only need to complete the application for undergraduate admission and academic scholarships and be admitted to the university by February 1. Students currently receiving scholarships are not required to submit the Application for scholarship. If applying only for academic merit scholarships a financial statement is not required but is recommended.

3. Students should have begun the process for admission to the University prior to or at the same time as applying for financial aid.

4. Tennessee residents should apply for the Tennessee Student Assistance Award if requesting aid based on financial need.

5. Prior to awarding any assistance, federal regulations require that the UTC Financial Aid Office have a financial aid transcript on file from each school (beyond high school) a student has previously attended. It is the responsibility of each student to see that the completed transcripts are sent to the UTC Financial Aid Office. Blank financial aid transcript forms are available from the Financial Aid Office.

6. The Financial Aid Notification Letter is the UTC award letter which states the amount and types of financial aid awarded. Students must accept or decline award within 14 days of receipt.

7. Students must make satisfactory progress toward the degree to continue on financial aid. There are two standards of progress the student must meet. First, students must be eligible to continue according to the University’s "Standards of Continuation" published in the catalog. Second, students must earn a required number of hours each year based on their enrollment as a part-time or full-time student. A thorough explanation of this standard and a set of guidelines may be obtained in UTC’s Financial Aid Office. A separate continuation scale for guaranteed and minority scholarships is published each year.

8. If students expect to have funds available for fee payment, they must complete all procedures, submit necessary documents, and accept their awards by July 1 for fall semester and November 1 for spring semester.
Application Process
1. Complete the "Free Application for Federal Student Aid" and mail in the envelope provided. There is no fee required. Allow 4-6 weeks for processing.
2. An institutional information form is required of all students. This document may be obtained from the UTC Financial Aid Office.
3. A student verification form and appropriate federal tax returns may be requested. These documents should only be submitted if requested!
4. Upon receipt of the Student Aid Report (SAR) from the U.S. Department of Education, the student brings or mails all parts of the report to UTC’s Financial Aid Office immediately.
5. Other forms may be required to complete the application process. Return all requested forms as soon as possible.

Award Process
The award process occurs 4-6 weeks following receipt of all requested forms.
6. Student accepts (or declines) all or part of the award and returns the signed copy of the UTC award letter to the Financial Aid Office within two weeks.

Check Authorization and Disbursement
Normally funds for students are authorized by the UTC Financial Aid Office and disbursed by the UTC Bursar’s Office.
7. Student acceptance of award initiates a check request and checks are ordered every Wednesday. Checks ordered on Wednesday are normally available in the UTC Bursar's Office in 4-7 business days. The check order includes one check for all sources of funds due a student in that check run. For example, a student receiving a Pell Grant for $506 and Perkins for $250 would have one check for $756.
8. Disbursement of Stafford Loans occur during designated fee collection days or as soon thereafter as possible. First time borrowers at UTC must attend an entrance interview in order to receive loan funds. First time freshmen loan proceeds will be disbursed 30 days after the first day of classes.

Tuition is free to residents of Tennessee. Out-of-state students must pay the tuition charge. A student’s residence is determined primarily by the residence of the student’s parents. Exceptional cases, including guardianship, are given special consideration and are determined on the basis of the particular circumstances in each case. Any student who is classified as an out-of-state student may, at any time, request that a residence classification be reconsidered. When additional information concerning a student's residence classification is available, the student should provide the Office of Undergraduate Admissions (or Graduate Office for graduate students) with this information in order that a reappraisal of residence status may be made.

Tuition and Maintenance Fees
<table>
<thead>
<tr>
<th>Maintenance Fee</th>
<th>Undergraduate</th>
<th>$ 965* per semester or fraction thereof;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Graduate</td>
<td>$1,258* per semester or fraction thereof;</td>
</tr>
</tbody>
</table>

Tuition and Maintenance Fee
<table>
<thead>
<tr>
<th>Undergraduate</th>
<th>Out-of-state students only</th>
</tr>
</thead>
<tbody>
<tr>
<td>$218 per semester hour;</td>
<td>$3133* per semester or fraction thereof;</td>
</tr>
<tr>
<td>Graduate</td>
<td>$3426* per semester or fraction thereof.</td>
</tr>
</tbody>
</table>

*Debt Service Fee: All students registered will be assessed a debt service fee of $4 per credit hour (maximum $52).
• Technology Fee (per semester) $15

Student fees are established by The University of Tennessee Board of Trustees and are subject to change without notice.

The above fees apply to courses taken for credit or audited.

Auditor's Fees
Fees for courses being audited are the same as those for courses taken for credit. Auditors do not take examinations, receive credit or grades, and may or may not participate in the class activities as determined by the instructor.

Disabled Persons Fees
Tennessee residents who are totally disabled and meet admission requirements may enroll for credit for a fee of $7.50 per semester hour to a maximum of $75 per semester. Tennessee residents who are 100 percent disabled may audit classes on a space available basis at the University without paying a fee.

For fee information call the Bursar’s office at (423) 755-4781.
**Listener’s Fee**
Individuals considering entering or returning to the University may listen in academic courses for a fee of $10 per course without additional obligations. Participation in this program is limited to two courses per semester for a maximum of two semesters. Only individuals who have not received a baccalaureate degree and who have not had any college courses in the previous five years may participate. For more information call the Bursar’s Office at (423) 755-4781.

**Music Fee**
In addition to the credit hour rate, a music fee is assessed for instructional courses. The fee is due at the regular fee payment dates. The fees are:
- Per one-half hour instruction..............................$30
- Per one hour instruction.....................................$60

**Post-baccalaureate Fees**
Post-baccalaureate students pay fees at the undergraduate rate.

**Senior Citizens Fees**
Tennessee residents who will become 65 years of age or older during the academic semester in which such persons begin classes and who meet admission requirements may enroll for credit for a fee of $7.50 per semester hour to a maximum of $75 per semester.

Tennessee residents who become 60 years of age or older during the academic semester in which such persons begin classes may audit classes on a space available basis at the University without paying a fee.

For fee information call the Bursar’s Office at (423) 755-4781.

**Summer Terms**
Fees for the summer sessions are the same as for regular semesters.

**Other Expenses**

**Application Fee**..........................................................$25
A nonrefundable fee payable at the time application is made.

**Bad Check Fee**
Any checks received by the University which fail to clear the bank on which drawn will incur a service charge of $10 if paid within the first seven days. After the seventh day the service charge will increase to $15. In addition to the service charge, a check written to cover tuition, dorm, and fees which fails to clear the bank, will incur the appropriate late and reinstatement fees in effect at the time the student redeems the check. Check writing privileges will be revoked for those students writing three or more bad checks to the University.

**Housing**
Room rents vary from $715 to $1120 per semester according to the accommodations available. A $25 reservation/damage deposit is required from students applying for housing. In addition a $75 advance payment is required for fall semester. Fees not paid on regular fee payment will incur a $15 late fee within the first six days. After six days the late fee will increase to $25. If the University must bill for dorm fees a $5 deferred fee will be due in addition to the late fee.

**Student Dining Plans**
Students may apply for various meal plans through the Marriott Food Service. For complete information regarding the plans available and an application, contact Food Services, UTC University Center, 755-4200.

**Orientation**
A $50 fee for freshman orientation includes meals, as well as overnight dormitory stay. The fee also covers cost of booklets and orientation materials.

**Parking**
- Reserved parking decal....................$52 per semester
- Reserved parking decal (summer)...........$28
- General parking decal..............................$42 per year

**Special Examination Fees**
Payable for each proficiency or validation examination.
- Undergraduate.............................$47 per credit hour
- Graduate.............................$66 per credit hour

**Fee Payment**
A student will not be allowed to register with a debt to the University.

**General**
On Saturdays when the Registration Office or Business Office may be open for a part of the day, the late registration service fees scheduled to be in effect on the following Monday will apply to fee transactions handled on Saturday.

No student is officially authorized to attend classes until he or she has properly registered and paid fees.

Upon receipt of full, partial, or incomplete schedule, students are registered and responsible for payment of fees. The Registration Office must be notified in writing prior to the first official day of classes that a student wishes to cancel registration. Students who withdraw after classes begin will be responsible for a percentage of fees plus late fees according to the withdrawal charge under “Refund of Fees and Adjustments.” Students who have not paid fees or made satisfactory arrangements with the bursar by the second official class day will be canceled. This applies to all students regardless of source of funds, including those whose fees are billed, deferred, waived, or paid with personal funds. Students must have their fee receipt validated on the official fee payment dates to avoid late fees.

Before paying fees, students should check their fee cards to be sure their names, social security numbers, and all charges assessed are correct. Additional courses and/or assessments which must be billed will be assessed a $5 deferred fee.

The University reserves the right to refuse to release to any student his or her transcript or degree for failure to return UTC property or for failure to pay any accounts due at the University.

The University accepts cash, checks, MasterCard, and Visa for payment of fees. Counter checks are not accepted. If unable to pay fees on the regular fee payment days, prepayment is accepted in the Bursar’s Office or by mail. Late fees will be assessed according to postmark date.
Prepayment Plan
A prepayment plan has been developed and implemented. Under the plan, students and/or parents choose the academic year expenses they wish to prepay including room, board, tuition, fees, or books. The expenses can be prepaid over a period of eight months with the first installment due by May 10. The remaining seven monthly installments are payable on the tenth of each succeeding month. Students and/or parents wishing to participate in the prepayment plan should contact the Bursar's Office for details.

Deferred Payment Plan
A student who is in good financial standing with the University and has an anticipated source of funds may defer up to 50% of fees. A $10 extension fee and at least 50% of fees are due at fee payment. The deferred amount will be divided into two equal payments, payable on the 30th and 60th calendar day of the term. An additional $25 will be assessed on each monthly installment not paid on or before the due dates. Financial aid recipients must first apply their aid toward payment of fees, regardless of source of funds. In order to participate, you must complete a deferred payment plan contract.

Dorm Payment Plan
Housing students may choose to participate in the dorm payment plan. Payment equivalent to 50% of rent is due and payable at fee payment, plus a $10 extension fee charge. The remaining balance is paid in two installments on the 30th and 60th calendar day of the term. A late payment charge of $25 will be assessed on each monthly installment not paid on or before the due dates. Financial aid recipients must first apply their aid toward payment of fees, regardless of source of funds.

Fall and Spring Semester
Students must pay their fees on the regular dates designated for this purpose. For more detailed information regarding fee payment dates, refund information, etc., refer to the schedule of classes (STARS) for the particular term in question. Effective the first regular business day (excluding Saturday, Sunday, and any holidays) following the last regular fee payment day, a $15 late payment and late registration fee will be charged for the first six calendar days. A $25 late payment/registration fee will be charged for the next six calendar days (maximum late fee $40). After the second official class day, students will be canceled for nonpayment of fees. A second cancellation will occur prior to the fourteenth day.

Summer Terms
For summer terms, fees must be paid within the first two business days beginning with the first day of classes. Thereby the following four business days a $15 late fee will be assessed. Students who have not paid within two business days will be canceled for nonpayment of fees.

Refund of Fees and Additional Charges

General
No refund is due on courses which are dropped unless the charge for the remaining courses plus the percentage charge for the courses dropped is less than the maximum semester charge for tuition and maintenance fees. All refund periods are based on the official first day of classes for the University, as published in the catalog and schedule of classes.

All charges and refunds will be made to the nearest even dollar. All charges are subject to subsequent audit and verification and errors will be corrected by appropriate additional charges or refunds.

Appoximately six weeks after the beginning of the semester (except summer) a statement of account will be sent to students who owe additional fees or fines.

Refunds on dropped courses, in accordance with the refund policy, will not be made until after the 10th week of the semester.

Fall and Spring Semesters

<table>
<thead>
<tr>
<th></th>
<th>Drop*</th>
<th>Withdrawal**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Charge</td>
<td>Refund</td>
</tr>
<tr>
<td>Prior to first day of class</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>1-7 calendar days***</td>
<td>20%</td>
<td>80%</td>
</tr>
<tr>
<td>8-14 calendar days</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>15-21 calendar days</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>22-28 calendar days</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>29 or more calendar days</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Drop - Courses dropped which do not result in complete withdrawal.
**Withdrawal - Complete withdrawal from all classes.
***Note: Only seven calendar days to drop with no charge.

Summer Terms
Refunds for withdrawal from all classes during each summer term are as follows.

<table>
<thead>
<tr>
<th>Number of calendar days*</th>
<th>Percentage of refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>100%</td>
</tr>
<tr>
<td>5-8</td>
<td>80%</td>
</tr>
<tr>
<td>9-12</td>
<td>60%</td>
</tr>
<tr>
<td>13-16</td>
<td>40%</td>
</tr>
<tr>
<td>17-20</td>
<td>20%</td>
</tr>
<tr>
<td>21 &amp; after</td>
<td>0%</td>
</tr>
</tbody>
</table>

If the courses dropped do not result in complete withdrawal, then the following refunds apply.

<table>
<thead>
<tr>
<th>Number of calendar days*</th>
<th>Percentage of refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>100%</td>
</tr>
<tr>
<td>5-8</td>
<td>80%</td>
</tr>
<tr>
<td>9-12</td>
<td>60%</td>
</tr>
<tr>
<td>13-16</td>
<td>40%</td>
</tr>
<tr>
<td>17 &amp; after</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Counted from the first official day of classes.
ACADEMIC REGULATIONS

Catalog Effective Dates
The catalog in effect at the time of entry will be used to determine degree requirements if the degree is conferred within 10 years. Students, however, may also elect the current catalog at the time of reentry, the catalog in effect when a new major is selected, or a catalog reflecting a revised curriculum. Transfer students may use the catalog in effect at the time of their first entry into college provided that the UTC degree is conferred within 10 years of their first entry.

A student seeking recommendation of The University of Tennessee at Chattanooga for initial teacher licensure or endorsement must satisfy the current UTC approved program requirements on file with the Tennessee Department of Education at the time of application for licensure.

Registration Limits
Students are classified as full time if they are registered for 12 hours or more. Students registered for fewer than 12 hours, either by their own choice or by University regulations, are classified part time. Students wishing to complete degree programs in four academic years will need to schedule 16 hours each semester. Schedules of over 20 hours are not permitted unless the students have obtained advance approval of the Petitions Committee.

The maximum load for a day term of summer is 7 hours; for any evening term the maximum load is 10 hours; any combination of terms is 10 hours, and the maximum registration is 20 hours for the entire summer session. The written consent of the adviser is required to register for a total of 17 to 20 hours in the summer. Exceptions must receive advance approval by the Petitions Committee.

Any student registered for credit courses may enter classes as an auditor, subject to the approval of the student's adviser and of the instructor whose class is audited. An audit registration may not be changed to a credit registration later than the last date of registration for the semester. Audit registrations are zero (0) credit.

Course Numbers and Levels
Courses offered by the University are listed in each college or school section with the course numbers, title, credit, course descriptions, and prerequisites. The numbers identify the level of the courses. In special circumstances a student may register for a course above the stated level when in accordance with departmental policy and on recommendation of the adviser. Freshmen, however, are not permitted to register for 300- and 400-level courses. For any undergraduate degree, students must complete a minimum of 30 hours of courses at the 300 level or above.

Course Numbers Level
000-099 Activity, service, or noncredit courses. A maximum of eight hours of S grade in courses in this group may be applied toward a degree.

100-199 Primarily for freshmen but may be taken by sophomores and juniors. Senior registrations at this level are not recommended.

200-299 Primarily for sophomores but open to juniors and seniors.

300-399 For juniors and seniors.

400-499 For seniors and graduate students. When taken for graduate credit, the letter G will precede the credit hours.

500-699 graduate Restricted to fully qualified students. Courses cannot be used for an undergraduate degree.

Classification
Students are classified as freshmen, sophomores, juniors, and seniors according to the number of hours earned:
- Freshmen — 0-23 semester hours
- Sophomores — 24-59 semester hours
- Juniors — 60-89 semester hours
- Seniors — 90 semester hours or more

Institutional Credit and Developmental Studies Program
Institutional credit will be assigned to all developmental courses in reading (EDCI105), mathematics (MATH 105, 106), study skills (USTU 100), study skills lab (HSRV 100, PSY 100, SOC 199), and writing (ENGL 105, 106). This credit will be in addition to all degree requirements. It will not apply to the hours required for graduation, major requirements, general education requirements, or electives. Neither will it be counted in the grade point average for graduation or honors. While the student is enrolled in developmental courses, however, institutional credit will be counted in the grade point average in determining the student's eligibility to continue in residence at UTC as outlined in the retention and continuation standards.

Effective fall 1986 and thereafter, first time freshman students who are required or who volunteer to enroll in developmental studies courses must successfully complete them within the first 42 attempted hours counting both institutional and regular credit. Transfer students must complete required developmental courses within 30 attempted hours following initial enrollment at UTC. Exceptions may be made in individual cases by the director of the development studies program or designate.

Students may drop a developmental studies course only with the permission of the course instructor, director of developmental studies, or a designated adviser (a list of persons authorized to sign for drop will be provided).

To exit the developmental studies program, a student must have a grade of D or above in all courses of his or her program of developmental studies.

Placement Exam Requirements
All new undergraduate students at UTC are required to take UTC placement exams in reading, mathematics, and writing prior to enrollment in these courses. All incoming students who have 3 years or more of high school study in a single foreign language (and no college level study of the language) and who wish to continue study in that language will be required to take a placement test to determine their level of competence in that language. A student should begin study of the language in ques-
tion at the level established by the placement level. Under special circumstances, exceptions may be granted upon appeal to the departments. Students presenting ACT/SAT scores are exempt from the reading placement. All new enrollees are strongly advised to take placement exams during the first week of their first semester and, are required to take the exams by term's end. In general, transfer student with acceptable performance in college level courses and/or acceptable ACT/SAT scores will be exempt from the reading test.

Freshman students who are required or who volunteer to enroll in departmental studies courses must successfully complete them within the first 42 attempted hours. Transfer students must complete developmental courses within 30 attempted hours following initial enrollment at UTC.

In general, the only students who are exempt from taking one or more of the placement exams are students with advanced placement or transfer students meeting one of the following criteria:

- Mathematics: Grade of C or better for developmental algebra (Math 105,106, or 107) or college algebra (Math 135) or trigonometry (Math 145) or calculus (Math 136, 150, etc.).
- If credit in these courses is several years old, students who need to enroll in mathematics at UTC are encouraged to take the placement test for advisement purposes.
- Students with credit for mathematics courses other than those specified above are not exempt from taking the mathematics placement test.
- Writing: Credit in developmental writing (English 100, 105, or 106) or freshman composition (English 101,102, 121, or 122);
- Reading: Acceptable performance in college level courses or acceptable ACT/SAT scores.

Students at Academic Risk
Undergraduate students who demonstrate that they may be at academic risk may be required to enroll in certain courses and participate in programs, including summer programs, designed to enhance their academic skills. Credit accrued may not necessarily be applicable to a degree.

Retention and Continuation Standards
In order to be able to continue in residence at UTC, students must earn a minimum grade point average in accordance with the following scale of attempted hours:

<table>
<thead>
<tr>
<th>Hours Attempted</th>
<th>GPA Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-23</td>
<td>1.0</td>
</tr>
<tr>
<td>24-39</td>
<td>1.5</td>
</tr>
<tr>
<td>40-55</td>
<td>1.8</td>
</tr>
<tr>
<td>56 and above</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Students who achieve the required cumulative grade point average for the hours attempted are considered to be in good standing. Those who fail to achieve the required average will be subject to the following action:

1. Students will be placed on academic probation after the first failure to earn the required grade point average. Freshmen admitted "on condition" enter on probation for continuation purposes and must earn a minimum 1.00 grade point average their first semester in attendance.

2. Academic suspension for one semester will follow if probation is not removed by raising the grade point average to required standards or if a 2.0 average for the semester of probation is not achieved. Freshmen admitted "on condition" will also be subject to suspension if they do not earn at least a 1.0 grade point average in their first semester of attendance. The complete summer session is considered a period of suspension. Suspended students who enroll in other colleges or in correspondence courses during their semester of suspension must earn at least a 2.0 average on all hours attempted during this period in order to be eligible for automatic readmission to UTC. Students not meeting the 2.0 requirement must apply for readmission through the Admissions/Readmissions Committee.

3. Students will be placed on probation when they return after the period of suspension. They must either achieve a 2.0 average in the semester following their return or raise their cumulative average to acceptable standards. If they fail to achieve either standard, they will be dismissed for an indefinite period and may not apply for consideration for readmission for one calendar year unless an appeal is filed with the Petitions Committee and acted upon favorably.

4. Any student permitted to enroll despite the fact that his or her cumulative average is below continuation standards will be on probation.

Students who are either suspended or dismissed have the right to appeal for reentry if they believe that extenuating circumstances were responsible for their poor academic achievement. Students who wish to appeal for reentry to the term that immediately follows their suspension or dismissal, including any term of the summer, must complete a petition form available in the Office of Records. In addition, dismissed students who wish to appeal for reentry before the end of a calendar year must also complete a petition form available in the Office of Records. Appeals for the term in which reentry is sought must be made by the third day of classes for the fall and spring semester and the second day of classes of any summer term.

Although readmission is not automatic, dismissed students who wish to appeal for reentry after the lapse of at least one calendar year must complete their appeal through the Office of Admissions on special forms available in that office. These appeals must be submitted by 5 p.m. two full working days before the first day of classes of the term in which reentry is sought.

Academic actions noted above are recorded on the academic record.

Academic Warning
Academic warning is a cautionary notice to the student that his or her semester grade point average is below 1.0 and that continued academic performance at this low level may lead to probation, suspension, or dismissal. Students may be placed on probation or may be suspended or dismissed without having received such a warning notice since these academic actions are closely linked to the overall grade point average. Academic warnings do not appear on the student’s academic record.

Academic Alert
Academic alert may be noted on the grade report for any student whose cumulative average is below 2.0 even though the student meets minimum requirements for continuation.
Academic Forgiveness (undergraduate only)
The University has adopted an academic forgiveness policy which permits students to apply for the removal of courses taken at any institution, including The University of Tennessee at Chattanooga. Although the courses will not be removed physically from the student's academic record, they will no longer be calculated in the grade point average computation and will no longer apply toward the fulfillment of any University requirement. The policies for academic forgiveness are as follows:
1. Academic forgiveness is initiated by student request.
2. A student must be admitted to UTC and registered for classes at UTC in order to apply for academic forgiveness.
3. Academic forgiveness applies to all courses taken anywhere by the student eight years prior to the date of application for academic forgiveness.
   a. All work attempted more than eight calendar years before the date of application will be removed from consideration for credit for fulfillment of general education or major requirements or for grade point average or for any other purpose or requirement.
   b. The eight years will be figured from the semester preceding the date the application is received in the Records Office (summer is considered one semester).
   c. Academic forgiveness may not be used to remove from consideration college courses taken within eight years of the date of application for academic forgiveness.
4. Academic forgiveness may be granted only once and, when granted, is irrevocable.

Students seeking academic forgiveness should:
1. Secure the application for academic forgiveness in the Records Office (128 Hooper Hall); read the terms carefully; complete the form and sign it.
2. Return the completed and signed form to the Records Office. The application for academic forgiveness will be verified and courses will be checked for eligibility in accordance with the policies stated above. Students will be notified of the course credits that will be forfeited.
3. Sign the final agreement to forfeit eligible courses and return the form to the Records Office for processing.

Grading Policies
Grades
A represents superior performance in the course.
B represents commendable performance in the essentials of the course.
C represents acceptable performance in the essentials of the course.
D represents marginal performance below the acceptable standards of university work.
S is given for courses completed on a satisfactory/no credit basis. The hours are not computed in the grade point average. Not more than eight hours in Exercise Science, Health and Leisure Studies 039, Varsity Sports, may be applied toward the 128 hours required for a degree.

NC represents failure to complete the requirements in satisfactory/no credit courses. The attempted hours are not computed in the grade point average.
I may be given to a student whose work has been of passing quality and who has valid reason for not completing some requirement of the course. Removal of an Incomplete must be submitted by the instructor to the Office of Records no later than three weeks before the last day of classes in the next regular semester, or the Incomplete will become an F. The Incomplete grade will not be computed in the grade point average during the interim. Any student called to active duty in the Armed Forces of the United States may, with the permission of the instructor, be given an indefinite incomplete. The incomplete may be made up at any time or a retroactive withdrawal may be granted (Students must contact the Director of Records for appropriate procedure.)
IP is used as an interim grade for departmental honors courses numbered 495r and indicates work in progress. It must be removed by the end of the next regular semester or the In Progress becomes an F. IP is also used as an interim grade for Physical Therapy 330, 331, 430, 431 and 490. Removal for all, except PHYT 431, must occur by the end of the next regular semester or the IP becomes a No credit (NC). Removal of IP’s in PHYT 431 must occur by the end of the following summer semester or the IP becomes a No credit (NC). The IP will not be computed in the grade point average during the interim.
F indicates unqualified failure and the necessity for repeating the course to obtain credit.
W indicates official withdrawal from one or more courses after the first two weeks of classes, and up to the last six class weeks before final examinations. Comparable deadlines apply to each of the summer terms.
WF is to be used for students who are receiving Title IV financial aid and who have stopped attending UTC classes without withdrawing officially. The WF is the equivalent of F for all academic purposes. The grade of F, as submitted by the instructor, will be changed to WF by the Records Office. The last day of class attendance will be obtained from the instructor, will be changed to WF by the Records Office. The last day of class attendance will be obtained from the instructor and communicated to the U.S. Department of Education as required. The grade of F will be reflected on transcripts and on the report of academic progress. The WF will be on the academic record for internal use only.

Quality Points
Quality points are computed for undergraduates for each credit hour as follows:
A — 4
B — 3
C — 2
D — 1
F (WF) — 0
S — not included
NC — not included
W — not included
Grade Point Average

Grade point averages are computed by dividing the total number of quality points earned by the total number of semester hours attempted, including hours of F. Hours are excluded in which grades of S, NC, I, and W have been earned. Institutional credit is not included in the calculation of grade point averages for graduation or for honors.

Grade point averages are not rounded, and no numerical value less than the stated grade point average will suffice. See section below for policy on replacement of grades.

Repeated Courses
1. Provided prerequisites are met, students may replace a total of five grades of C or lower. Any five grades in one or more subjects may be replaced, but the total number of replaced grades cannot exceed five. Developmental studies courses (institutional credit) will be included in the grade replacement limit, but grades of S, NC, and W will not count in the allotted number of replacement grades.

2. The policy was effective with the fall of 1985. Unlimited replacement of grades earned at any college or university will be permitted before the fall of 1985. Beginning with the fall of 1985, a student will be limited to five additional replacement grades in courses taken at UTC or any other college or university.

3. All grades, except the five replaced grades, will be used in the grade point average computation.

4. In any repeated course, excluding "r" courses, a student forfeits the first earned hours, if any. Previous grades and credit do not count; only the last grade counts.

5. Courses in which grades of A or B were earned cannot be repeated except for "r" courses. If an A or B is repeated, the repetition will be changed from credit to audit. An exception is made for registered nurses who are required by the School of Nursing to repeat specified science courses (Biology 208, 209, 210, Chemistry 121 and 122) that were originally completed 10 years or more prior to the students’ admission to the nursing major at UTC.

6. For a transfer student a "course" is interpreted as any course listed separately in an individual term on the transcript regardless of the number of such courses needed to equate to a UTC course.

7. When a student is repeating more than one course in a term and is nearing the permissible limit of five replacement grades, the following order will determine replacements: 4 hour F’s, 3 hour F’s, 2 hour F’s, 4 hour D’s, 3 hour D’s, 2 hour D’s, 1 hour F’s, 1 hour D’s, 4 hour C’s, 3 hour C’s, 2 hour C’s, 1 hour C’s. In the case of a tie, a grade in a course within the student’s major will be replaced first.

8. Students are responsible for indicating at the time of registration that they are repeating courses.

Withdrawals

After a semester or summer term is in session, a student is expected to attend all classes until or unless he or she notifies the Registration Office in writing of the student’s intent to withdraw from the University or from one or more classes.
The University offers undergraduate programs which lead to the degrees of Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, Bachelor of Science in Engineering, Bachelor of Science in Nursing, Bachelor of Social Work, and Bachelor of Science in Physical Therapy. Majors offered within these degrees are as follows (specific requirements are outlined in the appropriate colleges and divisions):

Applied Mathematics (B.S.)
Concentrations: Actuarial Science, Corporate Science, Computer Science, Systems Science

Art (B.A., B.F.A.)
B.F.A. Concentrations: Graphic Design, Painting & Drawing, Sculpture

Art Education (B.S.)

Biology (B.S.)
Concentrations: General Biology, Ecology, Preprofessional, Organismal, Molecular

Business Administration (B.S.)
Concentrations: Accounting, Administrative Systems, Finance, General Management, Human Resources Management, Industrial Management, Marketing

Chemistry (B.A. and B.S.)

Communication (B.A.)

Computer Science (B.S.)
Concentrations: Information Systems, Scientific Applications, Systems Architecture

Criminal Justice (B.S.)
Concentrations: Corrections, Juvenile Justice, Law and the Courts, Law Enforcement

Economics (B.A. and B.S.)

Engineering (B.S.E.)
Concentrations: Engineering Management, Electrical (Instrumentation and Control, Power), Environmental, Industrial, Mechanical (Mechanics, Thermal Science), Chemical, Civil (Structural), Manufacturing Engineering

Industrial Technology Management (B.S.)

English and American Language and Literature (B.A.)
Includes concentration in writing

Environmental Science (B.S.)
Concentrations: Biology, Chemistry, Engineering Science, Geography, Geology, Mathematics, Physics, Sociology-Anthropology

Exceptional Learning K-12 (B.S.)

Exercise Science, Health and Leisure Studies (B.S.)

Concentration: Exercise Science (K-12, and Fitness/Wellness Specialist and Cardiopulmonary Rehabilitation), Health Promotion K-12, Sports Administration, Leisure Studies, Community Health Education

French (B.A.)

Geology (B.S.)
Concentrations: Geology, Environmental Geology

Greek and Latin (B.A.)

History (B.A.)

Human Ecology (B.S.)

Humanities (B.A.)
Includes concentration in international studies

Human Services (B.S.)
Concentrations: Management, Allied Health Management

Latin (B.A.)

Legal Assistant Studies (B.S.)

Mathematics (B.A.)

Medical Technology (B.S.)

Multidisciplinary School Learning (B.S.)
Concentrations: K-4, 5T8

Music (B.A.)

Music (B.M.)
Concentrations: Instrumental Performance, Sacred Music, Theory and Composition, Vocal Performance

Music Education (B.S.)
Concentrations: Instrumental, Vocal

Nursing (B.S.N.)

Occupational Therapy (B.S.O.T.) (Tentative Start Fall 1998)

Philosophy and Religion (B.A.)
Concentrations: Philosophy, Religious Studies, Combined

Physics (B.S.)

Physical Therapy (B.S.P.T.)

Political Science (B.S.)
Concentrations: American Studies, International and Comparative Studies, Legal Studies, and Public Administration

Psychology (B.A. and B.S.)

Secondary Foreign Languages (B.S.)
Concentrations: French, Latin, Spanish

Secondary English (B.S.)

Secondary Mathematics (B.S.)

Secondary Natural Sciences (B.S.)
Concentrations: Biology, Chemistry, Earth & Space Science, Physics

Secondary Social Sciences (B.S.)
Concentrations: Economics, Geography, History, Political science

Social Work (B.S.W.)

Sociology and Anthropology (B.A. and B.S.)
Concentrations: Anthropology, Sociology

Spanish (B.A.)

Theatre and Speech (B.A.)
Includes concentration in Theatre Education K-12

Minors are currently available in the following areas:

- anthropology
- Greek
- art: painting or sculpture
- health physics
- or printmaking or graphic
- history
- design or history of art
- international studies
- Asian studies
- Latin
- athletics coaching
- mathematics
- Africana studies
- music: performance or history or composition
- classics
- philosophy
- classics
- physic
- communication
- political science: American government
- studies
- or international and comparative
- criminal justice: legal or legal
- studies or political psychology
- environments behavior or public
- economics administration
- English: literature or writing
- psychology
- environmental science
- recreation
- food and nutrition
- religious studies
- French
- social work
- geography
- sociology
- geology
- Spanish
- theatre
- women's studies

Additional minors may be developed.

Usage Notes
The letter r following a course number means that, because of a difference in content from semester to semester, a class may be taken more than once for credit. Example: Art 199r.

A capital letter (A, B, C, D, F, or G) prefixed to a course number means that course can also be used to satisfy the general education requirements of the category indicated. Example: Mathematics F136.
Degree Requirements

I. General Education Requirements

The general education requirements described below were approved by the faculty to become effective for new students who enter in the fall of 1982 and thereafter. Courses are continually being reviewed to meet the criteria for general education certification; the lists below, therefore, will be expanded throughout the year. Anyone who changes the current catalog must meet all requirements.

The general education program is minimal. In setting forth such requirements the faculty is not implying that the requirement is all that the student needs in each category; nor is the faculty implying that any particular course offers a thorough knowledge of the discipline. Provided with an introduction and a point of departure, each student and his or her adviser determine the student’s needs and direction for furtherance of his or her education. Courses meeting general education requirements are identified in the class schedule for each semester although all courses currently approved are listed below with each category. Generally, with the exception of laboratory courses in Category D which normally carry four credit hours, only courses earning a minimum of three semester hours of credit may fulfill a general education requirement. It is University policy that a student not schedule courses above his or her class level without permission of the department offering the course.

With the exception of majors in general areas such as humanities, students must select courses outside the major discipline in all general education categories. Students should complete the requirements for Category A (Written Communication) within the first 42 hours of academic credit attempted and Category F (Mathematics) at their earliest opportunity.

For transfer students, courses must be equated to approved general education courses in order to satisfy requirements. In Category D, 3.33 semester hours constitute a course for transfer students provided that the equivalency is an approved UTC general education course. On appeal, transfer students submitting General Education courses for credit may have those courses valuated by category guidelines not course equivalency.

Category A  Written Communication in the English Language (6 hours)

Courses in Category A are intended to help students improve their power to understand, to read, and to write the English language; to help them clarify and articulate thought; and to help them treat language as an instrument and model for understanding and appreciation. The primary emphasis is on written composition. The following courses satisfy this requirement.

English 121, 122; University Honors 101, 102.

Category A (Written Communication) course requirements must be completed within the first 42 hours of academic credit attempted. Exemption from English 121 together with completion of A122 satisfies Category A.

Category B  Humanities and Fine Arts (9 hours, 3 hours from Humanities, 3 hours from Fine Arts, and 3 hours from either)

Courses in Category B offer students opportunities to develop an appreciation for achievements in art, music, theatre, and literature; to acquire a sense of historical perspective; and to gain some knowledge of perennial and changing issues in philosophy and religion. Under the old licensure programs, majors in education may not use history in this category to satisfy state requirements for humanities. The following courses satisfy Category B requirements.

Humanities: Classics 310, 396; English 131, 133, 203, 207, 211, 212, 213, 214; History 101, 102, 203, 204, 210, 310; Philosophy 106, 201, 221, 425; Political Science 316; Religion 103, 110, 213, 221, 222, 236; University Honors 101, 102, 214.

Fine Arts: Art 111, 214, 301; Music 111, 317; Theatre and Speech 111, 115, 280; University Honors 103.

Category C  Behavioral and Social Sciences (6 hours)

Courses in Category C offer students opportunities to explore the nature and complex functioning of human beings as individuals and in societies and cultures, including as integral to that exploration study of the principles, scope, and methods of the behavioral and social sciences. The following courses satisfy this requirement.

Anthropology 152, 211; Economics 101, 102; Geography 104; Human Ecology 340; Human Services 101; Political Science 101, 202, 302; Psychology 101, 241; Social Work 210; Sociology 125, 151, 215, 220, University Honors 315, 316.

Category D  Physical and Natural Sciences (4 hours)

Courses in Category D offer students an understanding of the principles and scope of the physical and natural sciences. A fundamental part of these courses is the study of historical and contemporary ways in which these fields aid in understanding the natural and physical universe and also aid in the accomplishment of technological goals. Courses in this category must be laboratory courses. The following courses satisfy this requirement.

Anthropology 209; Astronomy 102; Biology 121; Chemistry 121, 125; Environmental Science 150; General Science 111; Geology 111; Physics 103, 230.

Category F  Mathematics (3 hours)

Courses approved for this category are intended to help students acquire some appreciation for mathematics as a creative activity of the human mind and some understanding of its usefulness in comprehending the physical universe. These objectives are supported by appropriate emphasis on computational skills and on the ability to work with mathematical symbols. The following courses satisfy this requirement.

Category G Perspectives (3 hours)
Courses in this category offer a special opportunity for students to achieve an understanding that reaches beyond their time and place by developing a sense of the importance and relevance of the past or of other societies and peoples through studies in: 1) non-Western cultures and civilizations; 2) major achievements or tragedies of Western civilization; 3) development, meaning, and impact of major scientific discoveries and theories; and 4) development, meaning, and impact of important economic, political, social, or technological ideas and policies. The following courses satisfy this requirement.

Anthropology 208, 311, 332, 333; Chemistry 311; Classics 110; Communication 320; Engineering 211; English 219, 257, 335, 336; Geography 103; History 114, 208, 221, 371, 336; Human Ecology 325; Human Services 300; Humanities 219, 257, 311, 336; Music 311, 397; Political Science 102, 244, 314, 346; Religion 211; University Honors 120, 217, 218.

II. American History

By act of the General Assembly of the state of Tennessee, students who have not had one year of American history in high school must complete six semester hours of American history if they receive an undergraduate degree after July 1, 1978. Three hours of this requirement may be satisfied by Tennessee history.

To meet teacher licensure requirements under the old licensure program, majors in elementary and early childhood education must complete six semester hours of American history in college regardless of their high school background.

III. Physical Education

Exercise Science, Health and Leisure Studies 021, is required in the first year, plus one additional Exercise science activity course with the exception of varsity sports. Transfer students who have already successfully completed two one-semester hour courses in physical education activity, excluding varsity sports, will be considered as having met the requirements.

The University may grant the individual student a deferment or waiver after reviewing the necessary records submitted by the student. Waiver of this requirement may be granted in accordance with the following policies:
1. Students who are 25 years of age on or before the first day of classes of the semester under consideration.
2. Recommendation of a licensed physician. (Any student having medical restrictions yet desiring to take physical education may have a program designed exclusively for him or her by enrolling in Exercise Science, Health and Leisure Studies 025. Guidance, participation, and evaluation are structured on an individual basis.)
3. Veterans with at least one year of military service.

Students receiving a deferment or waiver of this requirement will be responsible for meeting the credit hour requirement for graduation.

IV. Foreign Language

For B.A. and B.M. degrees: completion of the second college year of a sequence in one foreign language (e.g. French or German or Spanish 211 and 212 or French or German or Spanish 213 and 214 or Latin 201 and 202). Every student is advised to begin or to continue a foreign language study during the student's first year at the University or his or her first year as a candidate for the degree.

A student whose native language is not English and who is pursuing a B.A. or B.M. degree will fulfill the foreign language requirement by meeting the English requirements for foreign students: English 161, 162, 121 and 122.

V. Major

Requirements, including study in related areas, as specified by department.

VI. Minor

All candidates seeking the Bachelor of Arts degree in the College of Arts and Sciences will complete a minor within the College of Arts and Sciences. (Upon approval of the head of the major department, a student may select a minor outside of the College of Arts and Sciences. Appeals to the decision can be made to the dean.) Completion of a second major will satisfy this requirement. For students seeking the B.A. as a second degree, the previously completed major will satisfy the minor requirement. Previously approved minor courses of study will be honored for students changing majors.

Any student may complete an established minor requiring a minimum of 18 semester hours with at least 8 hours at the 300/400 level. A grade point average of at least 2.0 must be achieved in courses taken for any minor. Higher standards than these minimum requirements may be approved for various departments. Specific requirements for minors are listed with the departmental offerings. No more than 6 hours of credit in the major department may be applied to the minor.

A student who is receiving one minor in a given department may receive a second minor from the same department provided that the second minor includes at least 12 hours of course work not included in the first minor. Philosophy, Religion, the different foreign languages and Sociology, Anthropology and Geography will be treated as separate "departments."
VII. Additional Requirements*

A. Electives to complete a minimum of 128 semester hours of credit.

Candidates for the Bachelor of Science in Engineering degree must complete 134-144 semester hours and co-op Engineering graduates will need 144-154 semester hours, depending upon the concentration.

A minimum of 30 semester hours must be completed in residence on this campus, and the final 30 semester hours must be completed in residence courses at The University of Tennessee at Chattanooga. Students who have attended a junior or community college must complete the last 60 semester hours at a four-year college or university with the last 30 hours in residence at The University of Tennessee at Chattanooga. See Academic Residency Requirements for further information. Courses taken for graduate credit may not be applied toward an undergraduate degree.

B. A minimum of 30 hours of the 128 hours needed for graduation must be earned at the 300 level or higher.

C. A minimum grade point average of 2.0 must be achieved
1. On all cumulative work undertaken and
2. On all hours attempted at The University of Tennessee at Chattanooga and
3. On all hours attempted in the major discipline. For further clarification of which courses are included in the major discipline, see the description of the major.

D. Completion of testing requirements

In order for the University to assess and improve its academic programs, periodic measurements of student intellectual growth must be obtained. As a requirement for graduation every student will be required to participate in one or two evaluative procedures, which may include examinations in general education and/or the major field of study. The evaluative information obtained through testing is one of the means used to improve the quality of the educational experience for future generations of students.**

Application for a Degree

The student is responsible for applying for a degree with the Office of Records not later than the beginning of his or her final year. A student who neglects to file an application must wait until the next degree-conferring period to be awarded a degree.

Limitations for B.A. Degree

No more than 42 hours in any one department may be applied toward a Bachelor of Arts degree. At least 86 hours must be completed outside any one specific department. Some departments may specify more than 86 hours.

Second Bachelor’s Degree

A second bachelor’s degree occurs whenever a student simultaneously completes the requirements for more than one degree (ex: B.A. and B.S.) or, after receiving one degree, returns to the university to complete another degree.

A student may receive a second bachelor’s degree provided that:

1. All specific requirements for both degrees are met.
2. The curriculum for the second degree includes at least 30 hours not applied to the first degree. These hours must consist of courses taken at UTC. A grade point average of at least 2.0 is required in these courses.
3. The 30 additional hours beyond the first degree shall include a minimum of 12 hours taken at UTC in the major department of the second bachelor’s degree. A grade point average of at least 2.00 is required in these courses.

*See pages 17-20 for additional information on academic regulations.
**Approved by the UT Board of Trustees.
***See page 10 for additional information on nontraditional credit.

Degree Regulations

Academic Residency Requirements

The final 30 semester hours must be completed in residence on this campus. Special arrangements to allow work taken at other University of Tennessee campuses to be counted as part of this requirement must be approved by the Petitions Committee. A minimum of 30 semester hours, however, must be earned at UTC, with a 2.0 average required on all attempted UTC hours.

Students who attend a junior or community college at any time in their academic career must complete the last 60 semester hours at a senior college with the last 30 of those 60 completed at The University of Tennessee at Chattanooga.

Before entering professional school, students in combined programs must complete at The University of Tennessee at Chattanooga the last 30 of the 98 semester hours of undergraduate study.

Normally, nontraditional credit will not apply toward the last 30 hours of residency; however, students who have completed 30 hours of traditional course work at UTC and have not yet attempted the last 30 hours may petition to apply a maximum of 15 hours of these types of credit toward the last 30 hours. ***
PREPROFESSIONAL PROGRAMS

Combined Programs
The University of Tennessee at Chattanooga offers both three- and four-year programs leading to the bachelor's degree for students preparing for study in certain professional areas. In the four-year program the degree is granted upon completion of 128 semester hours, which include both the general education requirements and a major. Under the combined programs a student may receive the bachelor's degree from UTC after completing three years or a minimum of 98 semester hours of undergraduate study plus the first year of professional school. The combined programs available include the bachelor's degree for students preparing for the study of medicine, dentistry, or medical technology.

Before entering professional school, the student in a combined program must have completed all but 30 of the total semester hours required for the bachelor's degree. The requirements in general education and in a major must be completed as a part of this program. While transfer work may be accepted, at least the last 30 semester hours of the three-year undergraduate program must be earned at UTC.

The student is responsible for having a transcript of the first year's work at a professional school sent to the University and for filing application for the degree.

Preparation for Health Professions
Students wishing to enter dentistry, medicine, or other health fields such as cytotechnology, dental hygiene, medical technology, pharmacy, or veterinary medicine may complete their preprofessional training at UTC before going on to professional school.

For the Bachelor of Science in Nursing program, which is offered by UTC, see page 159. This is not a combined program.

The various curricula available at The University of Tennessee at Chattanooga have been prepared with the cooperation of The University of Tennessee, Memphis, and include the specific requirements for admission to the respective colleges of the health science units there. The veterinary medicine program is offered at The University of Tennessee, Knoxville.

In general, these same programs will also meet the minimum admission requirements to other professional colleges offering degrees in these health sciences. Students wishing to prepare for professional institutions other than The University of Tennessee, Memphis, should consult the catalogs of those schools to determine the specific preparation required for admission. In all cases, final decision for admission rests with the College involved.

Dentistry
Although applicants may be admitted to the College of Dentistry of The University of Tennessee, Memphis, with a minimum of 90 semester hours in academic subjects, preference is given to those who have already completed a baccalaureate. Admissions requirements include 6 hours of English composition, 8 hours of general biology, 8 hours of general chemistry, 8 hours of organic chemistry, and 8 hours of general physics. Upper level biology courses (selected from cellular biology, comparative anatomy, embryology, genetics, histology, microbiology, and physiology) are recommended. A minimum grade point average of 2.5 in all required subjects attempted and in cumulative coursework is normally required for admission. For general electives, courses in calculus, foreign language, literature, biochemistry, social sciences, and behavioral sciences are suggested.

A student in a combined program who is working toward a bachelor's degree from The University of Tennessee at Chattanooga must complete at least 98 hours, including all general education requirements, as well as requirements for a specific major offered by UTC before entering the College of Dentistry. After the successful completion of the first year at the College of Dentistry the student will be awarded the bachelor's degree from UTC.

Medical Technology (B.S.)
A student working toward the B.S. degree with a major in medical technology from UTC must complete 98 semester hours of the program outlined on page 40, together with 30 hours from an approved school of medical technology. The last 30 of the 98 hours must be completed in resident courses at UTC.

Preclinical Medicine
Although most students now earn a bachelor's degree before admission to a college of medicine, some may be accepted with only three years of undergraduate work. Minimum requirements for admission to the College of Medicine of The University of Tennessee, Memphis, include 16 hours of chemistry (8 hours of general and analytical and 8 hours of organic), 8 hours of physics (mechanics, heat, light, sound, electricity, and magnetism), 8 hours of biology including zoology, and 6 hours of English composition.

Strongly recommended additional courses include advanced chemistry (analytical, physical, or biochemistry or chemical instrumentation), advanced biology (cellular biology, embryology, molecular biology, or genetics), calculus, behavioral and social sciences as well as computer science, languages, literature, philosophy, history, and etymology. A total of 90 semester hours is required for admission if a student is not working toward a bachelor's degree from The University of Tennessee at Chattanooga. A degree candidate must complete 98 hours, including all general education requirements as well as requirements for a specific major offered by UTC. The last 30 of the 98 hours must be completed in resident courses at UTC.

Preprofessional Medicine
Although no combined degree program is available in the veterinary medicine field, students at The University of Tennessee at Chattanooga may complete all of the courses required for admission to the College of Veterinary Medicine at The University of Tennessee, Knoxville. Because of the competition for admission to this field as well as to other health fields, students are advised to complete an undergraduate degree program in a major that will offer alternative career opportunities. The following preprofessional medicine courses are required.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 121, 122</td>
<td>4</td>
</tr>
<tr>
<td>Humanities and Social Sciences</td>
<td>18</td>
</tr>
<tr>
<td>Math 135, 136 or 150, 160</td>
<td>6-8</td>
</tr>
<tr>
<td>Physics 103, 104</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 351, 352</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 466</td>
<td>3</td>
</tr>
<tr>
<td>Biology 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Biology 325</td>
<td>3</td>
</tr>
<tr>
<td>Biology 526</td>
<td>3</td>
</tr>
<tr>
<td>(Biology 311 may be approved only if Biology 328 is not offered)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>72-74</td>
</tr>
</tbody>
</table>
Allied Health Fields

Students planning to enter one of the other health fields can satisfy the minimum admission requirements for the respective units of The University of Tennessee, Memphis, by completing one of the following programs. These programs by themselves do not lead to a degree from The University of Tennessee at Chattanooga. Students wishing to do so, however, may count any of these courses completed at The University of Tennessee at Chattanooga as a part of the total hours required for a baccalaureate degree if they decide to continue here toward a major offered by UTC.

Cytotechnology

Three years of preparation (90 semester hours) are required for admission to this program at The University of Tennessee, Memphis. The program of study must include the following courses or their equivalents:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 121, 122 and 2 additional English courses</td>
<td>12</td>
</tr>
<tr>
<td>Biology 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Biology 311, 312</td>
<td>8</td>
</tr>
<tr>
<td>Biology 328 and 330</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Advanced science (analytical chemistry, organic chemistry, embryology, comparative anatomy, genetics, and physiology)</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics (preferably 155)</td>
<td>3</td>
</tr>
<tr>
<td>Social sciences</td>
<td>12</td>
</tr>
<tr>
<td>Electives*</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

*Courses in human anatomy and physiology, physics, English, speech, mathematics, organic chemistry, and social sciences strongly recommended. A total of 16 hours must be in upper level courses. A year of American history in either high school or college is required for the degree program at UT, Memphis.

Predental Hygiene

Students may be admitted to the Dental Hygiene program of The University of Tennessee, Memphis, upon completion of 64 semester hours including the following courses or their equivalents:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Biology 191, 208, 209</td>
<td>8</td>
</tr>
<tr>
<td>Biology 310 or 311</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>English 121, 122 and one additional English course</td>
<td>8</td>
</tr>
<tr>
<td>Psychology 101 and one additional psychology course</td>
<td>8</td>
</tr>
<tr>
<td>Sociology 151 and one additional sociology course</td>
<td>6</td>
</tr>
<tr>
<td>One course from Theatre and Speech 107,108, 109,309</td>
<td>7</td>
</tr>
<tr>
<td>*<em>Electives</em></td>
<td><strong>25</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>

*Courses in mathematics and social sciences strongly recommended. A year of American history in either high school or college is required for the degree program at UT, Memphis.

Prepharmacy

Students may be admitted to the School of Pharmacy of The University of Tennessee, Memphis, upon completion of 66 semester hours, excluding physical education or military science, which include the following courses or their equivalents:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Biology</td>
<td>311 (Meronology)</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 351, 352</td>
<td>8</td>
</tr>
<tr>
<td>Physics 103,104</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics 136 or 150</td>
<td>3</td>
</tr>
<tr>
<td>English 121,122</td>
<td>6</td>
</tr>
<tr>
<td>Communication or Speech</td>
<td>3</td>
</tr>
<tr>
<td>Math 210</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Electives*</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>67</strong></td>
</tr>
</tbody>
</table>

* A year of American history in either high school or college is required for the degree program at UT, Memphis.

HONORS AND HONOR SOCIETIES

General University Honors

Effective with the graduation class of December 1987, eligibility for general university honors was changed from past standards.

An undergraduate student will be graduated cum laude when the student's cumulative grade point average as well as UTC average at the end of the final semester is 3.5. With an average of 3.75 both cumulative and at UTC, the student will be graduated magna cum laude. The student with the highest average will be graduated summa cum laude if his or her average is at least 3.9. More than one summa graduate will be recognized in the event of a tie. Honors will be inscribed on the diplomas. Institutional credit will not be counted in the grade point average for graduation or honors. Grade point averages are not rounded. These standards apply to all undergraduate degree candidates regardless of the catalog under which they entered.

The University Honors Program

Each year the University Honors Program recruits some 30 to 40 freshmen to join the University's most prestigious honors program. This program creates an atmosphere, both academic and social, that encourages its members to develop their capacities for intellectual, moral, and social leadership. The goal is to foster a community of scholars who benefit from each other's work and who provide the University with new ideas and ways to excellence.

In order to achieve this goal, the program provides the Honors students with a specialized general education curriculum tailored to their talents and needs (see page 101); an integrated program of social, University, and community service activities; a personal advisement system that enables each student to derive the greatest benefits from the University's resources; access to a private reading room; and membership in a highly visible and respected group of students. In addition, approximately half of all Honors students receive William E. Brock Scholarships, which provides a substantial four-year tuition scholarship.

Applicants to the University Honors (UHON) program are expected to have demonstrated outstanding achievement and promise in high school. Continuance is reviewed each semester and is contingent upon the student's academic performance. All UHON students are obligated to complete Departmental Honors (see next section).

Associate Honors Fellows

Current UTC students who are academically motivated, and yet were not initially recruited into the UHON program, may apply for membership as Associate Honors Fellows. Associates enjoy most of the benefits of the other UHON students, including admission to specialized UHON courses; early registration for classes; and a modest stipend to spend on productions by the Chattanooga Symphony and Opera Company and the UTC Fine Arts Program. Interested students should inquire at the Honors Office, 202 Guerry Hall.
Departmental Honors

The Departmental Honors Program allows exceptional students to receive special recognition for their academic achievements. Departmental honors is bestowed upon students who have maintained high academic standards in their course work, have completed an acceptable honors thesis, and have achieved an honors pass on an oral examination. Graduation with departmental honors is recorded on the academic record and on the diploma.

The departmental honors thesis allows each honors candidate to deepen knowledge and increase skills in a special discipline. Original literary analysis, scientific experimentation, artistic expression, or other demonstration of superior proficiency or creativity are normally acceptable forms of expression for the thesis. The thesis will be defended by means of an oral examination administered by the major department. The oral defense will be on the thesis and related underlying issues of the discipline.

Each candidate must have a copy of current guidelines and is responsible for following the guidelines. Copies can be obtained from the director of the honors program, 202 Guerry Hall.

A student is not formally accepted in departmental honors until he or she receives notice in writing that the Faculty Council has approved the student's application. Each candidate must have a copy of current guidelines and is responsible for following the guidelines. Copies can be obtained from the director of the honors program.

A progress report to the adviser and the chair of the departmental honors committee is due the Monday one week before the last week of classes in the first term of the two terms' work. The progress report must be signed by the adviser before it is sent to the departmental honors committee.

Departmental honors is normally work done by an individual. Joint interdisciplinary projects may be applied for when the work clearly involves students in different disciplines and when certain monitoring procedures are observed. Each such case will be decided on its merits by the departmental honors committee.

Admission to the program requires an overall grade point average of 3.2 and a grade point average of 3.5 in the major field. Students who do not meet the minimum grade point average requirements may be admitted conditionally to the departmental honors program, but will be withdrawn from the program if they do not meet the minimum requirements by the end of the first term in which honors is taken. Each departmental honors candidate must complete four full semesters (or a minimum of 48 semester hours of course work) at UTC prior to graduation. Honors work will receive four semester hours of credit in the appropriate courses, numbered 495r, the distribution of hours in the two terms to be one of the following options only: 1-3,2-2,3-1. A grade may be given for the first term or postponed by giving an IP (In Progress), which grade is to be replaced by another grade by the end of the following regular semester. The credit hours so earned will count for graduation whether or not honors is conferred. Credit earned in departmental honors courses will not be calculated as part of the 42-hour maximum in the major.

Any student who has a grade point average of 3.75 in his or her major and 3.5 overall through the next-to-last semester may become a candidate for highest honors. Standards for the thesis and departmental examination for highest honors appropriately reflect the nature of the superlative designation.

Academic Recognition and Honor Societies

The University recognizes scholarly achievement in a number of ways. The dean's list includes each semester the names of all students who achieve an average for the semester of at least 3.2 with a registration of 6 graded hours or more.

Institutional credit will not be counted in the grade point average for graduation or honors.

Academic achievement, either in general or in specific fields, is recognized by a number of organizations:

Alpha, the scholastic honor society of The University of Tennessee at Chattanooga, elects to membership seniors who have maintained a very high scholastic average. Election is by vote of the faculty members of Alpha.

Alpha Lambda Delta, national honor society for women and men, elects to membership those freshmen who have a 3.5 average on at least 12 graded hours in the first semester or a cumulative average of 3.5 at the end of the freshman year.

Blue Key is a national recognition society for men and women.

Golden Key, is a national honor society for all juniors and seniors, either full or part time, who have been at UTC for one year and who have maintained at least a 3.3 grade point average.

Mortar Board, a national honor society for senior women and men, elects to membership those who at the end of their junior year have a minimum grade point average of 3.0 and who have demonstrated outstanding ability in leadership, scholarship, and service to the University.

Phi Eta Sigma, national honor society for men and women, elects to membership those freshmen who have a 3.5 average on at least 12 graded hours in the first semester or a cumulative average of 3.5 at the end of the freshman year.
Honor societies in specific areas include:

- Alpha Kappa Delta (sociology)
- Alpha Mu Alpha (marketing)
- Beta Alpha Psi (accounting)
- Beta Beta Beta (biology)
- Beta Gamma Sigma (business administration)
- Delta Omicron (music)
- Delta Tau Omega (geology)
- Financial Management Association (finance)
- Gamma Sigma Epsilon (chemistry)
- Kappa Delta Pi (education)
- Kappa Omicron Phi (home economics)
- Lambda Alpha Epsilon (criminal justice)
- Lambda Iota Tau (literature)
- Omicron Delta Epsilon (economics)
- Phi Alpha Theta (history)
- Pi Delta Phi (French)
- Pi Gamma Mu (social sciences)
- Pi Mu Epsilon (mathematics)
- Pi Sigma Alpha (political science)
- Psi Chi (psychology)
- Scabbard and Blade (military science)
- Sigma Delta Pi (Spanish)
- Sigma Iota Epsilon (business management)
- Sigma Pi Sigma (physics)
- Sigma Theta Tau (nursing)
- Sigma Xi (sciences)
- Tau Beta Pi (engineering)
- Upsikm Pi Epsilon (computer science)
The Graduate Division is the administrative unit which coordinates and supervises activities relating to the graduate degrees offered by The University of Tennessee at Chattanooga.

Graduate Degree Programs Offered

M.A.  English: Literary Study or Professional Writing
M. Ace.  Accountancy
M.B.A.  Business Administration, Accounting, Economics, Entrepreneurship, Finance, Health Services Management, Human Resources Management, International, Management Information Systems, Marketing, Operations/Production or Organizational Management (includes Executive M.B.A. Program)
M.M.  Music: Education or Performance
M.P.A.  Public Administration
M.S.  Computer Science; Engineering: Chemical Sciences, Civil, Electrical, Industrial, or Mechanical; Engineering Management; Environmental Science; Psychology: Industrial/Organization, School, or Research
M.S.C.J.  Criminal Justice
M.S.N.  Nursing: Administration, Anesthesia, Clinical, Education, Family Nurse Practitioner

Anyone holding the baccalaureate or higher degree who wishes to take courses must make formal application for admission through the Graduate Office. Those who do not qualify for graduate admission or who elect to pursue a second bachelor’s degree may be admitted as post-baccalaureate students.

For more information concerning a specific degree program, please refer to the appropriate department and the UTC graduate catalog.

For application materials, write
Office of Graduate Studies
114 Race Hall
615 McCallie Avenue
Chattanooga, Tennessee 37403-2598

UTC Seniors
A senior who is within 30 semester hours of completing requirements for the bachelor’s degree at The University of Tennessee at Chattanooga may apply for admission to graduate courses if the applicant has an overall grade point average of 3.0 (B) or higher and is recommended by the head of his or her major department. With the approval of the assistant provost for graduate studies, a student may earn up to six semester hours of graduate credit prior to completing the bachelor’s degree. Such approval must be obtained each semester by completing the special application form which is available in the Graduate Office. The approved application must be submitted to the Registration Office prior to the time of registration. Courses taken for graduate credit may not be applied toward an undergraduate degree.

Teacher Licensure
Students seeking initial licensure, endorsement or renewal of licensure may be classified as non-degree students.

Post-baccalaureate Admission
Post-baccalaureate is an undergraduate admission classification which indicates that the applicant has a baccalaureate degree. A student who does not qualify for graduate admission because of an inadequate grade point average should inquire in the Graduate Office about a conditional admission status.

Admission as a post-baccalaureate student allows the student to demonstrate ability but does not guarantee admission to a degree program. In addition, courses completed under post-baccalaureate admission do not count toward a graduate degree.

Second Bachelor’s Degree
A student may receive a second bachelor’s degree provided that all specific requirements for both degrees are met, that the curriculum for the second degree includes at least 30 hours (completed with a 2.0 average) not offered for the first degree, and that an additional year is spent in residence. Students desiring a second bachelor’s degree should apply in the Adult Services Center.
Student Services

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SERVICES

Bookstore
The University Bookstore has two locations operated by Barnes & Noble Bookstores, Inc. The main store is located in Guerry Center. The bookstore offers new and used textbooks for all courses and all required supplies for classes. The Blue & Gold Shoppe located in the University Center has a variety of candy, snacks, class supplies, and gift items.
The University Bookstore also operates the mini-market located in the main bookstore with extended hours to meet all the student's shopping needs with grocery items, frozen foods, candy, and school supplies.
Services provided include daily book buyback with price paid on a wholesale basis. Prices are higher at the end of the semester and may fluctuate depending on inventory needs of the bookstore for the next semester. A check cashing service is provided for students, faculty, and staff with a validated UTC I.D. and a Driver's License. The limit on all checks is $30. The bookstore accepts MasterCard, Visa, American Express, and Discover Card.

Check Cashing Service
The Bookstore, and the Bursar's Office provide a Check Cashing Service for students, staff, and faculty. A validated UTC ID or a current fee paid receipt and a valid drive's license must be presented along with checks. Personal checks are cashed up to $50 by the Bursar's Office and $30 by the Bookstore. Only one check per person per day may be cashed.

Counseling and Career Planning
The Counseling and Career Planning Center at The University of Tennessee at Chattanooga offers a variety of services to students, alumni, faculty and staff of the University. These services include personal, vocational, academic counseling, and crisis intervention, for individuals and groups. Consultation services, workshops and other programs are developed and available for the university community.
The staff of the Center includes professionally trained counselors and a psychologist, who have achieved appropriate certification and/or licensure at the State and National levels. Graduate students work under the supervision of the Center's professional staff.
Programs and services include: Career Planning; Personal Counseling; outreach Programs/Workshops; Consultation; and Testing. Information on a wide variety of careers, opportunities, graduate schools, and career development is available from books, pamphlets, audio and video resources, and computers (DISCOVER). The Center also serves as a practicum site for graduate students in counseling, psychology, and political science. Counseling, consultation, or use of resource materials are provided without charge. There is, however, a minimal charge for testing materials.
The services of the Counseling and Career Planning Center are confidential.
The Counseling and Career Planning Center holds a full accreditation through the International Association of Counseling Services, Inc. Location and hours: Counseling & Career Planning Center, Room 210A University Center, (423) 755-4438, Monday through Friday 8 A.M.- 5:00 P.M.

Student Dining Plans
Marriott Education Services manages our food services on UTC's campus. The cafeteria opens each weekday at 7:00 a.m. They offer flexible meal plans to meet your personal needs. Branded Concepts are available such as Pizza Hut, Taco Bell and Subway. Daily specials and monthly promotions are offered on a regular basis. There is also a cart available for services at the University Center. Employment opportunities are also available. For more information please contact Marriott at (423) 755-4200 or visit the ID Card Center located in the University Center.
Physically Challenged Student Services
On June 26, 1990, The Americans With Disabilities Act (ADA) was signed into law. This act further reinforces Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against persons with disabilities. ADA mandates that accommodations and adjustments be made in programs and activities in order to provide equal access to qualified persons with disabilities. The Director of Affirmative Action, Dr. Barbara Wofford, holds the responsibility of ensuring University compliance with ADA. The University continues to work for better integration of services and programs for persons with disabilities. Students requesting assistance in this matter may contact Tom Losh, Office of Student Affairs, 216 University Center (755-4534).

Health Services
Student health services are provided by certified family nurse practitioners under the medical direction of a group of local physicians specializing in young adult medicine. Clinic hours are 8:00 a.m. - 1:00 p.m., Monday through Friday, 1:00 - 5:00 p.m. by appointment. Emergency first aid is available to the entire University community from 8:30 a.m. - 5:00 p.m., Monday through Friday. The scope of services includes office visits for general illnesses, allergy injections, flu immunizations, hepatitis B immunizations, Tb skin testing, physical exams, lab services, educational programs, counseling, and referrals. All currently enrolled University students are eligible for health services. The student is responsible for all fees for referral services such as emergencies, hospitalization, surgery, X-rays, lab work, and medicines. The university recommends that the student obtain separate hospitalization and medical insurance. A health insurance policy is available through the university and covers a schedule of expenses for surgery and hospitalization in case of accident and illness. All international students are required to enroll in the insurance program. Information about this policy is mailed to students in the summer. The insurance policy information is also available in Student Health. For other information concerning Student Health Services or to schedule an appointment, please contact Rhonda Bovine, RNC, MSN, FNP, Director at (423) 755-4453.

Housing
Applications for housing may be obtained from the Housing Office. Housing contracts are a commitment for the academic year, August to May, or for shorter periods as required by midyear registration or certain special academic programs, if arranged for in advance. Only if a student withdraws from the University is a housing contract cancelled, and then in accordance with policies stated in the contract.

The University offers a program of differentiated housing which allows students the option of living in facilities with different types of programming and supervision. Further information concerning the details of these plans is available from the Housing Office and is sent with the housing application.

ID Cards
The University provides each student with an official University ID. This card is used to gain admission to athletic events, to check out books from the library, to obtain special rates and privileges at many University functions, and to indicate the individual's right to use University facilities.

ID cards for new students are made at registration. UTC ID cards are also a debit card for purchasing at the following locations:

- Food Services
- Bookstore
- Parking
- University Ticket Office
- Fine Arts Ticket Office
- Arena Ticket Office and Concessions
- Select copy and vending machine locations.

Students deposit a minimum of $50 to open a debit card balance. Additional monies can be added at anytime in $20 increments. UTC deposits can be made in the form of cash, check and Visa or Master Card.

The new location for the UTC ID Card Center is downstairs in the game room area of the University Center. Office hours are Mon- Thu 9:00 - 6:00; and Friday 9:00 - 5:00. The telephone number is 423-785-2218, fax: 423-755-4795, or Email address is UTCID@utc.edu

One card is intended to last throughout a student's entire stay at UTC. Lost or stolen ID cards should be reported immediately to the bookstore, food services, campus security or ID office. Replacement cards are made at the ID office for a cost of $10. No fee is charged for first ID Card or to use the ID Card as a debit card.

Placement Services
Located in the University Center, the Placement and Student Employment Center assists degree candidates, alumni, and students in securing full- and part-time employment. The service is available year round.

Student Handbooks
Distributed at the beginning of each academic year, the Student Handbook provides detailed information on student services. It also contains information on the Student Government Association and specific rules for the purpose of regulating campus life. These rules are stated in the Honor Code, Student Conduct Code, and other codes regulating groups.

Student Tickets
A validated student ID card with a picture provides admission to the regular season home football, basketball, and wrestling events. These seats are in the student section and are not reserved. Students take these seats on a first-come basis and the number of seats in the student section is limited to a specific figure.

Student guest tickets: A student may purchase a guest ticket at a discount price to each home football and basketball game. These tickets may be purchased at the University Center Ticket Office. The guest must sit in the student section.

Spouse tickets: A student may purchase a spouse or guest ID with a picture for $15 per semester. These may be purchased at the University Center Ticket Office.
Statement of a Drug-free Environment
The University of Tennessee is committed to ensuring that it is safe and free from the illegal use, manufacture, possession, distribution, or dispensing of controlled substances (as defined in the Controlled Substances Act, 21 U.S.C. Section 812). To accomplish this, the university has established a student drug abuse prevention program through the Office of Student Affairs. Further, students are subject to a Code of Conduct pertaining to use or possession of controlled substances, and recipients of certain federal financial assistance such as Pell Grants will be required to certify that they will be drug-free during the pendency of the Grant.

Measles Immunization
The state of Tennessee requires that all students born after 1956 provide the university documentation of immunization with two (2) live measles vaccinations after age 12 mos., unless contraindicated due to pregnancy, allergy to vaccine, or other valid medical reason. A verification of immunization, signed by a health care provider, should be returned to Student Health Service prior to registration for classes.

GENERAL REGULATIONS

Family Educational Rights and Privacy Act
A student's record is regarded as confidential, and release of the record or of information contained therein is governed by regulations of the federal law on "Family Educational Rights and Privacy." Only directory information, such as a student's name, address, telephone listing, major fields of study, participation in officially recognized activities and sports, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student, may be released by the institution without consent of the student unless the student has asked UTC to withhold such information. The law also provides for the release of information to University personnel who demonstrate a legitimate educational interest, other institutions engaged in research (provided information is not revealed to any other parties), and certain federal and state government officials.

A student may inspect and review records and is entitled to challenge the content of records. However, the student may be denied access to a parent's financial statement and to confidential letters and statements of recommendation which were placed in the University's records prior to January 1, 1975.

Honor Code
The Honor Code is based upon the assumption that the student recognizes the fundamental importance of honesty in all dealings within the University community and that education is a cooperative enterprise between student and teacher and between student and student. Any act of dishonesty violates and weakens this relationship and lessens the value of the education which the student is pursuing. The Honor Code and the Honor Court and its procedures are detailed in the Student Handbook.

Records
The Office of Records maintains an academic record on any student who has ever attended UTC. This record currently includes the student's name, social security number, birthdate, and credits transferred from other colleges. It includes all courses which a student has taken at UTC with credit hours, grades, and cumulative grade point average. Academic suspension or dismissal is recorded as well as academic probation.

Transcripts
Transcripts of a student's record are released only on the student's written authorization. A student is entitled to one transcript without charge; thereafter, $2 is charged for each subsequent transcript. Requests should be made to the Office of Records in advance of the date on which the transcripts are needed. The processing of transcripts may take as long as two weeks at the beginning or end of a term.

Transcripts are not released for students who have an indebtedness of any type to the University or who owe any fines.

Accommodations and Assistance
Students with disabilities who may require assistance or accommodations or students who have related questions concerning testing, note takers, readers, and etc., should speak to their individual professors as soon as the semester begins. Students may also contact the Office of Student Affairs at (423) 755-4534 with questions about these services.

Students are encouraged to bring the need for assistance or accommodations to attention of the Office of Admissions as soon as they are admitted to the University.
Professor Burhenn, Acting Dean

Anthropology
See Sociology, Anthropology, and Geography.

Art
Professor White, Head
The Department of Art, an accredited member of the National Association of Schools of Art and Design, enrolls students in one of three four-year degree options: a Bachelor of Fine Arts degree with concentration options in Graphic Design, Painting and Drawing, or Sculpture; a Bachelor of Science degree in Art Education, and a Bachelor of Arts degree. Selection of an area of study is based on an individual's professional objectives, however each program in the department follows a carefully structured and sequential curriculum. It is the intent of the department to have available a facility and resources appropriate for the level of professional preparation of its degree options.
The Art Department reserves the right to keep one example of the work of each student in each course. Sophomore year portfolio review is required.

Art (B.F.A.)
General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses other than art: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours)
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major
86 hours art including 101, 102, 104, 105, 106, 205; 9 hours (from courses other than those required for one of the concentration below) from: 203, 206, 207, 208, 260, 281, 233, 244, 305, 306; 12 hours art history including 214, 215 and 6 hours from 314, 315, 414, 431, 432 and Art 491.
Student must complete one area of concentration as follows:
Portfolio review, Sophomore year.
 Remaining hours in art to total 86.
2.5 GPA minimum in art courses
Participation in senior art exhibition

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical courses of study in art (B.F.A.)
Art (B.F.A.): graphic design

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>FRESHMAN</td>
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<tr>
<td>Elective</td>
<td>General Education</td>
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<tr>
<td>General Education</td>
<td>Art 102 Visual Studies II</td>
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<td>Art 101 Visual Studies I</td>
<td>Art 106 Drawing II</td>
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<td>Art 105 Drawing I</td>
<td>Art 104 Visual Studies III</td>
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<tr>
<td>General Education</td>
<td>Color Theory and Fundamentals</td>
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<td>EHLS021</td>
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SOHOMORE
Apply for Portfolio Review

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Art 205 Drawing III</td>
<td>General Education</td>
</tr>
<tr>
<td>Art 281 Photography</td>
<td>General Education</td>
</tr>
<tr>
<td>Art 214 Art History</td>
<td>Art 215 Art History</td>
</tr>
<tr>
<td>3 hours from Art</td>
<td>3 hours from Art</td>
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<tr>
<td>207,233,244,305,306</td>
<td>203,206,208</td>
</tr>
<tr>
<td>Art 260 Drawing for G.D.</td>
<td>Art 271 Basic Typography</td>
</tr>
<tr>
<td>General Education</td>
<td>Art 275 Letterform Design</td>
</tr>
<tr>
<td></td>
<td>Portfolio Review</td>
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<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>
JUNIOR
General Education 4
Art History 3
3 hours from Art 207, 233, 244,305,306 3
Art 380 Photography for Graphic Design 3
Total 16

ART HISTORY 3
ART 362 Illustration for Graphic Design 3
Total 15

GENERAL EDUCATION 4
Total 7

STUDENT ELECTIVE 3

SENIOR
Apply for Senior Exhibition
General Education 3
Art Elective 3
Art 465 Problem Solving in Graphic Design 3
Total 9

ART HISTORY 3
Art 362 Illustration for Graphic Design 3
Total 6

GENERAL EDUCATION 3
Total 3

ART ELECTIVE 3

TOTAL HOURS 128

Art (B.F.A.): painting and drawing

First Semester
Elective 3
General Education 3
Art History 3
Art 101 Visual Studies I 3
Art 105 Drawing I 3
General Education 3
EHLS 021 1
Total 6

Second Semester
General Education 3
Art Elective 3
Art 104 Visual Studies III: Color Theory and Fundamentals 3
EHLS Activity 1
Total 16

TOTAL HOURS 128

Art Education (B.S.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 1 approved course in literature, Philosophy B201, and Theatre and Speech Bl 15 (3 hours each)
Category C: 1 approved behavioral or social science course, and Psychology C101 (6 hours)
Category D: 2 physical or natural science courses to total 8 hours (one course must be an approved laboratory science)
Category F: Mathematics F120 (3 hours)
Category G: 1 approved perspectives course (3 hours)
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
Computer Science 102
Philosophy 336
Psychology 221
54 hours art including 101, 102, 103,105, 106, 203, 205, 207,214, 215, 233,323, 324,490; 2 courses from Art 314,315,414,431,432; and 6 hours in one studio concentration.
25 hours in professional education including Education 201, 321, 433,444r, and 332 or 333.
For graduation: 2.0 average in art and 2.0 average in College of Education and Applied Professional Studies courses
For certification: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical course of study in Art Education (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>General Education Category A</td>
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<tr>
<td>Mathematics 120</td>
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<tr>
<td>Art 101 Visual Studies</td>
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<tr>
<td>Art 103 Intro to Art</td>
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<tr>
<td>Art 105 Drawing</td>
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<tr>
<td>Elective</td>
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<td><strong>Total</strong></td>
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<td><strong>SOPHOMORE</strong></td>
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<td>General Education Category D</td>
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<tr>
<td>Philosophy 201</td>
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<tr>
<td>Art 214 Art History</td>
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<tr>
<td>Art 205 Drawing</td>
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<tr>
<td>Art 233 Sculpture I</td>
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<td>EHLS 021</td>
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<td>Science Elective</td>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>JUNIOR</strong></td>
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<td>Apply for Student Teaching</td>
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<td>Philosophy 336</td>
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**Art (B.A.)**

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)

Category B: 3 approved courses other than art: one from humanities, one from fine arts, and one from either (3 hours each)

Category C: 2 approved behavioral or social science courses (6 hours)

Category D: 1 approved physical or natural science course with laboratory (4 hours)

Category F: 1 approved mathematics course (3 hours)

Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Foreign language through second college year

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

**Major**

42 hours art including 101,102,105,106,203,207,233,214,215, and 3 additional hours from 314, 315, 414, 431, 432; 3 hours from 205, 208, 260, 281, 303, 305, 306; 3 hours from 235, 244; 6 additional hours in studio electives from 300/400 level.

Participation in senior art exhibition

2.0 average in all art courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

**ART MINORS**

**Graphic Design (24 hours):**

Art 101,105, 260, 261, 281; 9 hours from 361,380,460,461r.

Minimum 2.0 average in the minor.

**History of Art (18 hours):**

Art 214, 215; 6 hours from 314, 315,414,431,432; 6 hours (3 of which must be at the 300/400 level) from American Studies 200; Classics 396; English 203, 204; Philosophy 336; History (any 300/400 level course).

Minimum 2.0 average in the minor.

**Painting (24 hours):**

Art 104, 105, 106, 207, 208; remaining 9 hours in painting at the 300/400 level.

Minimum 2.0 average in the minor.

**Printmaking (24 hours):**

Art 101,104,105,106,203; remaining 9 hours in printmaking at the 300/400 level.

Minimum 2.0 average in the minor.

**Sculpture (24 hours):**

Art 102 (101 waived for the sculpture minor), 105, 233, 235, 244; remaining 9 hours in the three-dimensional area at the 300/400 level.

Minimum 2.0 average in the minor.

**ART COURSES**

**101 Visual Studies I: Form in Two Dimensions (3)**

Color concepts and the visual elements, principles, and factors of organization as they apply to two dimensional design. Fall semester. Studio hours 6. Corequisite: 105 for the art major or approval of department head.

**102 Visual Studies II: Form in Three Dimensions (3)**

Studio experience with visual and tactile components of three dimensional design. Basic problems involving relief, mass, freestanding form, and principles and factors of 3-D organization. Spring semester. Studio hours 6. Prerequisite: 101; Corequisite: 106 for the art major or approval of department head.

**103 Introduction to Art Education (3)**

Examination of a broad range of historical and philosophical issues in art education. Designed to help the student discover values in art education. Lectures, readings, reports, and discussion. On demand.

**104 Visual Studies III: Color Theory and Fundamentals (3)**

An introduction to color perception and to the principles of color application on a two-dimensional plane. Basic theoretical systems, harmonic systems, pigment and color mixing, color interaction; historical, psychological and symbolic implications. Spring semester. Prerequisite for the art major 101. Studio hours (6).

**105 Drawing I (3)**

Introduction to drawing and pictorial composition using basic drawing media in black and white. Primary emphasis on line, form, value, texture, space, shape, and one-point and multiple-point perspective. Fall semester. Corequisite: 101 for the art major or approval of department head. Studio hours 6.

**106 Drawing II (3)**

Continuing work in drawing with the introduction of color media in pictorial composition. Primary emphasis on analytical skills, cognitive development, development of critical skills, and the exploration of alternative techniques and media. Spring semester. Studio hours 6. Prerequisite: 105. Corequisite: 102 for the art major or approval of the department head.

**111 Introduction to Art (3)**

Consideration of the formal elements, design principles, and technical factors of significance in the production of works of visual art. Examination of selected works representative of a broad range of functions, forms, styles, and artistic intentions. Comparisons between works of different periods. Designed to heighten perception, appreciation, and enjoyment of the visual arts. Every semester.
199r Special Projects (1 –4)
Every semester.

203 Introduction to Printmaking (3)
Survey of printmaking history and processes. Limited studio experience in basic techniques of relief, intaglio, lithography and screen printing. Spring semester.
Prerequisite: Art 102, 106, or approval of department head. Studio hours 6.

205, 206 Drawing III, IV (3,3)
Figure, landscape, and still life subjects approached from the standpoint of their compositional and expressive possibilities. Experimentation with various media. Study of art anatomy. 205 fall/206 spring semester. Prerequisites: 101, 105, 106. Courses are sequential for art majors; 205 prerequisite to 206.

207, 208 Painting I, II (3,3)
Painting of still life, landscape, and abstract compositions in oil emphasizing color relationships and composition as essential means of pictorial expression. 207 fall semester/208 spring semester. Prerequisites for art majors: 101, 105, 106. Courses are sequential for art majors; 207 prerequisite to 208.

214 The History of Western Art from Prehistoric through Medieval (3)
The arts of the prehistoric, ancient Near Eastern, Egyptian, Greek, Roman, Early Christian, Byzantine, Romanesque, and Gothic periods. Fall semester.

215 The History of Western Art from the Renaissance to the Present (3)
A survey of the art of the Renaissance, Baroque, Rococo, and Romantic periods, and the various movements of the modern era in the 19th and 20th Century: Realism, Impressionism, Expressionism, Fauvism, Cubism, Surrealism, Abstract Expressionism, Op and Pop Art, New Realism, Post-Modernism and many more. Emphasis will be placed on the relationship of art and society. Spring semester.
Prerequisite: 214.

222 Teaching Art Appreciation in the Elementary Classroom (3)
Emphasizes importance of art appreciation in the public school at the elementary level. Focus on teaching skills appropriate for the appreciation of the visual arts. Application of traditional and new media at the elementary level of instruction. Every semester.

223 Teaching Art Appreciation/Field Experience (1)
The application of teaching skills related to the appreciation and knowledge of visual arts for the elementary age child through field experiences and seminars. This course will concern itself with curricular and media development. Every semester. Prerequisite: 222.

227 Introduction to Crafts (3)
Studio work in a number of craft areas: metals, fibers, and clay. Discussion of historical and contemporary trends in crafts. On demand. Studio hours 6.

233 Sculpture I (3)
Emphasis on basic sculpture processes and materials associated with mold making, casting, carving, and fabrication (construction). Fall semester. Prerequisites: Art 102. Studio hours 6.

235 Metals I (3)
An introduction to the design and fabrication of jewelry and small metal objects. Exploration of techniques in construction, decoration, and finishing. Spring semester. Prerequisites: Art 102, 106, 223. Studio hours 6.

244 Ceramics I (3)
Problems in the hand methods of forming clay and use of the potter's wheel. Study of form, color, and texture with a concern for basic ceramic technology. On demand. Prerequisites: 101, 105, 106 or approval of department head. Studio hours 6.

260 Drawing for Graphic Design (3)
Drawing for the graphic designer, focusing on observation, analysis, and visual representation of 3-D form in 2-D space. The design process is followed from concept through completion including the development of hand skills with design tools, systems and production methods. Fall semester. Prerequisites: Art 102, 106. Studio hours 6.

271 Basic Typography (3)

275 Letterform Design (3)

281 Photography (3)
Introduction to black and white photography as an art form with emphasis on composition. Basic camera operation, film processing, and darkroom printing. Adjustable lens camera required. Every semester. Prerequisites: Art 101. Credit not allowed in both Art 281 and 251.

301 Art Structure (3)
Slides, demonstrations, and studio experience in drawing, painting, sculpture, and other visual arts. Exposure to selected works of art through exploration of techniques and approaches designed to increase the student's understanding of art, particularly of contemporary styles. Every semester. For the non art major.

303r Watercolor (3)
Basic techniques in transparent watercolor with emphasis on materials, process, and composition. Fall semester. Prerequisite: Art 102, 106, 207. Studio hours 6.

305 Printmaking: Intaglio and Relief (3)
Work in single and multi-color intaglio, including line etching, and aquatint. Block and woodcut methods. Fall semester. Studio hours 6. Prerequisites: 101, 105, 106, 203, or approval of department head.

306 Printmaking: Lithography and Serigraphy (3)
Work in single and multi-color lithography, considering the various techniques of stone and metal plate printing. Work in single and multi-color serigraphy, including various stencil methods of silk-screen printing. Spring semester. Studio hours 6. Prerequisite: 203, 207 or approval of department head.

307, 308 Painting III, IV (3, 3)
Figure, still life, and landscape composition in oil, watercolor, acrylic, and mixed media. Problems in analytical study and creative interpretation. On demand. Studio hours 6. Prerequisites: 208. Courses are sequential, 307 prerequisite to 308.

314 The History of Modern Architecture (3)
American architecture from the late 18th century to the present. Begins with the French "Visionary" architects, proceeds to the British Arts and Crafts Movement, German Expressionism, American Period revivals, and International Style. Also covers Art Nouveau, Art Deco, Frank Lloyd Wright and the Prairie School, progressive architecture in Holland, Italy, and Japan, and advent of Post Modernism. Emphasis on the relationship between architectural and socio-political scenes of the modern world. Fall semester alternate years.

315 History of Modern Painting and Sculpture (3)
A survey of the last 100 years of western painting and sculpture from Post-Impression to Post-Modernism. On demand. Prerequisite: 215.

322, 324 Materials and Procedures in Art Education (3,3)
Exploratory activities designed to acquaint the prospective teacher of art with a representative range of appropriate art materials and the procedures which promote their effective use in grades one through twelve. First semester: elementary, grades one through six. Second semester: secondary, grades seven through twelve. Two-dimensional and three-dimensional studio projects, lectures, and discussion included in both courses. 322 spring/324 fall semester alternate years. Prerequisite to student teaching.

336 Sculpture II (3)
Continued work in sculpture processes which utilize metal as a primary material. Casting, welding, metal fabrication (construction). Spring semester Prerequisite: 233, 235.
337, 338 Three Dimensional Studio I, II (3, 3)
Development and exploration of contemporary concepts and media in the 3-D studio areas. On demand, courses are sequential. Prerequisite: Art 211, 215, 244.

340 Visual Arts for Children (1)

344 Ceramics II (3)
Development of student’s individual style through use of design elements and technical skill. Kiln use and general laboratory techniques. On demand. Prerequisite: 244. Studio hours 6.

361 Processes and Materials for Graphic Design (3)

362 Illustration for Graphic Design (3)

371 Intermediate Typography (3)
A continued study in theoretical and applied issues of typography, focusing on creative and innovative use of type selection and specification. Typography as visual communication. Fall semester. Prerequisite: 271. Studio hours 6.

380 Photography for Graphic Design (3)
Photography as a medium for design and presentation. Application of reproduction methods for the graphic arts field using photographic tools as a form of a design aesthetic. Fall semester. Prerequisite: Art 281, 260. Studio hours 6.

381 Color Photography (3)
Introduction to the principles and theory of color photography. Techniques covered are color film processing, color printing, slide presentations, and applied technology. Exploration of media for creative expression. Every semester. Prerequisite: 281 or approval of department head. Studio hours 6.

401 Visual Arts Internship (3)
Practical experience in a professional environment to provide individuals with the opportunity to be supervised in art-related agencies. These would include, but not be limited to, advertising and media industries, art museum operation, gallery management, etc. Every semester. Prerequisite: declared major, 75 accumulated credit hours minimum, 21 hours in art, approval of department head during the preceding semester.

405, 406 Drawing V, VI (3, 3)
Individual problems in the application of drawing techniques and styles. Continued exploration of life drawing from the human figure. On demand, courses are sequential. Prerequisite: Art 206. Studio hours 6.

407, 408 Painting V, VI (3, 3)
Development of individual style in painting through selected media, conceptual intent, and compositional approaches. On demand, courses are sequential. Prerequisite: Art 308. Studio hours 6.

409 Senior Studio in Painting and/or Drawing (3)
Selected problem in painting or drawing to further the development of a student’s aesthetic, and which culminates in a body of work of exhibition quality. On demand. Corequisite: Art 408. Studio hours 6.

414 Major Trends in American Art (3)
The visual arts of the United States including the arts of the European settlers and the first generation Americans of the Colonial Period, the great portraitists of the Revolution and the 19th century, the 19th century landscapists, the pioneer modernists of die early 20th century, and the regionalists of the ‘30s. Culminates with the first American style to achieve international significance, the New York School, and the resultant dominance of American art in the world today. Spring semester. Prerequisite: 215.

431, 432. Arts of the Far East (3, 3)
A selective presentation of the visual arts of China, Japan, India, and other culturally significant regions of Asia. First semester devoted to the earlier phases of Chinese and Japanese art and the art of India from the Indus Valley Civilization through the Medieval period. Second semester presents developments in China from the Han Dynasty onward, and in Japan from die Heian period to the present. On demand. Courses need not be taken sequentially.

437, 438 Three Dimensional Studio III, IV (3, 3)
Directed study of student-selected 3-D problems and processes with primary focus on non-traditional forms. On demand. Courses are sequential. Prerequisite: Art 338.

439 Advanced Three Dimensional Studio (3)
Directed study of student-selected 3-D problems and processes with emphasis on development of personal aesthetic. On demand. Prerequisite or corequisite: Art 437.

440 Senior Studio in Sculpture (3)
Selected problems in the 3-D area to further the development of a student’s aesthetic, and which culminates in a body of work of exhibition quality. On demand. Prerequisite: Art 439.

450r Concentration Topic in Printmaking (3)
Continuing investigation of one of various printmaking processes: intaglio, monotype, book art, lithography, screen printing. On demand. Students may not repeat the same topic. Maximum 9 hours toward concentration. Prerequisite: varies with topic offered and permission of department head.

451 Senior Studio in Printmaking (3)
Selected problem in printmaking to further the development of a student’s aesthetic, and which culminates in a body of work of exhibition quality. On demand. Prerequisite: Art 105, 306.

452 Research and Studio Problems in Elementary School Art (1-3)
Assigned projects in the history, theory, and innovative approaches in art education at the elementary level. Emphasis on studio problems directed toward the individual’s need. On demand.

460 Graphic Design IV - Senior Graphic Design Studio (3)
An intensive design research course specifically focusing on design systems such as: signage, identity, package, environmental, product, or publication. This course will also address student preparation specifically for design professions. On demand. Prerequisite: Art 361.

465, 466 Problem Solving in Graphic Design (3, 3)
Advanced study in graphic design, focusing on applied problems. Emphasis on formal, intellectual, aesthetic and pragmatic issues. Problems integrating word and image, organization of information, visual interpretation. Work leading to significant portfolio development. Fall and Spring semester. Courses are sequential. 465 prerequisite to 466. Studio hours 6.

471 Advanced Typography (3)

490r Seminar in Art Education (3)
Emphasis on contemporary issues in art education. On demand.

491 Senior Exhibition Experience (2)
A collective, collaborative sequence to plan, design, and install a gallery exhibition required for all graduating seniors majoring in art. Emphasis on group interaction and co-ordination, cooperative learning, problem-solving skills, exhibition and gallery design. Every semester. Prerequisite: senior standing in the major.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See “Departmental Honors,” page 27.

497r Research (1-4)
Every semester.
The Department of Biological and Environmental Sciences offers three majors: a B.S. in biology, a B.S. in medical technology and a B.S. in Environmental Science. The course requirements are listed below.

Students are urged to consider attendance at the institution affiliated with UTC’s Department of Biological and Environmental Sciences that offers field course experience in the life sciences: Gulf Coast Research Laboratory, Ocean Springs, Mississippi, offering courses in marine biology.

Preprofessional programs in dentistry, medical technology, medicine, cytotechnology, dental hygiene, pharmacy, and veterinary medicine are described in the Preprofessional Programs section of the catalog.

**Biology (B.S.)**

- General Education (see pages 22-24 for list of approved courses)
- Category A: 2 approved courses in written communication in the English language
- Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
- Category C: 2 approved behavioral or social science courses (6 hours)
- Category D: 2 approved physical or natural science course other than biology with laboratory (4 hours; approved related course below will apply)
- Category E: 1 approved mathematics course (3 hours; approved related courses below will apply)
- Category G: 1 approved perspectives course other than biology (3 hours)

**Exercise Science, Health and Leisure Studies 021** plus one additional semester exercise science activity

**Major and related courses**

- Foreign language through 102 (first college year)
- Mathematics 135, F136 or F145, F150;
- Chemistry D121, 122,351,352;
- Biology - 38 hours including 121, 122, (A grade of C or better must be earned in 122 in order to take courses beyond the 100 level, for which 122 is a prerequisite), 325 (326 required for the molecular concentration but is an elective for all other concentrations), four laboratory courses above the 100 level, 3 hours of a single, formal lecture or laboratory course at the 400 level.

No more than 4 hours of 497r and/or 498r may be counted as part of the 38 hours of biology.

2.0 average in major and related courses (excluding Biology 210)

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Each Biology major must also complete the requirements for one of the following concentrations. Specific courses for each concentration will be selected from the following four categories:

- **Botany:** 207, 352
- **Zoology:** 312, 313, 330, 340, 342, 403, 408, 425, 456, 457
- **Ecology and Evolution:** 306-7, 315, 416, 450, ESC 406
- **Cell and Physiology:** 304, 311,323, 326, 412,420,428,463

**General Biology Concentration**

- **Physics 103, 104 or Geology 111, 112:** Physics 103, 104 recommended for prospective graduate students.
- **Biology:**
  - Botany (select 1 course) - 207, 352
  - Zoology (select 1 course) - 312, 313, 330, 340, 342, 403, 408, 425, 456, 457
  - (Courses offered in Botany and Zoology at Gulf Coast Research Laboratory may be substituted. Permission of the department head required.)
  - Ecology and Evolution (select 1 course) - 306-7, 315, 416, 450, ESC 406
  - Cell and Physiology (select 1 course) - 304, 311,323,412,420,428,463
- **Recommended electives:** Mathematics 210, Computer Science 110, and Chemistry 341,466

**Preprofessional Concentration (Premedical, Pre dental)**

- **Chemistry 466**
- **Physics 103,104**
- **Biology:**
  - Botany (select 1 course) - 207, 352
  - Zoology (select 1 course) - 312, 313, 330, 403, 408, 425, 456, 457
  - (Courses offered in Botany and Zoology at Gulf Coast Research Laboratory may be substituted. Permission of the department head required.)
  - Ecology and Evolution (select 3 courses) - 306-7 (required), 315,416,450, ESC 406
  - Cell and Physiology (select 1 course) - 304, 311, 323, 428, 463
- **Recommended electives:** Computer Science 110 and Classics 300

**Ecology Concentration**

- **Mathematics 210**
- **Physics 103, 104 or Geology 111, 112**
- **(Physics 103, 104 recommended for prospective graduate students.)**
- **Biology:**
  - Botany (select 1 course) - 207, 352
  - Zoology (select 1 course) - 312, 313, 340, 342,456, 457
  - (Courses offered in Botany and Zoology at Gulf Coast Research Laboratory may be substituted. Permission of the department head required.)
  - Ecology and Evolution (select 3 courses) - 306-7 (required), 315,416,450, ESC 406
  - Cell and Physiology (select 1 course) - 304, 311, 323, 428, 463
- **Recommended electives:** Computer Science 110, Geog 221, Geol 123

**Organismal Biology Concentration**

- **Mathematics: F145, 210, F150 recommended for prospective graduate students.**
- **(Physics 103, 104 recommended for prospective graduate students.)**
- **Biology:**
  - Botany (select 1 course) - 207, 352
  - Zoology (select 1 course) - 312, 313, 340, 342,456, 457
  - (A minimum of one botany and one zoology course must be taken. Courses offered in Botany and Zoology at Gulf Coast Research Laboratory may be substituted. Permission of the department head required.)
  - Ecology and Evolution (select 2 courses) - 306-7, 315, 416, 450, ESC 406
  - Cell and Physiology - 304 or 323
- **Recommended electives:** Computer Science 110 and Chemistry 466

**Molecular Concentration**

- **Mathematics F145, F150 recommended for prospective graduate students.**
- **Chemistry 466**
- **Physics 103, 104**
- **Biology:**
  - Botany (Select 1 course) - 207 352
  - Zoology (Select 1 course) - 312, 313,330, 340, 342,403, 408, 425,456, 457
  - Ecology and Evolution - (Select 1 course) 306, 315, 416, 450, ESC 406
  - Cell and Physiology - 311, 326, 412, 420, and 428
- **Recommended electives:** Mathematics 210, Computer Science 110 and Chemistry 341,446
Typical course of study in biology (B.S.): general biology concentration

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TOTAL HOURS 128

Typical course of study in biology (B.S.): ecology concentration

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<tr>
<td>Cell and Physiology 3-4</td>
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<tr>
<td>Total 15-18</td>
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TOTAL HOURS 128

Typical course of study in biology (B.S.): organismal concentration

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<td>Mathematics F136 or F150 3-4</td>
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TOTAL HOURS 128
**Typical course of study in biology (B.S.)**

First Semester & Second Semester
---
**FRESHMAN**
- General Education Category A: 3
- Chemistry Dl 21: 4
- Biology 121: 4
- Elective: 3
- EHLS 021: 1
- **Total:** 15

**SOPHOMORE**
- Mathematics 135 or F145: 3
- Chemistry 351: 4
- Botany: 4
- General Education Category B: 3
- Foreign Language: 4
- **Total:** 18

**JUNIOR**
- Physics 103: 4
- Biology 325 (326): 4
- General Education Category B: 3
- General Education Category C: 3
- Elective: 4-2
- **Total:** 15-16

**SENIOR**
- Biology 428: 4
- Biology 412: 3
- Chemistry 466: 4
- General Education Category G: 3
- Electives: 3
- **Total:** 16

**TOTAL HOURS 128**

*General Education courses from categories A,B,C, or G may be taken in any sequence.

**BIOLOGY MINOR**

The Biology Department offers a minor requiring 20 hours of biology including Biology 121, 122 and eight hours at the 300 level or above. Minimum 2.0 average in the minor.

**Medical Technology (B.S.)**

- General Education (see pages 22-24 for list of approved courses)
- Category A: 2 approved courses in written communication in the English language (6 hours)
- Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
- Category C: 2 approved behavioral or social science courses (6 hours)
- Category D: 1 approved physical or natural science course with laboratory (4 hours or approved related course below will apply)
- Category F: 1 approved mathematics course (3 hours; approved related courses below will apply)
- Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

**Major and related courses**
- Mathematics 135, F136 or F145, F150; F145, F150 recommended for prospective graduate students
- Physics 104, and 16 hours of chemistry including D121, 122, 351, either 352 or 341
- Biology courses including 121, 122, 208, 209, 311, 412; 323 or 428; one course from 315, 325, 403, 425, and one course from 306-307, or 408; 30 hours from approved school of medical technology

2.0 average in all biology courses

**Electives to complete 128 hours**

**Typical course of study in medical technology (B.S.)**

First Semester & Second Semester
---
**FRESHMAN**
- General Education Category A: 3
- Chemistry 122: 4
- Biology 122: 4
- Elective: 3
- EHLS Activity: 1
- **Total:** 15

**SOPHOMORE**
- Mathematics 135 or F145: 3
- Chemistry 341 or 352: 4
- General Education Category B: 3
- General Education Category C: 3
- Biology 208: 3
- Biology 209: 1
- General Education Category G: 3
- **Total:** 17

**JUNIOR**
- Physics 105: 4
- Biology 323 or 428: 4
- General Education Category C: 3
- Elective (Foreign Language)*: 7
- **Total:** 18

**SENIOR**
- 30 hours from approved school of medical technology.

**TOTAL HOURS 128**

*Students considering a B.S. in biology as an addition or an alternative to a B.S. degree in medical technology should take one year of a foreign language.

**Environmental Science (B.S.)**

The environmental science major consists of two parts: 1) a core curriculum required of all majors and 2) a concentration of study in one of the following areas: biology, chemistry, engineering, geology, geography, mathematics, physics, or sociology/anthropology. Environmental science courses are described below; all other required courses are described in the listings of other departments named.

**General Education** (see pages 22-24 for list of approved courses)
- Category A: 2 approved courses in written communication in the English language (6 hours)
- Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
- Category C: 2 approved behavioral or social science courses (6 hours)
- Category D: 1 approved physical or natural science course other than discipline concentration (6 hours)
- Category F: 1 approved mathematics course (3 hours; approved related courses below will apply)
- Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Major and Related Courses
The following core requirement must be completed by all Environmental Science majors.
Mathematics F145, F150, F210
33 hours including Environmental Science 150, 151, 410, 484, Geography 221; and courses from the areas:
Environmental Policy and Planning (select 1 course): Environmental Science 407, 430, Sociology 209
Environmental Resources (select 1 course): Environmental Science 240, 250, Geography 436, 445
Environmental Methods (select 1 course): Environmental Science 340, 360, Geography 465, 466
Senior Experience (2 credit minimum) Environmental Science 480, 490, 491r, 495r, 496r, 497r, 498r
Three laboratory courses above the 100 level from either the core or concentration requirements.
Each Environmental Science major must also complete the requirements for one of the following concentration:
Biology:
Computer Science 110 or 118
Chemistry D121, 122, 341, 351
Biology 121, 122, 306 (307 recommended)
Three courses from Biology 207, 311, 312, 313, 325, 342, 352, 408, and 416
One course from Environmental Science 225, 406 or 465
Chemistry:
Computer Science 110 or 118
Biology D121, 122, 306 (307 recommended)
Chemistry 121, 122, 341, 342, 351, 352
Physics 103, 104
Engineering science:
Chemistry D121, 122, 341, 351, 352
Engineering 103, 104, 113, 114, 124, 211, 225, 271, 272, 303, 307, 322, 328, 329, 331
Mathematics 160, 212, 245, 255
Physics 231, 232
Geology:
Computer Science 110 or 118
Chemistry D121, 122
Geography 101 or Geography 108
Geography 206 (409 recommended)
Geology 111, 112, 241, 242, and 9 additional hours from 225, 454, 407, 436, 445, or 496. These hours are additional to any Geology hours taken as part of the 30 hours required of all ESC majors.
Geography:
Computer Science 110 or 118
Sociology C151, 209, 314
Geology 111, 112
21 hours from Geography, 9 of which must be at the upper level. These hours are additional to any Geography hours taken as part of the 30 hours required of all ESC majors. With permission of the Biology/Environmental Science department head, Geology 307 or Biology 416 or an upper level ESC course may be substituted for 3 hours.
Mathematics:
Computer Science 118
Mathematics 160, 212, 245, 255, 295, 308, 350, 407, 408, 412; two courses from 414, 418, 422, 428, 440, 445, 460, or 470
1 two semester sequence from biology, chemistry, engineering, geology, physics
Physics:
Computer Science 110 or 118
Chemistry D121, 122
Mathematics 160
Physics 103, 104, 231, 232; 12 hours from 303, 304, 307, 310, 318, 341, 342, 411, or 412.
Sociology-Anthropology:
Computer Science 110 or 118
Sociology 151, 314, 394; either Anthropology 152 or 208; either Anthropology 302 or Sociology 312; additional 15 hours from Anthropology 211, 335, 356, 410, 425 and Sociology 209, 219, 300, 305, 317, 318, 331, 341, 440, 415, 430 (minimum 9 hours selected from these additional courses at 300-400 level); one two-semester sequence from biology, chemistry, geology, or physics.
2.0 average in all environmental science courses

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical courses of study in environmental science (B.S.)

Environmental science (B.S.): biology concentration

First Semester  
FRESHMAN
Environmental Science 150 4
Elective 3
Biography 121 4
General Education Category A 3
EHLS 021 1
Total 15
Second Semester
General Education Category B 3
Mathematics 135 or F145 3-4
Chemistry 341 4
Environmental Science 406 or 465 4
General Education Category C 3
Computer Science 110 or 118 3
Environmental Science 406
Elective 3
Total 17-18

SOPHOMORE
Environmental Science 340 4
Chemistry 341 4
Mathematics F210 3
General Education Category B 3
EHLS Activity 1
Total 16-17

JUNIOR
Environmental Science 484 3-4
Chemistry 341 4
Mathematics F210 3
General Education Category A 3
Environmental Science 484 or 340 3-4
Chemistry 351 4
Total 16

SENIOR
Elective 3
General Education Category C 3
General Education Category B 3
Environmental Science 484 or 340 3-4
Environmental Science 480 1
Total 13-14

TOTAL HOURS 128

Environmental science (B.S.): chemistry concentration

First Semester  
FRESHMAN
Environmental Science 150 4
Chemistry 122 4
General Education Category A 3
EHLS 021 1
Mathematics F145 4
EHLS Activity 1
Total 16
Second Semester
General Education Category B 3
Environmental Science 150 4
Chemistry 122 4
General Education Category A 3
EHLS Activity 1
Total 16

SOPHOMORE
General Education Category B 3
Mathematics F145 3-4
Chemistry 341 4
Mathematics F150 4
General Education Category C 3
Biography 122 4
Environmental Science 406 or 465 3
Computer Science 110 or 118 3
Total 17
Environmental science (B.S.): geology concentration

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<td>or 250 3</td>
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Environmental science (B.S.): geography concentration

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Environmental science (B.S.): engineering concentration

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Environmental science (B.S.): mathematics concentration

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Environmental Science 150 4
General Education Category A 3
EHLS 021 1
Mathematics F150 (135/145)* 4
Elective 3
Total 15

Sophomore
General Education Category G 3
General Education Category B 3
Mathematics 295 3
Mathematics 245 3
Biology 122 4
Total 16

Junior
Environmental Science 340 3-4
Computer Science 118 3
Mathematics 407 3
Mathematics 350 3
General Education Category B 3
Total 15-16

Senior
General Education Category B 3
General Education Category G 3
Environmental Science 484 or 340 3-4
Mathematics elective from 414,418,424,440,460 3
Electives 5
Total 17-18

Total Hours 128

*Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.
### ENVIRONMENTAL SCIENCE MINOR

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**TOTAL HOURS 128**

**BIOLOGY COURSES**

**121 Principles of Biology I (4)**

An introduction to the basic biological ideas including the methods of the biologist, Darwin's evolutionary theory, cell structure, digestion, respiration, body fluid regulation, cell division and reproduction, Mendelian and molecular genetics, and animal behavior. Every semester. Lecture 3 hours, laboratory 2 hours.

**122 Principles of Biology II (4)**

Continues examination of basic biological principles including energy transformations, hormones, nervous control, effectors, organism development, modern evolutionary theory, ecology, origin of life, and survey of major groups within the kingdoms of organisms. Every semester. Lecture 3 hours, laboratory 2 hours.

**123 Introductory Animal Physiology (4)**

Study of the form, reproductive processes, and evolutionary relationships of the principal nonvascular and vascular plant groups. Spring semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: Biology 122 or equivalent.

**124 Human Physiology (3)**

Lecture studies of the physiological functions of the human body. Formerly 192. Every semester. Corequisites: Biology 209; Chemistry 121.

**125 Laboratory Studies in Human Physiology (1)**

Laboratory studies of the physiological functions of the human body. Formerly 193. Every semester. Laboratory 2 hours. Pre- or corequisite: Biology 208.

**126 Genetics: A Human Concern (3)**

An investigation of our current knowledge of genetics, both traditional and modern molecular, and the use of this knowledge as it affects our lives. Specifically, after a review of what we now know about human inheritance, discussions will center around the ethical, social, and legal ramifications of our present understanding and capabilities to utilize this knowledge both now and in the future. Fall semester alternate years.

**127 Plant Physiology (4)**

Vascular plant structure and function emphasizing physiological activities, such as photosynthesis, water relations, mineral nutrition, and hormonal action. On demand. Lecture 3 hours, laboratory 2 hours. Prerequisites: Biology 122; Chemistry 121, 122 or equivalent. Pre- or corequisite: Chemistry 351.

**128 Ecology (3)**

The community concept with reference to structure, energy, cycles, and populations; the distribution of plants and animals with analyses of the factors involved. Spring, fall, or summer semester. Prerequisite: Biology 122 or equivalent, or approval of instructor.

**129 Ecology Laboratory (1)**

Field application of ecological principles. Spring, fall, or summer semester. Laboratory 2 hours. Field trips. Prerequisite: Biology 122 or equivalent. Corequisite: 306.

**130 Principles of Microbiology (4)**

Morphology and physiology of microorganisms. Spring semester. Lecture 2 hours, laboratory 4 hours. Credit not allowed in both Biology 210 and 311. Prerequisites: Biology 122, Chemistry 122 or equivalent.

**131 Comparative Vertebrate Zoology (4)**

The biology of the phylum Chordata, in particular the vertebrates, with an emphasis on their systematic, structural evolution, and functional morphology. Laboratory dissection of the shark, salamander, and cat. Fall or spring semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: Biology 122 or equivalent.

**132 Evolution (3)**

Evidences of evolution; mechanism of natural selection; role of genetic factors in the diversity of populations; origin of races; species and higher categories; adaptation and behavior; recognition of evolutionary relationships; significance of evolution to the human species. Spring semester alternate years. Prerequisite: Biology 122 or equivalent.

**133 Introductory Animal Physiology (4)**

A detailed analysis of selected aspects of animal physiology. For students whose primary interest is biological science. On demand. Lecture 3 hours, laboratory 3 hours. Prerequisites: Biology 122, Chemistry 122.

**134 Genetics (3)**

Principles of classical (Mendelian), molecular, and population genetics including patterns of inheritance, genetic code and regulation of protein synthesis, recombinant DNA techniques, and evolution of the genome at the population and molecular levels. Fall semester. Prerequisites: Biology 122, Chemistry 122 or equivalent. Corequisite (Biology major only): 326.

**135 Genetics Laboratory (1)**

Investigations in classical, molecular, and population genetics. Fall semester. Laboratory 2 hours. Pre- or corequisite: 325.

**136 Histology (4)**

Structure of animal tissues and organ levels with emphasis on recognition, origin, and function of mammalian tissues. Spring semester alternate years. Lecture 2 hours, laboratory 4 hours. Prerequisites: Biology 122, Chemistry 122 or equivalent. Biology 191 or 313 recommended, Chemistry 352 recommended or permission of the instructor.

**137 Herpetology (4)**

Morphology, ecology, taxonomy, and evolution of amphibians and reptiles. Spring, Fall, or Summer semester. Lecture 3 hour, laboratory 2 hours. Dissections and field trips. Prerequisites: 122 or equivalent.
324 Entomology (4)
Principles of entomology including the morphology, development, taxonomy, ecology, and importance of insects. Fall semester alternate years. Lecture 3 hours, laboratory 2 hours. Prerequisite: Biology 122 or equivalent.

352 Taxonomy of Vascular Plants (4)
Speciation; breeding systems; pollination systems; edible and poisonous plants; and origin of flowering plants. Laboratories emphasize identification of flowering plants, conifers, and ferns. Some field work required. Spring semester. Lecture 2 hours, laboratory 4 hours. Prerequisite: Biology 122 or equivalent.

403 Developmental Vertebrate Embryology (4)
Current developmental processes and concepts drawn from selected invertebrate studies, but with major emphasis on experimentation in higher vertebrates. Laboratory explores vertebrate development through embryological slides, films and experimentation. Spring semester each year. Lecture 2 hours, laboratory 4 hours. Prerequisite: Biology 122 or equivalent.

408 Parasites of Man (4)
Life cycles, ecology, and physiology of the parasites of human beings including the diseases caused by these parasites. Formerly 308. On demand. Lecture 2 hours, laboratory 4 hours. Prerequisite: Biology 122 or equivalent, or approval of instructor.

412 Immunology and Virology (3)
Reactions of the mammals, including humans, to foreign substances. A study of viruses using, in part, immunological and serological procedures. Spring semester. Prerequisite: 210 or 311.

416 Biogeography (3)
A study of the distribution of plants and animals from a climatic and historical perspective. Fall semester. Prerequisite: Biology 122.

420 Molecular Genetics (3)
Genetic structure and regulation focusing on modern techniques and applications of genome manipulation. Spring semester. Prerequisite: 325 or 428.

425 Developmental Biology (3)
Principles of development with emphasis on causal factors in plant and animal embryogenesis. On demand. Lecture 2 hours, laboratory 3 hours. Prerequisite: Biology 122, Chemistry 122 or equivalents, and 8 additional semester hours of biology. Pre- or corequisite: Chemistry 352. Permission of the instructor in some cases.

428 Cellular Biology (4)
Morphological and chemical organization of the cell; cellular metabolism; metabolic energy relationships; nature of enzymes; fermentative and oxidative metabolism; photosynthesis. Fall and/or spring semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: Biology 122, Chemistry 352, Mathematics 135 or equivalent.

450 Systematics (3)
Principles of systematic biology including contemporary systematic philosophies, problems of species and speciation, taxonomic characters and interpretation, construction of evolutionary trees, higher categories and classification, nomenclature, taxonomic collections and procedures of identification. On demand. Prerequisites: Biology 122 or equivalent.

456 Ichthyology (4)
The biology of fishes, with an emphasis on the functional morphology, systematic, evolutionary, diversity, distribution, and ecology of fishes. Laboratory includes identification of the diversity of regional fish faunas, as well as laboratory dissections and field trips. Spring or fall semester. Lecture 3 hours, laboratory 3 hours. Prerequisites: Biology 313, (or equivalent courses) or permission of the instructor.

457 Mammalogy (4)
The biology of mammals, with an emphasis on diversity, distribution, systematics, structural evolution and paleontology, and functional morphology. Laboratory includes identification of regional diversity, as well as dissections and field trips. Spring semester alternate years. Lecture 3 hours, laboratory 3 hours. Prerequisites: Biology 313 (or equivalent courses) or permission of the instructor.

463 Endocrinology (3)
The hormones of animals with emphasis on those of mammals. Fall semester. Prerequisites: Biology 122, Chemistry 122.

494r Biology Seminar (1)
Presentation of programs of current biological interest by students, faculty, and outside speakers. On demand. Prerequisite: 16 semester hours biology. Maximum credit: 2 hours.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See "Departmental Honors," page 27.

496r Biological Techniques (1)
The study of various procedures dealing with such diverse topics as instrumentation, photomicrography, or special field techniques. Subject differs each time offered. On demand. Prerequisite: 15 hours of biology and approval of instructor.

497r Research (1-4)
Every semester. Prerequisite: approval of instructor and head of the department.

498r Individual Studies (1-4)
Every semester. Prerequisite: approval of instructor and head of the department.

499r Group Studies (1-4)
On demand.

ENVIRONMENTAL SCIENCE COURSES

150 Introduction to Environmental Problems I (4)
An introduction to current environmental problems at the global, national and local levels. Topics to be covered include: ecosystems, geochemical cycles, domestic and industrial wastes, pest control, resources, energy sources, land use, and population dynamics. The laboratory integrates the scientific approach as applied to such environmental problems as population growth and energy alternatives and provides hands-on experience in identification of abiotic and biotic factors affecting environmental quality. Open to all students interested in environmental issues. Every semester. Lecture 3 hours, laboratory 2 hours.

151 Introduction to Environmental Problems II (4)
Continues examination of current environmental problems, including environmental impact assessments, risk analysis and environmental health, an overview of environmental legislation, and selected high risk ecosystems (e.g. wetlands, bottomland hardwoods, etc.). Spring semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: Environmental Sciences 150.

199r Special Projects (1-4)
On demand. Maximum credit four hours.

225 Oceanography (3)
Chemical and physical properties of sea water. Causes and patterns of oceanic circulation. Life zones in the oceans and factors delimiting them. Origin and physiography of ocean basins. Mineral and energy resources of the oceans. Spring semester. May be registered as Geology 225.

226 Oceanography Laboratory (1)

240 Introduction to Soil Resources (3)
Geologic origin, characteristics, and taxonomic groupings of soils, together with emphasis on survey methods and mapping procedures. Conservation and the environmental impact of agricultural and nonagricultural soil and land use. Spring semester alternate odd years. Lecture 2 hours, laboratory 2 hours.

250 World Resources (3)
Location, utilization, production, consumption, and significance of resources to society. Introduction to the vast, interlocking network of activities that produce and affect the world's use and consumption of resources. Spring semester alternate odd years. May be registered as Geography 250. Lecture 3 hours.

340 Environmental Survey Methods (4)
Field survey methods for compiling of botanical, zoological, geological, and archaeological data. To include mapping, sampling, and recording. Fall semester alternate even years. Lecture 2 hours, laboratory 4 hours.
360 Air and Water Pollution Control (3)
The study of the origin, monitoring and control of air and water pollutants; to include sample taking, testing and observation of procedures used in community laboratories. Spring semester alternate odd years. Lecture 2 hours, laboratory 2 hours. Prerequisites: one year of a natural science or engineering and fulfillment of the mathematics and statistics requirement for the respective concentration.

406 Limnology and Reservoir Ecology (3)
Chemical, physical, and biological processes in lake and reservoir systems (nutrient budgets and cycling, hydrodynamics, phytoplankton/zoooplankton/benthic dynamics, and physical similarities and differences in lakes and reservoirs). Fall semester alternate odd years. Lecture 2 hours, laboratory 2 hours. Prerequisites: general chemistry, general biology, ecology, junior standing; general physics recommended.

407 Environmental Conservation (3)
See Geography 407.

410 Environmental Law and Agencies (3)
Survey of national, state, and local environmental agencies, and provisions of environmental laws and ordinances at all levels of government. Emphasis on National Environmental Policy Act (NEPA). Analysis and composition and environmental impact statements. Spring semester alternate odd years. Prerequisite: senior standing.

430 Problems in Environmental Management (3)
Case history studies of problems in environmental management, with emphasis on the kinds of environmental precautions required in specific situations and on factors contributing to legal challenges to industrial and technological activities which have environmental consequences. On demand.

455 Demographic Analysis (3)
Techniques of measuring and analyzing human population growth and distribution. Emphasis is placed on relationships of human population changes on environmental resources as well as effects of environment on morbidity and mortality. On demand.

465 General Toxicology (3)
Basic concepts of toxicology including an overview of toxic agents, the nature of toxic damage, and the methods used in quantitative toxicology. On demand. Lecture 3 hours. Prerequisites: Environmental Science 150; Biology, either 121 or 122; Chemistry 121 and 122. Recommended: Chemistry 351.

475r Environmental Workshops for Teachers (1-4)
Workshops for science educators in environmentally related topics such as the conservation of endangered species, soil conservation, or water quality and water resource conservation. Designed to provide teachers with laboratory or field experiences and materials related to the environmental sciences. May be taken a maximum of three times.

480 Seminar on the Environment (1)
Seminar and discussion of topics of current environmental interest. Student presentation required. Spring semester. Prerequisite: senior or graduate standing.

481 Politics and the Environment (3)
A political analysis of the conflicting interests involved in implementing policies to protect the environment, develop alternative energy sources, and promote economic growth. On demand.

482 Technology and the Environment (3)
Explores the complex relationships between technology and the environment that have existed since the Paleolithic Period. Special attention to the study of tools for extracting materials and energy from the environment and to the effect of these tools upon the landscape. On demand.

483 Economics and the Environment (3)
An economic analysis of causes and effects of pollution; the role of economic policy in controlling pollution with special emphasis on water, air, and solid waste residuals; an evaluation of the alternative environmental controls. On demand.

484 Values and the Environment (3)
An examination of the personal and social values at issue in the environmental problems of urban and nonurban regions. Attention to the emerging concern for an environmental ethic. Fall semester alternate odd years. Prerequisite: Environmental Science J 50.

490 Environmental Science Senior Project (3)
A group project involving analysis and solution of an environmental problem; oral and written presentation of progress and final results required. Fall semester alternate even years. Prerequisite: senior standing.

491r Environmental Science Internship (Specific Agency, etc.) (1-4)
A cooperative arrangement between the University and agencies, organizations, groups, and businesses involved with environmental problems. Designed to provide students with a learning, observing, and work experience through direct contact with individuals working on problems related to their field. Maximum credit: 9 hours. Every semester. Prerequisite: junior or senior standing and consent of environmental studies department head.

495r Departmental Honors (2 hours per term, 4 hours for the two terms) On demand. See “Departmental Honors,” page 27. The Chemistry Department strongly recommends that all senior departmental honor projects be preceded by a ten week summer research project or by two semesters of departmental research in Chemistry 497. Between 5 and 10 clock hours of research per week are expected for 495 credit. Maximum credit 4 hours.

496r Environmental Field Camp (1-6)
An interdisciplinary field experience representing two or more of the following disciplines: archaeology, botany, zoology, geology, and sociology. The field experience will include data collection in meaningful scientific studies, mapping, photography, and use of taxonomic keys. On demand. Prerequisite: introductory courses in the natural and behavioral sciences, at least junior level standing, and approval of instructors.

497r Research (1-4)
On demand. Prerequisites: approval of instructor and head of the department.

498r Individual Studies (1-4)
Every semester. Prerequisites: approval of instructor and head of the department.

499r Group Studies (1-4)
Every semester.

CONSORTIUM COURSES
The University of Tennessee at Chattanooga maintains a formal affiliation arrangement with the Gulf Coast Research Laboratory (GCRL) in Ocean Springs, Mississippi. Through this arrangement, our students may take field courses in marine science at GCRL during the summer. Credits for these courses are awarded through the University of Southern Mississippi and will be accepted as transfer credit at The University of Tennessee at Chattanooga. The following is a list of courses taught at GCRL, their level (undergraduate or graduate), and the semester hours credit. Not all courses are offered each year.

- Marine Science 1: Oceanography (U) 5 hrs.
- Marine Science II: Marine Biology (U) 5 hrs.
- Coastal Vegetation (U/G) 3 hrs.
- Marine Phycology (U/G) 4 hrs.
- Salt Marsh Plant Ecology (U/G) 4 hrs.
- Coastal Marine Geology (U/G) 3 hrs.
- Marine Invertebrate Zoology (U/G) 6 hrs.
- Marine Ichthyology (U/G) 6 hrs.
- Marine Microbiology (U/G) 5 hrs.
- Comparative Histology of Marine Organisms (U/G) 6 hrs.
- Marine Fisheries Management (U/G) 4 hrs.
- Fauna and Faunistic Ecology of Tidal Marshes (U/G) 4 hrs.
- Early Life History of Marine Fishes (G) 4 hrs.
- Marine Ecology (U/G) 5 hrs.
- Parasites of Marine Animals (U/G) 6 hrs.
- Marine Aquaculture (U/G) 6 hrs.
- Coastal Ecology for Teachers (U/G) 4 hrs.
- Special Problems in Marine Science (U/G) 1 to 6 hrs.
- Special Topics in Marine Science (U/G) 1 to 6 hrs.

Students may obtain more information about the Gulf Coast Research Laboratory and admission to the summer program from the Biology/Environmental Science Head or by writing: Office of Student Services, Gulf Coast Research Laboratory, Ocean Springs, MS 39564-7000. Telephone (601) 872-4201.
Business Administration
See School of Business Administration.

Chemistry
Professor Kutz, Head

The chemistry curriculum provides programs leading to B.A. and B.S. degrees. The B.A. program emphasizes the liberal arts with specialization in chemistry and offers the opportunity to develop a broad background in the sciences for students who are preparing for professional study in the health sciences. The B.S. program offers a greater concentration in chemistry, physics, and mathematics and is recommended for students with a career interest in chemistry. This program, which has been approved by the Committee on Professional Training of the American Chemical Society, is recommended for students who are planning for graduate study in chemistry. Both programs provide strong emphasis on theory and laboratory experience. The department also offers a minor in chemistry.

Preprofessional programs in dentistry, medical technology, medicine, cytotechnology, dental hygiene, pharmacy, and veterinary medicine are described in the Preprofessional Programs section of the catalog.

Chemistry (B.A.)
General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language, (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course other than chemistry with laboratory (4 hours; approved related course below will apply)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Foreign language through second college year
Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major and related courses
Mathematics F145, F150,160
Physics D103,104
35 hours chemistry including 121 (or 125), 122,333,341,351,352,371,386,443,486r
2.0 average in all chemistry courses (excluding Chemistry 111,211 and 311)
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical course of study in chemistry (B.A.)

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<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td>Freshman</td>
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<td>Chemistry 121</td>
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SOPHOMORE
Chemistry 341 4 Chemistry 352 4
Chemistry 351 4 Physics 104 4
Physics D103 4 Elective 4
Math 160 4 Category C 3
EHLS Activity 1
Total 16 Total 16

JUNIOR
Chemistry 371 4 Chemistry 443 4
Chemistry 386 1 Foreign Language II 4
Foreign Language I 4 Electives 3
General Education Category B 3 Category C 3
Chemistry 333 3 Category G 3
Total 15 Total 17

SENIOR
Chemistry 486r 1 Chemistry Elective 2
Foreign Language III 3 Foreign Language IV 3
Category B 3 Electives 11
E lectives 10
Total 17 Total 16

TOTAL HOURS 128

Chemistry (B.S.)
General Education (see page 21-23 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course other than chemistry with laboratory (4 hours; approved related course below will apply)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
One year of a foreign language.
English 278
Mathematics F150,160, 212
Physics D230 (or Physics D103 and 104), 231
One course selected from CPSC 102,110,118 or 150. Students proficient in basic use of the computer are advised to take a programming course (118 or 150).
Chemistry 121 (or 125), 122,333,341, 351,352,371,372,386,434,443,486r
One Chemistry research-related course from 342,453,495r, 496r,497r
One additional Chemistry lab course from 342,453.
One additional Chemistry course from 342,367,426,453,466,475,499r
2.0 average in all chemistry courses (excluding Chemistry 111, 211, 311)
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Typical course of study in chemistry (B.S.)

**FRESHMAN**

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**SOPHOMORE**

| Chemistry 341 | 4 |
| 4             | Chemistry 352 |
| 4             |                 |
| Chemistry 351 | 4 |
| 4             | Physics D230 |
| 4             |                 |
| General Education Category C | 3 |
| 3              | General Education Category C |
| 3              |                 |
| Mathematics 160 | 4 |
| 4              | English 278    |
| 3              |                 |
| EHLS 021      | 1              |
| 1              | EHLS Activity  |
| 1              |                 |
| Total          | 16              |
| Total          | 15              |

**JUNIOR**

| Chemistry 371 | 4 |
| 4             | Chemistry 443 |
| 4             |                 |
| Chemistry 386 | 1 |
| 1             | German 102     |
| 4             |                 |
| German 101    | 4              |
| 4             | Mathematical 212 |
| 3             |                 |
| Chemistry 333 | 3 |
| 3             | Chemistry 372  |
| 4             |                 |
| Physics 231   | 4              |
| 4             | Chemistry 486r |
| 1             |                 |
| Total          | 16              |
| Total          | 16              |

**SENIOR**

| Chemistry Lab Elective | 4 |
| 4                     | Chemistry 434 |
| 4                     |                 |
| Chemistry 497r        | 2 |
| 2                     | Chemistry Elective |
| 2                     |                 |
| General Education Category B | 3 |
| 3              | Electives |
| 10            |                 |
| Electives       | 4              |
| 4              |                 |
| General Education Category G | 3 |
| 3              | Total          |
| 16             | 16              |
| Total          | 16              |
| Total          | 16              |

**CHEMISTRY MINOR**

Chemistry 121 (or 125), 122, 341, 351, 352, and one course selected from 342, 371, 443, or 466. Minimum 2.0 average in the minor.

**CHEMISTRY COURSES**

111 Chemistry and the Environment (3)

Examines chemical concepts and methods of investigation with applications to the environment. Spring semester odd years. Credit may not apply toward a chemistry major.

121 General Chemistry I (4)

Surveys chemical principles involving structure, properties, reactions, and organic chemistry, with laboratory experiments to demonstrate these principles. Every semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: Math Placement level 20 or math 106 or equivalent. Chemistry 125 may be substituted for Chemistry 121 in meeting all requirements.

122 General Chemistry II (4)

Examines chemical concepts in inorganic, analytical, and physical chemistry. Laboratory experiments emphasize qualitative analysis. Every semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: 121 or 125 with a minimum grade of C; Math 135 or equivalent.

125 Honors General Chemistry (4)

Provides an advanced survey of chemical principles involving structure, properties, reactions, and organic chemistry. Laboratory work emphasizes advanced experimental procedures. Fall semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: approval of instructor. Chemistry 125 may be substituted for Chemistry 121 in meeting all requirements.

168 Survey of Organic and Biochemistry (4)

A selection of chemistry principles relevant to health fields, including a survey of organic and biochemistry, with laboratory experiments to demonstrate these principles. Spring semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: Chemistry 121 or 125 with minimum grade of C. Credit not allowed after Chemistry 466. Credit may not be applied toward a chemistry major.

199r Special Projects (1-4)

Focuses on individual or group projects. On demand. Maximum credit 4 hours.

211 Forensic Chemistry (3)

Presents the application of chemical analysis to criminalistics including studies of physical evidence, microscopy, drug analysis, toxicology, arson investigation, serology, firearms, and documents. Fall semester odd years. Credit may not be applied toward a chemistry major.

311 Technologies in America's Future (3)

Examines the role of technological development on the society of the future. Particular emphasis will be placed on methods of technological forecasting, the positive and negative impacts of key technological developments on meeting societal and personal needs, and those areas of technology that are most likely to affect change in our society. Spring semester odd years. Credit may not be applied toward a chemistry major.

333 Inorganic Chemistry (3)

Concepts and models in inorganic chemistry with emphasis on atomic structure and bonding, molecular orbital theory, material science, and descriptive inorganic chemistry including biological and environmental applications. Fall semester. Lecture 3 hours. Prerequisite: Chemistry 352 with minimum grade of C; Mathematics 160. Co- or prerequisite: Chemistry 341 and Physics 104 or 231.

341 Quantitative Analysis (4)

Examines die theory and practice of volumetric, electrochemical, and spectrophotometric analysis applied to die study of stoichiometry and equilibrium. Fall semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: 122.

342 Analytical Methods (4)

Focuses on advanced theory and practice of analytical chemistry including instrumental approaches to separation and analysis. Spring semester even years. Lecture 3 hours, laboratory 3 hours. Prerequisite: 341.

351, 352 Organic Chemistry (4,4)

Studies compounds of carbon with emphasis on structure, synthesis, reactions, and reaction mechanisms with experiments to demonstrate principles and reactions. Qualitative organic analysis included in Chemistry 352. 351 Fall semester/352 Spring semester. Lecture 3 hours, laboratory 3 hours. Prerequisites: 122; 351 is prerequisite to 352.

367 Current Topics in Biochemistry (3)

Studies the biosynthesis of biochemically active molecules, including amino acids, immunoglobulins, and hormones, with special emphasis on current research in these areas. Spring semester odd years. Prerequisite: 352.

371, 372 Physical Chemistry (4,4)

Examines thermodynamics, kinetics, and quantum mechanics with applications to physical and chemical properties of matter. 371 Fall semester/372 Spring semester. Lecture 3 hours, laboratory 3 hours. Prerequisites: Chemistry 341, 351; Mathematics 160. Co- or Prerequisite: Physics 104 or 231; Chemistry 371 is prerequisite to Chemistry 372.

386 Chemical Literature (1)

Surveys the primary, secondary, and tertiary sources of chemical information with weekly individual assignments in the use of these sources. Fall semester. Prerequisite: 16 semester hours of chemistry.

390r Cooperative Work Experience (1)

Cooperative chemistry work experience is part of the Cooperative Education Program. Students participate in off-campus laboratory work in industry or government. Written and oral reports required. Prerequisite: Selection by Cooperative Education Office. Maximum credit 4 hours. Credit may not be applied toward a chemistry major; but/or B.A. degree will count against the 42-hour limit permitted in any one department. Course graded on a satisfactory/no credit basis.
426 Chemistry in Industry (2)
Surveys the chemical industry including economic aspects, activities of chemists, and case studies in the solving of industrial problems. Spring semester odd years. Prerequisite: 24 semester hours of chemistry.

434 Advanced Inorganic Chemistry (4)
Advanced theories of bonding and structure in inorganic chemistry with emphasis on ligand field theory, bioinorganic chemistry, and organometallic chemistry. Spring semester. Lecture 3 hours, Laboratory 3 hours. Prerequisites: Chemistry 333, 371 with grade of C or better; Mathematics 212; Physics 231.

443 Instrumental Analysis (4)
Examines the theory and use of infrared and ultraviolet spectroscopy, nuclear magnetic resonance, atomic absorption, gas chromatography, thermal analysis, electrochemical analysis, and other instrumental methods of characterizing chemical structure. Spring semester. Lecture 3 hours, laboratory 3 hours. Prerequisites: 341 and 352 with minimum grades o/C. Physics 212; Mathematics 231.

453 Advanced Organic Chemistry (4)
Studies advanced concepts of organic chemistry including principles of synthesis, structure, reaction mechanisms, and stereochemistry as applied to current research problems. Laboratory syntheses involve advanced techniques. Fall semester even years. Lecture 3 hours, laboratory 3 hours. Prerequisite: 352 with minimum grade o/C.

466 Biochemistry (3)
Surveys chemical aspects of metabolism in living systems including respiration, photosynthesis lipid, and amino acid degradation. Examines the significance of nucleic acids, nucleotides, amino acids, and proteins. Fall semester. Prerequisite: 352.

475 Polymer Chemistry (2)
Focuses on the chemistry of synthetic polymers including mechanisms of polymerization and the relation of properties to structure. Spring semester even years. Prerequisites: 352 and 371 or equivalent knowledge.

486r Seminar (1)
This participation seminar is based on student papers, invited speakers, and other activities. Every semester. Prerequisite: 24 semester hours of chemistry. Maximum credit 2 hours.

495r Departmental Honors (2 hours per term, 4 hours for the two terms)
The Chemistry Department strongly recommends that all senior departmental honors projects be preceded by a ten-week summer research project or by two semesters of departmental research in Chemistry 497. Between 5 and 10 clock hours of research per week are expected for 495r credit. Every semester. Prerequisite: approval of Chemistry Department. See "Departmental Honors," page 27.

496r Industrial Research (2)
Focuses on group participation in a research project sponsored jointly by the Chemistry Department and a local industry. Written report required. On demand. Laboratory 4 hours. Prerequisite: 20 semester hours of chemistry.

497r Research (2)
Involves laboratory or library research under staff supervision. Seminar presentation of results. Students should confer with the instructor prior to registration. Every semester. Laboratory 4 hours. Maximum credit 4 hours.

498r Individual Studies (1-4)
Involves individual or group projects. Credit may be earned through University, governmental, or industrial laboratory experience approved by the department. Every semester. Maximum credit 4 hours.

499r Group Studies (1-4)
Examines a special topic of a selected area of chemistry as specified in the schedule of classes. Students should confer with the instructor prior to registration. On demand.
### Typical course of study in communication (B.A.)

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Communication 101</td>
<td>3</td>
<td>English 122</td>
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<tr>
<td>English 121</td>
<td>3</td>
<td>Foreign Language 102</td>
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<tr>
<td>Foreign Language 101</td>
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<td>General Education</td>
</tr>
<tr>
<td>E HLS 021</td>
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<tr>
<td>General Education</td>
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#### Sophomore

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<tbody>
<tr>
<td>Communication 230</td>
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<td>Communication 231</td>
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<tr>
<td>Foreign Language 211 or 213</td>
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<td>Foreign Language 212 or 214</td>
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<td>General Education</td>
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<td>General Education Category D</td>
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<td>3</td>
</tr>
<tr>
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<td>Elective</td>
<td>3</td>
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#### Junior

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<tr>
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<tbody>
<tr>
<td>Communication 320</td>
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<td>Communication Electives</td>
<td>6</td>
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<tr>
<td>E HLS Activity</td>
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<td>Minor</td>
<td>3</td>
</tr>
<tr>
<td>Communication Elective</td>
<td>3</td>
<td>Minor</td>
<td>3</td>
</tr>
<tr>
<td>Minor</td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
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<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
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#### Senior

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<tr>
<td>Communication 451</td>
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<td>Communication 485 or 480</td>
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<tr>
<td>Communication Elective</td>
<td>3</td>
<td>Communication 420</td>
<td>3</td>
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<td>Minor or Electives</td>
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<td>Electives</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>3</td>
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<td><strong>15</strong></td>
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</tbody>
</table>

**TOTAL HOURS 128**

### Communication Minor

A total of 18 hours, including Communication 101. Nine hours must be at the 300 level or above. Minimum 2.0 average in the minor.

### Communication Courses

**101 Introduction to Mass Communication (3)**

Structure and functions of the mass communication media and their adjuncts; creation, distribution, and exhibition of mass media content; legal and ethical considerations. Every semester. Lecture 3 hours.

**120 Mass Media in American Society (3)**

Development, theory, functions, uses and effects of mass media and roles of mass media in society and daily lives of individuals. On demand. Lecture 3 hours.

**199r Special Projects (1-3)**

Individual or group studies. Every semester. Laboratory 1 to 3 hours

**230 Writing I (3) (formerly COMM 260)**

Intensive practice in writing for mass media. Style, usage, format and basic computer, interview, and research skills Every semester. Prerequisites: English 121, typing proficiency of 30 wpm, or approval of the instructor. Laboratory 4 hours.

**231 Writing II (3) (formerly COMM 360)**

Researching, structuring, writing, and evaluating news stories, and practice in writing for public relations and advertising. Theoretical perspectives of news and other media information, comparisons among the media. Every semester. Prerequisites: 230, typing proficiency of 36 wpm, or approval of the instructor. Laboratory 4 hours.

**271 Introduction to Public Relations (3)**

Fundamentals of establishing and maintaining effective relations with organizational publics. Introduction to publicity methods and managing the public relations function. Case study approach. On demand. Prerequisites: 101, 230, or approval of instructor. Lecture 3 hours.

**320 Mass Communication Perspectives (3)**

History and development of mass media and mass media issues in American society. Cultural, technological, economic and societal consequences of the media. Every semester. Prerequisite: 101. Lecture 3 hours.

**333 Persuasive Writing (3)**

Preparation of persuasive copy for print and electronic media. Creative and conceptual aspects emphasized. Fall semester. Prerequisite: 231. Laboratory 4 hours.

**335 Publication Editing and Design (3) (formerly COMM 267)**

Elements of publication design, with special attention to typography, graphics, and layout. Every semester. Prerequisite: 240. Laboratory 4 hours.

**340 Audio Production and Presentation (3)**

Producing and presenting content in radio and nonbroadcast audio media, using both studio and portable facilities. Studio, control room, and field production procedures, recording and editing, music and sound effects. Every semester. Lecture 1 hour, laboratory 3 hours.

**345 Video I (3)**

Writing and producing news, commercials, and public service and promotional announcements. Every semester. Prerequisite: 231. Lecture 2 hours, laboratory 3 hours.

**361 Advanced Reporting (3)**

Reporting and writing news from city and county sources, with emphasis on researching public documents. Explorations and discussions of news and its relationship to society. On demand. Prerequisite: 231. Laboratory 4 hours.

**363 Feature Writing (3)**

Nonfiction writing for newspapers, magazines and specialized publications. Every semester. Prerequisite: 231 or approval of the instructor. Laboratory 4 hours.

**400r Special Topics (3)**

Specialized study of mass media designed to meet interests of students and faculty. On demand. Approval of instructor and head of the department.

**410 Public Communication and Environmental Issues (3)**

Seminar concerning environmental policy, information, and education, environmental reporting, and environmental public relations. Also discusses risk communication and the multiracial environmental justice movement. On demand. Prerequisite: Junior or senior standing, Category D, approval of instructor.

**420 Senior Seminar (3) (formerly COMM 450)**

Current issues in mass media and completion of a research project. Every semester. Prerequisite: 320.

**445 Video II (3)**

Television field production: scripting, shooting and editing. Spring semester. Prerequisite: 345. Lecture 2 hours, laboratory 3 hours.

**451 Mass Communication Law and Ethics (3) (formerly COMM 351)**

United States legal system, elements of constitutional law, die law of mass communication. Personal and professional ethics as they apply to communications disciplines. Fall semester. Lecture 3 hours.

**461 Newspaper and Newsletter Editing and Design (3) (formerly COMM 367)**

Principles and practices of editing and evaluating news copy, writing headlines and captions, newspaper and newsletter layout and design practices, electronic editing, and newspaper and newsletter production processes. Spring semester. Prerequisite: 231. Laboratory 4 hours.

**465 The Advertising Campaign (3)**

Principles of campaign research, planning, implementation, and presentation applied to an account. Spring semester. Prerequisite: 333. Lecture 1 hour, laboratory 3 hours.

**470 The Public Relations Campaign (3) (formerly COMM 471)**

Principles of campaign research, planning, implementation, and evaluation, and their application. Spring semester. Prerequisite: 333. Lecture 1 hour, laboratory 3 hours.
Economics—51

480 Directed Project (3)
Guided project designed to demonstrate proficiency at professional level in a specific area. Every semester. Prerequisites: senior standing and approval of the department in the semester preceding enrollment.

485 Individual Internship (3)
Working experience in a professional situation. Every semester. Prerequisites: senior standing and approval of the department in the semester preceding enrollment.

495 r Departmental Honors (1-3 hours, 4 hours for the two)
On demand. See "Departmental Honors," page 27.

497 r Research (1-3 hours)
Every semester. Prerequisite: approval of the department.

498 r Individual Studies (1-3 hours)
Every semester. Prerequisite: approval of the department.

499 r Group Studies (1-3 hours)
On demand.

Computer Science
See College of Engineering and Computer Science.

Criminal Justice
See College of Health and Human Services.

Education

Engineering
See College of Engineering and Computer Science

Economics
Professor Hutchinson, Head

The economics curriculum is designed to prepare students for a successful career in different sectors of the economy. This is accomplished by offering a B.A. as well as B.S. in economics. The B.A. degree provides flexibility in course offerings and requires study of a foreign language. The B.S. degree, on the other hand, stresses mathematics and analysis.

Economics (B.A.)
General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than economics (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours; approved related courses will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Foreign language through second college year
Completion of a minor within the College of Arts and Science with a minimum of 2.0 grade point average

Major and related courses
Management 211 and 212 or Mathematics F210
30 hours of economics including 101, 102, 324, 325, 453, and electives
2.0 average in all economics courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
An economics major may complete a maximum of 33 credit hours in the School of Business Administration. This limit does not apply to students seeking the double major or degree in business and economics.

Typical course of study in economics (B.A.)

First Semester
FRESHMAN
Elective 3
Economics 101 3
Foreign Language 3-4
General Education Category A 3
EHLS 021 1
General Education 3
Total 16-17

SOPHOMORE
Mathematics F210 or B Management 211 3
Foreign Language 3
General Education and Electives 10
Total 16

JUNIOR
Economics 324 3
Electives 13
Total 16

SENIOR
Economics Electives 3
General Education and Electives 10
Economics 453 3
Total 16

Total Hours 128

Economics (B.S.)
General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than economics (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours; approved related courses below will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Major and related courses
Mathematics 135 and F136 or Mathematics F145 and Mathematics F150
Management 211 and 212
Computer Science 110
15 hour core courses including Economics 101, 102, 324, 325, 453
18 hours from the following: Economics 301, 306, 317,404,417,425, 426, 429,
430,444,450,452,455,460,465,470,495r, 497r, 498r, 499r; Accounting 201;
Finance 302 (BACC 202 is prerequisite) Other courses may be substituted with
approval of department.
2.0 average in all economics courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
An economics major may complete a maximum of 33 credit hours in the School
of Business Administration. This limit does not apply to students seeking the
double major or degree in business and economics.

Typical course of study in economics (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRESHMAN</td>
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<tr>
<td>Economics 101</td>
<td>Economics 102</td>
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<tr>
<td>Mathematics 135* or F145*</td>
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<td>Computer Science 110</td>
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<tbody>
<tr>
<td>B Management 211</td>
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<tr>
<td>B Accounting 201</td>
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<td>Economics Elective</td>
<td>General Education and Electives</td>
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<td>Electives</td>
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<tbody>
<tr>
<td>Economics 324</td>
<td>Economics 325</td>
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<td>General Education and Electives</td>
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<tbody>
<tr>
<td>Economics 453</td>
<td>Economics Electives</td>
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<tr>
<td>16</td>
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</table>

TOTAL HOURS 128

*If exempted, student may take Mathematics F136. Students not eligible for
Mathematics 135 must first take Mathematics 106. Students eligible to waive
F145 may start in F150.

ECONOMICS MINOR
A student may obtain a minor in economics by taking Economics 101 and 102
plus 12 additional hours of 300 or 400-level economics courses (minimum of
18 hours).
Minimum 2.0 average in the minor.

ECONOMICS COURSES

101 Principles of Economics: Macroeconomics (3)
A study of national income and its determination, money and banking, economic
fluctuations, fiscal and monetary policy, economic growth, and international
economics. Every semester. Economics 101 and Economics 102 can be taken in
either order.

102 Principles of Economics: Microeconomics (3)
A study of the market system, the price system, forms of business organization,
government and business, labor and distribution. Every semester. Economics 101
and Economics 102 can be taken in either order.

199r Special Projects (1-3)
Individual and group projects. On demand. Maximum credit 3 hours.

301 Money and Banking (3)
Development and analysis of the American monetary system and commercial and
central banking; special attention to analysis and evaluation of monetary
policies. Every semester. Prerequisites: 101, 102.

306 Public Finance (3)
Public expenditures and revenues, principles of taxation, public debt, and fiscal
policy. On demand. Prerequisites: 101, 102.

317 Labor Economics and the Labor Process (3)
Theories of labor markets, the labor process, and income distribution. Economic
aspects of issues such as discrimination, education and unemployment. On demand.
Prerequisites: 101, 102.

324 Intermediate Microeconomic Theory (3)
Survey of developments in economic analysis; price determination, including
considerable study of demand and cost theory; imperfect competition. On demand.
Prerequisites: 101, 102.

325 Intermediate Macroeconomic Theory (3)
Introduction to contemporary theory of income and employment; emphasis on the
essential principles and concepts used in the determination of the level of
income and employment, the rate of economic growth, and the general price level.
Every semester. Prerequisites: 101, 102.

404 International Economics (3)
The classical and modern theories of international trade; international trade
accounting; exchange rates; tariffs and other restrictions on trade; recently created
agencies and programs to promote international economic relationships; the
influence of international economic relationships on world politics. On demand.
Prerequisites: 101, 102, or equivalent.

417 Women in the Economy (3)
The role of women in the U.S. economy. An economic analysis of women's labor
force participation, discrimination against women in the labor market, women's
paid and unpaid work, the child care industry, and female poverty. On demand.
Prerequisites: 101, 102, or consent of instructor.

425 Industrial Organization (3)
The structure of industry, business conduct, and economic performance; analysis
of antitrust law and government regulation. Every semester. Prerequisites: 101, 102.

426 Comparative Economic Systems (3)
Theoretical and empirical examination of various economic systems with emphasis
on current capitalist and socialist economies. Objectives and outcomes of market
and planned economies are compared. On demand. Prerequisites: 101, 102.

429 Managerial Economics (3)
The solution of business problems by use of economic theory, accounting,
marketing methods, financial techniques, etc. On demand. Prerequisites: 101, 102;
Management 212, and Mathematics 136.

430 Environmental Economics (3)
An economic study of environmental issues and alternative solutions to them.
Topics include measurement of cost and benefits, property rights and externalities,
pollution control, and past, present, and future environmental policy and
regulations. On demand. Prerequisites: 101, 102.

444 Economics of Underdeveloped Areas (3)
Factors underlying economic progress of nations and geographic areas; analysis of
resources, manufacturing and agricultural productivity, saving and investment,
trade, monetary and banking system, and fiscal system. On demand. Prerequisites:
101, 102, or graduate standing.

450 Marxist Political Economy (3)
An introduction to Marxist thought in general and Marxist economic theory in
particular. Marxist analysis of theories of value and distribution, including modern
radical economics. On demand. Prerequisites: 101, 102.
European Economic History (3)
The economic history of Europe from the break-up of the ancient world through
the 19th century. Exploration of the relationship between economic growth and
social development. On demand. Prerequisites: Junior standing.

History of Economic Thought (3)
Development of theories of value and distribution, macroeconomics, money and
banking, international trade, and business cycles: works of Smith, Malthus, Ricardo, Marx, Jevons, Marshall, Wicksell, Knight, Schumpeter, and Keynes. On
demand. Prerequisites: 101, 102.

Urban Economics (3)
A study of the metropolitan economy with a problem orientation in areas of in-
metropolitan industry location, urban residential location and travel behavior, the
urban ghetto, housing markets, urban transportation, and environmental quality.
On demand. Prerequisites: 101, 102.

Introduction to Econometrics (3)
The study of issues in economics and statistical tests of economic models through
regression analysis. Also recommended for non-economics majors with an interest
in economics and mathematics. On demand. Prerequisites: 101, 102; Mathematics
13 6 or 150; and Management 212 or Mathematics 407.

Economics of Regulated Industries (3)
Presentation and analysis of economic aspects of regulation of public service
industries. On demand. Prerequisites: 101, 102.

Seminar in Current Economic Topics (3)
The application of economic techniques and analytical methods to not less than
five current topics, which may vary from semester to semester, selected by the
instructor. Designed for senior economics majors. On demand. Prerequisites: 6
hours of economics courses at the 300 level or above.

Departmental Honors (1-3 hours per term, 4 hours for the two terms) On demand. See "Departmental Honors," page 27.

Research (1-3)
On demand.

Individual Studies (1 -3)
On demand.

Group Studies (1-3)
On demand.

English
Professor A. Herron, Head

In addition to providing a variety of courses for general education and for electives, the English Department offers programs leading
to the B.A. (in English and American language and literature) and to the B.S. (in secondary English). Beyond the traditional
freshman program in rhetoric and composition, most of the offerings in the English curriculum are based on the study of
literature, such as genre studies, courses in major authors, and surveys of literary periods. There are also several upper level courses
which stress the development of skills in various forms of writing. It is in fostering and advancing the humanistic traditions, however,
that the English Department makes its principal contribution to liberal education.
54 — English

JUNIOR
English 207
3
English Electives, including novel course
9
Support courses (chosen with adviser)
6
Perspectives
3
Electives
9-12
Total
30-33

SENIOR
English 361
3
English Electives (300-400 level)
12
Support course (chosen with adviser)
3
Electives
9-12
Total
27-30

TOTAL HOURS 128

ENGLISH MINORS

English: Literature
21 hours including 133, 203, 207, one (1) from English 204, 211, 212, 213, 214 and three (3) from 300-400 level literature courses with one (1) course before 1800, and one (1) course after 1800 in American or English literature, and one (1) elective 300-400 level in literature or writing to be chosen in conjunction with an academic advisor.

English: Writing
21 hours including 15 hours in writing courses and 6 hours elective at the 300 level or above - all to be chosen in conjunction with an academic advisor. The following are the professional writing courses: 277 or 278, 279, 300, 410, 471r. The following are the creative writing (fiction or poetry) courses: 270, 375r, 376r.
The 15 hours may be achieved in any combination of professional and creative courses. The six (6) hours may be in writing or literature courses. At least 9 hours must be at the 300 level or above.

ENGLISH COURSES

105 Developmental Writing I (3 hours of institutional credit)
Review of correct language forms. Requires extensive practice in the writing of sentences and paragraphs as well as in the practice of editing for proper punctuation and accurate grammatical structure. Every semester. Credit not applicable toward any degree. Prerequisite: Placement required.

106 Developmental Writing II (3 hours of institutional credit)
Emphasis on developing ideas and organizing them into coherent paragraphs while using correct language forms. Requires extensive practice in writing paragraphs and short essays. Every semester. Credit not applicable toward any degree. Prerequisite: Grade of C or C better in English 105 or placement.

121 Rhetoric and Composition (3)
The principles and practice of effective reading and writing. Frequent themes, exercises, selected readings. Attention to individual problems of grammar and usage. Formerly English 101. Every semester. Prerequisite: Grade of C or C better in English 106 or placement. In rare instances exemption from English 121 may be recommended by the department.

122 Rhetoric and Composition (3)
Review of competencies stressed in English 121 with emphasis on the extended essay; use of research matter in writing; attention to diction, figurative and symbolic language, relationship of style and meaning. Formerly English 102. Every semester. Prerequisite: English 121 or placement.

131 Values in 20th Century American Fiction (3)
A study of contemporary man's search for values as reflected in selected twentieth century American novels and short stories from World War I to the present. Formerly English 111. Spring semester alternate years.

133 Introduction to Literature (3)
Readings from poetry, fiction, and drama to demonstrate how the writer selects from ideas, experience, and language and combines these elements to speak of and to the human condition. Formerly English 103. Fall and spring semester.

161 English as a Foreign Language I (3)
The first of two sequential courses in ESL, this course offers non-native speakers intensive practice in reading, writing and the most difficult points of English usage. Required during the first term of residence of all students who are non-native speakers of English and who are placed in the course on the basis of the English department's writing proficiency examination that must be completed before registration by all non-native speaker of English. Fall semester.

162 English as a Foreign Language II (3)
The second of two sequential courses in ESL, this course offers non-native speakers intensive practice in writing and in the more difficult points of English usage and style. Required during the first term of residence of all students who are non-native speakers of English and who are placed in the course on the basis of the English department's writing proficiency examination that must be completed before registration by all non-native speaker of English. Fall and Spring. Prerequisite: Placement test or completion of English 161.

199r Special Projects (1-4)
Individual or group projects. Every semester. Maximum credit 4 hours for B.A. in English or B.S., Secondary Education in English. By permission of department head.

203 Literature of the Humanities (3)
Selections from the literature of the Western tradition, from Homer to the end of the Renaissance; read in English and studied in the context of the other humanities and the fine arts. Fall and spring semester.

204 World Literature from the Renaissance (3)
Selections from English literature of the Renaissance and later periods and from European and American writers. Spring semester alternate years.

207 Shakespeare: an Introduction (3)
Fall and spring semester.

211 Survey of English Literature to 1800 (3)
Fall and spring semester.

212 Survey of English Literature since 1800 (3)
Fall and spring semester.

213 American Literature to 1855 (3)
Representative works from the Colonial and Romantic periods. Fall semester.

214 American Literature from 1855 (3)
Representative works from the late 19th and 20th centuries. Fall and spring semester.

219 African-American Literature (3)
Readings will be largely fiction with supportive critical works and some poetry and drama to examine the development of African-American literature form the 1850's to the present. Figures may include Harper, Chestnut, Washington, DuBois, Hurston, Wright, Ellison, Brooks, Baldwin, Walker, and Morrison. Spring semester. May be registered as Humanities 219.

228 Children's Literature (3)
A survey and evaluation of some of the best literature for children, with special attention to literature for preschool and elementary school years. Fall and spring semester. Prerequisite: one lower level course in written communication in English.

229 Literature for the Adolescent (3)
A survey and evaluation of literature whose primary audience is the adolescent, with special attention to the usefulness of such literature in secondary education. Spring semester. Prerequisite: one lower level course in written communication in English.

230 Popular Fiction (3)
Science fiction or detective fiction or other type of popular fiction, one or another of which will be studied for its literary merit; the type of popular fiction to be studied in any particular section will be specified in the schedule of classes. On demand.

233 The Uses of Tradition: India and Japan (3)
A comparison of two mythic and traditional cultures confronting modernism, as reflected in expository reading, documentary films, and the arts, including fiction, poetry, music, and dramatic film. On demand.
257 The Romantic Experience (3)  
An interdisciplinary survey of "Romanticism" in European civilization, ca. 1789 to 1918, addressing and analyzing some of the main historical, philosophical, and aesthetic forces involved in this broad cultural experience. On demand. May be registered as Humanities 257.

270 Creative Writing (3)  
Instruction and practice in writing imaginative literature for magazines and specialized publications. Fall and spring semester.

277 Professional Writing (3)  
An introduction to the theory and practice of the basic forms of writing used in any profession. Emphasis on the processes of communication in addition to their various forms; practice in the reading and writing of memoranda, prospectuses, digests, charts, extended reports, etc. Fall and spring semester.

278 Scientific Writing (3)  
An introduction to the theory and practice of science writing. Emphasis on the problems of communicating to specialized audiences and the problems of translating specialized language for general audiences; practice in the translation and writing of technical reports and supporting materials, proposals, articles, reports, etc.; practice in the conversion of technical information and formulas into everyday language. Spring semester.

279 Writing for the Human and Social Sciences (3)  
An introduction to the theory and practice of the modes of discourse used in human and social sciences. Emphasis on the processes of thinking involved in researching, reading, and communicating in these fields; extended research, and original essays with opportunities for the student to focus on his or her academic field. Spring semester alternate years.

300 Intermediate Rhetoric and Composition (3)  
An introduction to the theory and practice of the basic kinds and combinations of discourse and their aims; extended essays and other writing assignments in these kinds of discourse. Fall and spring semester.

301 The Literature of England to 1300 (3)  
Representative works in translation. On demand.

302 The Literature of England, 1300-1500 (3).  
Representative works including Chaucer. On demand.

303 Early Renaissance Literature to 1600 (3)  
Representative works from Tudor and Elizabethan periods. Fall semester alternate years.

304 Milton and the Seventeenth Century (3)  
Representative works from the Jacobean and late Renaissance periods. Spring alternate years.

305 Age of Dryden, Pope, and Swift (3)  
Representative works from the early 18th century. On demand.

306 Age of Johnson (3)  
Representative works from the mid and late 18th century. On demand.

317 English Romantic Period (3)  
Representative works from the period 1789-1837. On demand

318 Victorian Literature (3)  
Representative works from the period 1837-1901. On demand.

319 English Transitional Period (3)  
Representative works from the period 1880-1920. On demand.

320 Modern British Literature (3)  

331 American Women Writers (3)  

332 Southern American Literature (3)  
Study of slave narratives and subsequent literature influenced by them.
Foreign Languages and Literatures

Professor O. Preble-Niemi, Head

The department offers the B.A. degree in French, Greek and Latin, Latin, and Spanish. A student may also pursue a B.A. in humanities degree with an emphasis in classical civilization. Elementary and intermediate German are offered and may be chosen to fulfill the foreign language requirement. Modern language courses, taught in English, which deal with foreign literatures and civilizations, afford the nonforeign language student a broader perspective of other peoples and cultures.

The department also offers minor programs in Latin, Greek, Classics, Spanish, or French.

A native speaker of a language which is offered for credit by the Department of Foreign Languages and Literatures or anyone with native speaker proficiency in such a language must consult the department for proper placement and permission to enroll.

Independent studies will be offered only for 400-level courses, with the exception of courses in German and the Classical languages, which will be taught at any level in this format only upon availability of staff and mutual consent of student and instructor.

During the summer term, modern foreign language courses of 4 semester hours require 600 minutes of language laboratory time in addition to the scheduled class time.

All incoming students who have three years or more of high school study in a single foreign language (and no college level study of the language) and who wish to continue study in that language will be required to take a placement test to determine their level of competence in that language. A student should begin study of the language in question at the level established by the placement level. Under special circumstances, exceptions may be granted upon appeal to the department.

Classical Civilization

MINOR IN CLASSICS
18 hours in classical civilization including Classics 110, 310, 395, 396, 397 and Philosophy 351.
Minimum 2.0 average in the minor.

CLASSICS COURSES

110 Major Triumphs of Greece and Rome (3)
Major accomplishments of the Greco-Roman civilization and their impact upon the modern world. On demand.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit four hours.

300 Scientific Terminology (2)
Designed to meet the needs of nonlanguage students. Origin and derivation of English words in common scientific usage. On demand.

310 The Greco-Roman World (3)
The history, culture, and lifestyles of the ancient Greeks and Romans. On demand. May be registered as History 310.
Typical course of study in foreign languages:

**French (B.A.)**

(For a student with 2 years of high school French)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>French 211</td>
<td>French 212</td>
</tr>
<tr>
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<td>General Education Category A 3</td>
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<tr>
<td>General Education Category B 3</td>
<td>General Education Category B 3</td>
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<td><strong>Total</strong> 16</td>
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**SOPHOMORE**

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<tr>
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<td>Electives 7</td>
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**JUNIOR**

<table>
<thead>
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<tr>
<td>General Education Category G 3</td>
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<tr>
<td>Electives 7</td>
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</table>

**SENIOR**

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</thead>
<tbody>
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<td>Electives 10</td>
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</tr>
<tr>
<td><strong>Total</strong> 16</td>
<td><strong>Total</strong> 16</td>
</tr>
</tbody>
</table>

**TOTAL HOURS 128**

**FRENCH MINOR**

18 hours in French, above 101-102, including 211-212; 9 hours must be at the 300 level or above. French 213 cannot be used for credit toward the minor.

**FRENCH COURSES**

<table>
<thead>
<tr>
<th>101, 102 Elementary French (4,4)</th>
<th>Basic grammar, elementary reading, and conversation. 101 fall/102 spring semester.</th>
</tr>
</thead>
<tbody>
<tr>
<td>199r Special Projects (1-4)</td>
<td>Individual or group projects. On demand. Maximum credit 4 hours.</td>
</tr>
</tbody>
</table>

**211 Intermediate French for Conversation**

Continuation of grammar intensive oral practice in French with emphasis in acquiring conversational skills. Class taught mostly in French. Fall. Prerequisite: 101, 102 or 2 years high school French.

**212 Perspectives on the French World**

Emphasis on oral proficiency and cultural awareness of the French speaking world, in preparation for upper level courses. Class taught mostly in French. Spring. Prerequisites: French 211 or equivalency.

**213 Intermediate French for Reading**

Continuation of grammar, and oral practice in French with emphasis in acquiring reading skills. Classes taught mostly in English with discussion in French or in English. Fall. Prerequisites: 101, 102 or 2 years high school French.

**214 Intermediate French for Reading**

Readings on French culture, literature and civilization. Emphasis in acquiring reading and translation skills. Classes conducted mostly in French with discussion in English or in French. Spring. Prerequisites: 101, 102 or 2 years high school French.

**311r, 312r Composition and Conversation (3,3)**

Selections from French literature, topics of current interest and articles from French newspapers and magazines may be used as a basis for discussions and compositions. 311 fall/312 spring semester on demand. Prerequisites: 211, 212 or approval of the department.
Special problems in syntax, illustrative reading, composition. On demand. 

Prerequisites: 211, 212 or approval of the department.

Introduction to French Culture (3)
The fine arts, patterns of living, and total life-style of the French people approached through their language. Geographical and historical backgrounds included. On demand. 

Prerequisites: 211, 212 or approval of the department.

Introduction to French Literature (3,3)
Representative works from the beginning to 1800 with attention to cultural, political, and social background. Sequel from 1800 to the present. 331 fall/332 spring semester. On demand. 

Prerequisites: 211, 212 or approval of the department.

French Internship (3)
A cooperative arrangement between the university and specific elementary or middle schools, social service agencies or businesses involved with either foreign language instruction, service to foreign language-speaking clients, or business transactions with companies abroad. Every semester. Prerequisite: Junior or senior standing and permission of the department.

Special Topics in French Language or Literature (2-3)
A reading course with emphasis on a field, period, or author, or on a topic of philology or linguistics, or on teaching methods. On demand. By special arrangement with the head of the department and the instructor. Prerequisites: 311-312,331-332, or approval of die department.

The focus of the following courses may include the development of the novel, the theater, poetry, narrative techniques, various critical approaches to works within a century and Francophone literature with particular emphasis on Quebec Studies.

Seventeenth Century French Literature (3)
On demand. Prerequisites: 311-312, 331-332, or approval of the department.

Eighteenth Century French Literature (3)
On demand. Prerequisites: 311-312, 331-332, or approval of the department.

Nineteenth Century French Literature (3)
On demand. Prerequisites: 311-312, 331-332, or approval of the department.

Twentieth Century French Literature (3)
On demand. Prerequisites: 311-312, 331-332, or approval of the department.

Cultural Experience (6)
An intensive language experience in the United States or abroad. Prerequisites: 311-312,331-332, Requires approval of Foreign Language Department.

Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See “Departmental Honors,” page 27.

Research (1-4)
On demand. Prerequisites: 311-312, 331-332, or approval of the department.

Individual Studies (1-4)
On demand. Prerequisites: 311-312, 331-332, or approval of the department.

Group Studies (1-4)
On demand. Prerequisites: 311-312, 331-332, or approval of the department.

German

Elementary German (4,4)
Basic grammar, elementary reading, and conversation. 101 fall/102 spring semester.

Special Projects (1-4)
Individual or group projects. On demand. Maximum credit four hours.

Intermediate German for Conversation (3)
Grammar review, intensive oral practice in German, limited readings. Fall semester. On demand. Prerequisites: 101, 102 or two years high school German.

Perspectives on the German World (3)
Emphasis on oral proficiency and cultural awareness, with limited grammar and readings. Spring semester. Prerequisites: German 211 or equivalency.

Intermediate German for Reading (3,3)
Grammar review, extensive reading in German, with discussion in English. 213 fall/214 spring semester. On demand. Prerequisites: 101,102 or two years high school German.

Research (1-4)
On demand.

Individual Studies (1-4)
On demand.

Group Studies (1-4)
On demand.

Greek

Foreign Languages: Greek and Latin (B.A.)

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)

Category B: 3 approved courses other than Greek and Latin: one from humanities, one from fine arts, and one from either (3 hours each)

Category C: 2 approved behavioral or social science courses (6 hours)

Category D: 1 approved physical or natural science course with laboratory (4 hours)

Category F: 1 approved mathematics course (3 hours)

Category G: 1 approved perspectives course other than Foreign Languages (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major
18 hours Latin beyond 101, 102
12 hours Greek
2.0 average in all Greek and Latin courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical course of study for foreign languages: Greek and Latin (B.A.)

Greek and Latin (B.A.)

Electives to complete 128 hours
Foreign Languages — 59

SENIOR
Advanced Latin 3 Advanced Latin 3
Advanced Greek 3 Advanced Greek 3
Electives 10 Electives 10
Total 16 Total 16

TOTAL HOURS 128

GREEK MINOR
18 hours of Greek above 101 with at least 9 hours at the 300 level or above.
Minimum 2.0 average in the minor.

GREEK COURSES
101, 102 Elementary Greek (3,3)
Elements of the Greek language. Reading of Greek prose. 101 fall/102 spring semester.

199r Special Projects (1-4)
On demand.

310 Readings of Greek Literature (3)
A study of the development of Greek literature with selections from representative authors. On demand.

312 Advanced Greek Grammar and Composition (3)
On demand.

350r Greek Prose (3)
Greek historians, Attic orators, and Greek philosophers considered in different semesters. On demand.

351r Greek Poetry (3)
Greek tragedy, comedy, and lyric poetry considered in different semesters. On demand.

425r Special Topics in Greek Literature (2)
Readings in a specific author, genre, or period. On demand.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.

Italian

101, 102 Elementary Italian (4,4)
Basic grammar, elementary reading, and conversation. On demand.

211, 212 Intermediate Italian for Conversation (3,3)
Grammar review, intensive oral practice in Italian, limited readings. On demand. Prerequisites: 101, 102 or 2 years high school Italian.

Latin

Foreign Languages: Latin (B.A.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses other than Classics and Latin: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course other than Foreign Languages (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major
21 hours Latin beyond 101,102; 9 hours from Classics 310,395, 396,397
2.0 average in all Latin courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical course of study for foreign languages:
Latin (B.A.)

First Semester

FRESHMAN
General Education Category A 3
General Education Category B 3
Latin 101 3
Latin 102 3
EHL 021 1
General Education Category C 3
Electives 3
Total 16

SOPHOMORE
Latin 201 3
General Education Category D 3
General Education Category F 3
Electives 7
Total 16

JUNIOR
Advanced Latin 3
Classical Civilization 3
General Education Category G 3
Electives 7
Total 16

SENIOR
2 Advanced Latin Courses 6
Advanced Latin 3
Electives 10
Total 16

LATIN MINOR
18 hours of Latin above 101 with at least 9 hours at the 300 level or above.
Minimum 2.0 average in the minor.

LATIN COURSES

101, 102 Elementary Latin (3,3)
Elements of the language. Reading of Latin prose. 101 fall/102 spring semester.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

201 Intermediate Latin (3)
A continuation of first year Latin with an intensive review of basic Latin grammar. Emphasis on attaining reading skills through select authors. Prerequisites: Latin 101, 102 or 2 years of high school Latin.

202 Intermediate Latin (3)
Selected readings from Latin authors. Prerequisite: Latin 201 or equivalent.

310 Readings in Latin Literature (3)
A study of the development of Latin literature with selections from representative authors. On demand.
60 —Foreign Languages

312 Latin Prose and Composition (3)
On demand.

350r Latin Prose (3)
Sallust, Caesar, Tacitus, Seneca, Cicero, and Petronius considered in different semesters. On demand.

351r Latin Poetry (3)
Latin lyric poetry, Roman comedy, Latin satire, Horace, Vergil, and Lucretius considered in different semesters. On demand.

425r Special Topics in Latin Literature (2)
Readings in a specific author, genre, or period. On demand.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.

Modern Languages

100 A Profile of French Culture (3)
A humanistic view of the patterns of living and total life-style of the French people with special attention to their art, music, and literature (in translation). Geographical, historical, and linguistic backgrounds included. On demand. No foreign language credit.

110 A Profile of German Culture (3)
A humanistic view of the patterns of living and total life-style of the German people with special attention to their art, music, and literature (in translation). Geographical, historical, and linguistic backgrounds included. On demand. No foreign language credit.

120 A Profile of Hispanic Culture (3)
A humanistic view of the patterns of living and total life-style of the Hispanic people with special attention to their art, music, and literature (in translation). Geographical, historical, and linguistic backgrounds included. On demand. No foreign language credit.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours. No foreign language credit.

201 Modern French & German Literature: Alienation through Conflict (3)
French and German literature in translation; the study of dramatic and fictional works which reveal aspects of man's attempt to understand and explain his world. On demand. No foreign language credit.

202 Language, Literature, and the Exile Experience (3)
A literary and linguistic view of the exile experience. Selected readings from the literary outputs of exile communities in Europe and the U.S. Studies in language preservation and rejection in exiled communities. On demand. No foreign language credit.

230 Contemporary Francophone African Cinema (3)
An overview of recent African films from former French colonies with attention to issues of identity, heritage, and former colonial status. No foreign language credit. Maybe registered as Theatre and Speech 230 or Humanities 230.

300 Masterpieces of French Literature in Translation (3)
Study of representative works from French literature in relation to their cultural context. On demand. No foreign language credit.

301 French Women Writers in Translation (3)
Contributions of French women writers to the social, economic and political institutions of French culture. Readings from several disciplines. Topics studied are gender roles, systems of authority, masculine/feminine representations of reality, and the concept of "feminine" writing. On demand. No foreign language credit.

302 Latin American Women Writers in Translation (3)
Contributions of Latin American women writers to the social, economic, and political institutions of Latin American culture. Readings from literary selections in several genres. Topics will include gender roles, systems of authority, masculine/ feminine representations of reality, and the concept of "feminine" writing. On demand. No foreign language credit.

310 Masterpieces of Germanic Literature in Translation (3)
Study of representative works from German or Germanic literature in relation to their cultural context. On demand. No foreign language credit.

320 Masterpieces of Hispanic Literature in Translation (3)
Study of representative works from Spanish, Catalan, Portuguese, or Latin-American literature in relation to their cultural context. On demand. No foreign language credit.

330 Masterpieces of European Literature in Translation (3)
Study of representative works from French, German, or Hispanic literature in relation to their cultural context with emphasis on a specific period, genre, or theme. On demand. No foreign language credit.

397r Research (1-4)
On demand.

398r Individual Studies (1-4)
On demand.

399r Group Studies (1-4)
On demand.

Spanish

Foreign Languages: Spanish (B.A.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses other than Spanish: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course other than Foreign Languages (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major
27 hours Spanish beyond second college year, including Spanish 311-312, 321-322,331-332, and 323 or325
A minimum of 6 hours of Spanish at the 400 level
2.0 average in all Spanish courses
To meet requirements for the major, a minimum of 9 hours of 300 level or above must be taken at UTC.

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Typical course of study in foreign languages:

**Spanish (B.A.)**

(For a student with 2 years of high school Spanish)

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<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>FRESHMAN</td>
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<tr>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

| SOPHOMORE     |                 |
| Advanced Spanish | Advanced Spanish |
| General Education Category B | General Education Category D |
| General Education Category F | Electives |
| Electives      |                 |
| Total          | Total           |
| 16            | 16              |

| JUNIOR        |                 |
| 2 Advanced Spanish Courses | Advanced Spanish |
| General Education Category G | Electives |
| Electives      |                 |
| Total          | Total           |
| 16            | 16              |

| SENIOR        |                 |
| 2 Advanced Spanish Courses | Advanced Spanish |
| Electives      | Electives       |
| Total          | Total           |
| 16            | 16              |

**TOTAL HOURS 128**

**SPANISH MINOR**

18 hours in Spanish, above 101-102, including Spanish 211-212. 9 hours must be at the 300 level or above. Spanish 213 cannot be used for credit towards the minor. Minimum 2.0 average in the minor.

**SPANISH COURSES**

101, 102 Elementary Spanish (4,4)
Basic grammar, elementary reading, and conversation. 101 fall/102 spring semester.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

211 Intermediate Spanish for Conversation (3)
Continuation of grammar intensive oral practice in Spanish with emphasis in acquiring conversational skills. Class taught mostly in Spanish. Fall. Prerequisite: 101, 102 or 2 years high school Spanish.

212 Perspectives on the Spanish World (3)
Emphasis on oral proficiency and cultural awareness of the Spanish speaking world, in preparation for upper level courses. Class taught mostly in Spanish. Spring. Prerequisites: Spanish 211 or equivalency.

213 Intermediate Spanish for Reading (3)
Continuation of grammar, and oral practice in Spanish with emphasis in acquiring reading skills. Classes taught mostly in English with discussion in Spanish or in English. Fall. Prerequisites: 101, 102 or 2 years high school Spanish.

214 Intermediate Spanish for Reading (3)
Readings on Hispanic culture, literature and civilization. Emphasis in acquiring reading and translation skills. Classes conducted mostly in Spanish with discussion in English or in Spanish. Spring. Prerequisites: 101, 102 or 2 years high school Spanish.

311r, 312r Composition and Conversation (3,3)
Selections from Spanish literature, topics of current interest, and articles from Spanish newspapers and magazines may be used as a basis for discussions and compositions. 311 fall/312 spring semester. On demand. Prerequisites: 211,212 or approval of the department.

321,322 Advanced Spanish Grammar (3,3)
Special problems in syntax, illustrative reading, and composition. 321 fall/322 spring semester. On demand. Prerequisites: 211,212 or approval of the department.

323 Introduction to Spanish Culture (3)
The fine arts, patterns of living, and total life style of the Spanish people approached through their language. Geographical and historical backgrounds included. On demand. Prerequisites: 211, 212 or approval of the department.

325 Introduction to Spanish-American Culture (3)
The fine arts, patterns of living, and total life-style of the Spanish-American people approached through their language. Geographical and historical backgrounds included. On demand. Prerequisites: 211, 212 or approval of the department.

331 Masterpieces of Spanish Literature (3)
Readings of representative works from the earliest epic and lyric poetry to the modern novel and theater with attention to cultural, political, and social background. On alternate years. Prerequisites: 211, 212 or approval of the department.

332 Masterpieces of Latin American Literature (3)
Readings of representative works from the Chronicles of the Conquest to contemporary works, with attention to the cultural, political and social background. On alternate years. Prerequisites: 211, 212 or approval of the department.

340 Spanish Internship (3)
A cooperative arrangement between the university and specific elementary or middle schools, social service agencies or businesses involved with either foreign language instruction, service to foreign language-speaking clients, or business transaction with companies abroad. Every semester. Prerequisite: junior or senior standing and permission of the department.

400r Topics in Spanish Literature (3)
Study of topics such as Spanish literature of the Golden Age, 18th and 19th century Spanish literature, The Generation of 1898, and contemporary Spanish literature. On demand. Prerequisites: 311-312, 331-332, or approval of the department.

401r Special Topics in Hispanic Language or Literature (2-3)
A reading course with emphasis on a field, period, or author, or on a topic of philology or linguistics. On demand. By special arrangement with the department head and the instructor. Prerequisites: 311-312, 331-332, or approval of the department.

402r Topics in Spanish-American Literature (3)
Study of topics such as Spanish-American novel, Spanish-American theater and poetry, and Spanish-American essay. On demand. Prerequisites: 311-312, 331-332, or approval of the department.

430 Cultural Experience (6)
An intensive language experience in the United States or abroad. Prerequisites: 311-312, 331-332, or equivalent. Requires approval of Foreign Language Department.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. Prerequisites: 311-312, 331-332, or approval of department. See "Departmental Honors," page 27.

497r Research (1-4)
On demand Prerequisites: 311-312, 331-332, or approval by the department.

498r Individual Studies (1-4)
On demand Prerequisites: 311-312, 331-332, or approval by the department.

499r Group Studies (1-4)
On demand Prerequisites: 311-312, 331-332, or approval by the department.

**German**
See Foreign Languages and Literatures.

**Greek**
See Foreign Languages and Literatures.
History (B.A.)

**Major**

36 hours in history including 101, 102, 203, 204, and 301. At least one course (three hours) will be taken from each of the following categories of study:

I. American History: 331, 332, 335, 336, 337, 341, 343, 346
II. European History: 311, 312, 313, 314, 315, 317, 318, 319, 323, 324, 327
III. Non-Western History: 364, 365, 368, 370, 371, 372
IV. 400-level courses: 401, 411, 412, 415, 416, 419 (400-level courses are topical courses that may be taught as seminars in which enrollment will be limited to 15 students.)

2.0 average in all history courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

The following special-topics courses may be approved by the department head for credit in the most appropriate regional category: 385r, 350, 499r.

**Typical course of study in history (B.A.)**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td></td>
</tr>
<tr>
<td>History 101</td>
<td>History 102</td>
</tr>
<tr>
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**HISTORY COURSES**

101, 102 Emergence of the Modern World (3, 3)

A survey of the processes, ideas, and events that have shaped our contemporary world, emphasizing modernization and industrialization; imperialism, nationalism, and competing ideologies in a world setting. First semester concentrating on the period from approximately 1300-1800; second semester extending from 1800 to the present. Every semester.

114 Heroes and Villains (3)

A biographical approach to world history. Personalities and their roles in shaping the modern world, to be selected from a variety of fields of human activity: politics, science, philosophy, religion, economics, war, etc. Attention given to interpretations concerning the role of individuals in history. Every semester.

120r Historical Themes (3)

An analysis of some topic of contemporary significance from an historical perspective. The theme under study to be viewed in a number of historical settings to add insights to our understanding of the present. On demand.

199r Special Projects (1-4)

Individual or group projects. Every semester. Maximum credit 4 hours.

203, 204 United States History (3, 3)

A survey of American History from colonial beginning to the present, with special attention given to the main currents and developments of American life. First semester to 1865, second semester since 1865.

208 Introduction to Asian Civilizations: China and Japan (3)

A survey of the major trends of Chinese and Japanese history. Emphasis placed on traditional cultural values, periods of power and greatness, problems of modernization, and recent developments. Students should gain perspective on current conditions in China and Japan. On demand.

210 Western Christianity Since 1,000 (3)

The origins and development of Christian doctrines, church structures, political relationships and social teachings in the west; from c.1000 through the early twentieth century. May be registered as Religion 210. On demand.

221 Science, Technology, and Society in the Industrial Age (3)

An historical examination of the impact of scientific and technological change in Western society since the advent of the Industrial Revolution. On demand.

301 Seminars in History (3)

A seminar primarily intended for junior majors in history or education - social studies with a history concentration. Focusing on specific topics in American, European, or non-Western history, the course introduces students to historiographical debate, analysis of historical evidence, and current historical methodologies. Prerequisite: 12 hours in history or permission of the instructor. Every semester.
310 The Greco-Roman World (3)
The history, culture, and life-styles of the ancient Greeks and Romans. On
demand. Maybe registered as Classics 310.

311, 312 Medieval Europe (3, 3)
Europe from the fall of the Roman Empire to the Italian Renaissance; the first
semester emphasizing the formation of medieval institutions to c. 1200; the second
semester stressing the shattering of the medieval synthesis. 311 fall/312 spring
semester alternate years.

313 The Age of the Renaissance (3)
Economic, social, artistic, and political developments, 1300-1500; Italian
Humanism; Christian Humanism; and ferment in the Church. Fall semester
alternate years.

314 The Age of the Reformation (3)
Religious, political, social, and economic factors involved in the Protestant and
Catholic Reformations in the 16th century. Spring semester alternate years.

315 Early Modern Europe, 1600-1750 (3)
Religious, political, economic, and social development in this period of contradiction
and intellectual ferment; Puritans, counter-Reformation; Constitutionalism,
Absolutism; Scientific Revolution, the Baroque in the arts. On demand.

317 The Era of the French Revolution and Napoleon (3)
Developments leading to the French Revolution and the fall of the monarchy, the
noble resurgence and the phases of the revolution; accomplishments and failures
of the revolution; Napoleon Bonaparte as heir to the Bourbons and the
Enlightenment and Revolution, and as a social engineer. Spring semester alternate
years.

318 Europe in the Nineteenth Century (3)
Europe from the creation of the Napoleonic Empire to the outbreak of World War
I; the development and failure of the Congress System; the operation of the balance
of power and international relations; national consolidation and domestic political
developments, the rise of imperialism, and the spread of industrial society. Fall
semester alternate years.

319 Europe in the Twentieth Century (3)
Political, economic, and social development of the European states from the
outbreak of World War I to the present. Special attention given to the problems
of world wars and reconstruction, with development of conflicting ideologies, the
impact of worldwide depression, the decline of European colonial systems, and
the diplomacy of the cold war. Spring semester alternate years.

323, 324 History of England (3,3)
The history of Britain from the earliest times to the present; the first semester
emphasizing constitutional and institutional developments to 1660; the second
semester, the growth of political democracy, the British Empire, economic and
social change. 323 fall/324 spring semester alternate years.

327 Russian History since 1800 (3)
Characteristics of Tsarist society in the 19th century, attempts to reform the
nation, the revolutions of 1905 and 1917, and the Soviet system. Fall semester
alternate years.

328 Viking History (3)
An examination of the political, military, social, technological, mythic, and
cultural aspects of the Scandinavians expansion form Russia to Vinland from 793
to 1100. On demand.

331 Colonial and Revolutionary America (3)
The colonial period of American history from the earliest settlements in North
America to independence and the U.S. Constitution; the European background
to colonization, colonial settlements, the development of colonial social, political,
and economic institutions, and the causes, course, and consequences of the
American Revolution. On demand.

332 Early National Period, 1789-1840 (3)
The Constitution and presidencies of George Washington and John Adams; the
War of 1812 and the emergence of nationalism; rise of the frontier; Jeffersonian and
Jacksonian democracy, emphasis on political, social, and economic developments
that forged the new nation. On demand.

333 The Civil War and Reconstruction (3)
The Old South and the causes of the Civil War; the leaders; the chief political,
military, and economic developments from the Compromise of 1850 to the end of
Reconstruction. On demand.

336 The Gilded Age (3)
The United States from the end of the Civil War to 1900. On demand.

337 Progressive America: From TR to FDR (3)
An examination of the political, economic, cultural, and diplomatic forces that
shaped America in the early 20th century; topics include progressivism, World
War I, the roaring twenties, and the Great Depression. Fall semester alternate
years.

338 Contemporary America Since 1945 (3)
An examination of political, economic, and social aspects of the recent past,
including post-World War II readjustments, the Cold War, the Kennedy years, the
Vietnam trauma, and the downfall of the "imperial presidency." Spring semester
alternate years.

341 A History of the South (3)
The role of the South in the formation of the nation. Interpretations of the
institutions and developments that made the South unique. On demand.

343 History of Tennessee (3)
A study of the political, economic, social, and cultural development of the state
from the days of the Indians to the present. Spring semester.

346 Afro-American History (3)
A historical survey of Black Americans with some attention to African backgrounds;
emphasis on the reaction of blacks to their experience in the New World. On
demand.

350 War Through the Ages (3)
The evolution of war as an instrument of national policy and the effects of wars on
the world balance of power. Treatment will be episodic, concentrating on the
Persian and Peloponnesian Wars, the Punic Wars, the Hundred Years War, the
Seven Years War, the Wars of the American and Spanish Revolutions and
Napoleon, and the World Wars of the 20th century. Fall or spring semester.

364 Traditional China: History and Culture (3)
A survey of Chinese history and culture prior to the impact of the West. Course
readings provide a basic political and chronological orientation, but emphasis
placed on literary and philosophical writings in translation, and on studies of the
social structure of traditional Chinese society. On demand.

365 Traditional Japan: History and Culture (3)
A survey of traditional Japanese history and culture prior to the impact of the West.
Course readings provide a basic political and chronological orientation, but
emphasis placed on literary, cultural, and artistic achievements, and on studies of
the social structure of traditional Japanese society. On demand.

367 Modern Japan (3)
A survey of Japan since Perry and the Meiji Restoration. Topics will include Meiji
industrialization, foreign policy and Japanese imperialism, economic and social
change, the rise of militarism, WWII, occupation, postwar economic growth,
political and cultural change, and Japan's role as an economic superpower. On
demand.

368 East Asia in Modern Times (3)
East Asia since the mid-19th century and the effects of the West; the Opium War,
modernization, the Chinese Revolution of 1911, Japanese expansion, Pearl Harbor
and Hiroshima, Mao Tse-tung and the Chinese Communists. On demand.

370 The Middle East (3)
Background and setting of the modern Middle East; factors influencing Great
Power strategy; Islam; rise and decline of the Ottoman Empire; imperialism and the
breakup of the Ottoman Empire. On demand. Prerequisites: History 10/, 102, or
permission of instructor.
History

371 History of Subsaharan Africa to 1880 (3)
Geography and people of Africa; origin of traditional African societies; major Sudanic empires; Islamic impact on Africa; oral traditions; slave trade and its consequences; African artistic, musical, architectural, and religious traditions; Africa and the age of discovery; Swahili city states; African commerce and technology; major central and southern African political developments. On demand. Formerly 211.

372 History of Subsaharan Africa, 1880-Present (3)
Partition of Africa; ideological underpinnings of imperialism; growth of colonial systems and the African reaction; colonial devolution and independence; apartheid; the European colonial legacy; response of traditional African social and political structures to technological modernity; nature of modern African cultural trends and developments. On demand. Formerly 212.

385r National History (3)
A course dealing with a selected national history. On demand. Prerequisites: by special arrangement with the department head and instructor; specific prerequisites to be given when the topic is announced.

401 Senior Tutorial (3)
Directed readings, special study, and investigation. Primarily for senior majors in history and others interested in an intensive study of historical problems. Every semester.

411, 412 American Intellectual and Social History (3,3)
Survey and analysis of American assumptions, social attitudes, and institutions, and their effects on American life. First semester coverage extends to 1865. 411 fall/412 spring semester alternate years.

415, 416 Economic History of the United States (3,3)
First half from colonial period to 1873. Origins, development, and expansion of the American economy with emphasis on roles of government and business. Relationship between economic growth and social development designed to provide perspective on problems of modern society. On demand.

419 The City in American History (3)
Role of the city in American history from colonial times to the present; emphasis on emergence of the 20th-century metropolis; city planning, problems of modern mass living, and other topics peculiar to urban history also considered. On demand.

490 Internships in History (1-3)
Designed to provide practical experience with the materials and problems encountered by history professionals outside the traditional academic setting. Placements will be arranged on an individual basis. On demand. Prerequisites: junior standing, B average in history courses, and permission of instructor.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See "Departmental Honors," page 27.

497r Research (1-3)
Every semester.

498r Individual Studies (1 -3)
Every semester.

499r Group Studies (3)
Every semester.

Human Services
See College of Health and Human Services.

Interdisciplinary Studies
Professor Burhenn, Acting Head

The Department of Interdisciplinary Studies coordinates a number of programs leading to baccalaureate degrees as well as several other nondegree programs. Because of their interdisciplinary nature, these programs draw upon the varied resources of a number of departments.

Degree program: Humanities (B.A.). Nondegree program: University Studies.

Humanities
Professor J. Trimpey, Coordinator

The humanities generally comprise languages and literature, philosophy, religion, history, and the fine arts. With the approval of the Faculty Board for the Humanities, each major designs a program of study by selecting appropriate courses from those disciplines and from the humanities courses listed below.

Humanities (B.A.)
General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category E: 1 approved mathematics course (3 hours)
Category F: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Foreign language through second college year
Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major and related courses
45 hours approved program of studies related to the culture of a time and place (America, Europe, or the non-Western world) or to a major idea or theme lending itself to analysis through the disciplines of the humanities. Focus on human experience as revealed in the religious, intellectual, artistic, linguistic, and social actions which characterize the chosen area of study. No more than 15 hours at 100-200 level and no more than 18 hours in any one discipline. Maximum of 15 of the 45 hours may be awarded by the Faculty Board for the Humanities for independent study on campus or for knowledge gained in travel or in work.

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Geology
See Physics, Geology and Astronomy.

Human Ecology

Humanities
See Interdisciplinary Studies.
Typical course of study in humanities (B.A.)
Because each student follows a unique program of study, it is impossible to outline a typical curriculum. Hypothetically, however, supposing a student chose to focus on Medieval and Renaissance Europe, the course of study might look like this.

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<td>History 311</td>
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**TOTAL HOURS 128**

HUMANITIES COURSES

199r Special Projects (1-4)
Individual and group studies. On demand.

219 African-American Literature (3)
See English 219.

230 Contemporary Francophone African Cinema (3)
See Modern Languages 230.

257 The Romantic Experience (3)
See English 257.

300 The Vietnam Conflict: Then and Now (3)
An introduction to the Vietnam War, its development, its meaning, and its impact on the social, political, economic, and cultural identities of the U.S. and Vietnam.

311 Music of the World (3)
See Music 311.

336 The Development of Medieval Germanic Epic (3)
See English 336.

385r International Fiction (3)
A study of works of fiction by writers from the international community, exclusive of works from and about the British Isles, Canada and the United States. Content may vary. Pre-requisite: English 122.

397 Music, the Arts, and Ideas (3)
See Music 397.
University Studies

Professor Burhenn, Acting Head

University Studies offers a variety of interdisciplinary courses and seminars which may be taken for elective credit or, when approved, may satisfy certain major or general education requirements.

For current offerings see schedule of classes.

100 Principles of Effective Study (3 hours institutional credit)
The study and development of reading and study skills that are required for college level study. Every semester. Credit not applicable toward any degree. Prerequisite: approval of the instructor.

101 The Freshman Seminar (3)
An introduction to the nature of university education and a general orientation to the functions and resources of the University. Designed to help freshman adjust to the University, to develop a better understanding of the learning process, and to acquire basic academic survival skills, and to enrich their appreciation for the University's commitment to development of the intellect. Elective available to all students with fewer than 30 hours. Recommended during initial semester for students who enter the University with fewer than 15 hours. Offered Fall and Spring semesters.

111 Science Concepts and Perspectives (3)
This course explores key concepts and principles of science with particular emphasis placed on the connections and fundamental relationships between and among traditional science disciplines. In addition, the course stresses the relevance of science and technology to everyday human experiences and thus, conveys the powerful effects science has on our society and our lives. Every semester.

199r Interdisciplinary Seminars (1-4)
Specific topics, themes, and subjects for which the interdisciplinary approach is especially useful. On demand.

200 Introduction to Women's Studies (3)
An examination of human experience from a feminist perspective. An exploration of the ways in which women have been defined and have defined themselves. A multi-disciplinary teaching context with focus on women's self identity, women's identity in families, and women's identity in society. Prerequisites: English 121,122.

202 Women's Issues in South Asia (3)
A survey of contemporary issues for women in South Asia. On demand.

210 Death and Life in Literature (3)
The study of themes of death and dying in imaginative literature, with emphasis on the correlation between fictional representations of death and of life, its contents and values; and on the connection between metaphors of death and approaches to textual interpretation. Primary texts include poetry, short stories, essays, novels, and plays. On demand.

301 Feminist Literary Criticism (3)
The history, theory and practice of feminist literary criticism studied in cultural context.

340 Concepts of Language Literacy: Acquisition, Development, and Usage (3)
Examination of the theoretical framework underlying language development and the communication processes. Emphasis will be placed on the expressive and receptive language skills as developed by students in their writing, speech, and literature courses at the college level. The areas of emphasis will be listening, speaking, writing and reading. Prerequisite: for education majors only (EDUC 320, EDUC 360, PSY 221). Corequisite: EDUC 413.

401 Laboratory Procedures and Safety (1)
Develop science laboratory and field teaching competencies appropriate for the preservice secondary science teacher with emphasis on the content of the respective teaching major. Spring Semester. Corequisite: Education 431 (science section) for secondary natural science majors. Prerequisite: 30 hours in natural sciences or permission of instructor.

440 Social Studies Topics, Concepts and Perspectives (3)
An examination of concepts, theories and principles of history, sociology, anthropology, geography, political science, and economics in curricula typically developed for children age 6-14. Emphasis on diverse presentation. Prerequisite: EDUC 306.

498r Individual Studies (1-4)
On demand. Approval of department head.

499r Interdisciplinary Seminars (1-4)
Specific topics, themes, and subjects for which the interdisciplinary approach is useful. On demand.

Mathematics

Professor H. Miller, Head

The Department of Mathematics offers two degree programs, the B.A. and the B.S. in Applied Mathematics.

The B.A. is the traditional liberal arts degree with a major in mathematics.

The B.S. in Applied Mathematics is a degree program designed to examine the growing influence of mathematics in business and industrial practices. The student must select a concentration in one of the following areas: actuarial science, computer science, corporate science, or systems science.

Students who plan to teach at the secondary school level must meet new state licensure requirements. These students need to consult with advisors in the College of Education and Applied Professional Studies and the Department of Mathematics.

In addition to its own degree programs, the Department provides extensive support for other programs requiring mathematics courses, and for the University's General Education requirements. It also offers a minor in mathematics.

All entering students except those transferring with an appropriate college level mathematics course or those receiving advanced placement credit must take the Mathematics Placement Test. The UTC Department of Mathematics uses the test score both to assess the student's pre-college preparation and to determine whether prerequisites are needed for some of the 100 and 200 level courses offered. Students not meeting the required minimum must take Mathematics 105 or Mathematics 106, depending on the score. Test schedules are printed in the fall, spring, and summer schedule of classes.

Applied Mathematics (B.S.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category E: 1 approved mathematics course (3 hours; courses below will apply)
Category F: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Major and related courses
Mathematics (135 and/or F145)*, F150, 160; 212,245, 255, 295,308, 350,407, 408, 412, and either 414 or 424
9 hours of 300 and 400-level mathematics courses excluding 303,307,415,416
Economics C101, C102; Computer Science 150

One of the following concentrations
1. Actuarial Science: Accounting 201, 202,335; Finance 302, 321,337; either Marketing 313 and/or Economics 460; one elective from; Accounting 300, Finance 318, Economics 301,324,429.
2. Computer Science: Computer Science 160, 250, 251, 260, 312; Either Mathematics 418 or 428 (may not be used to satisfy math elective course); one elective from Computer Science 300-400 level courses.
3. Corporate Science: Accounting 201, 202; Finance 302; Management 311; Economics 324, 429; either Marketing 313 and 450 or Economics 460; one elective from business administration or economics 300-400 level courses (excluding Management 356).

A student may not elect both the corporate science and the actuarial science concentrations.

No more than 32 hours from the School of Business Administration may be credited toward the degree.

2.0 average in all mathematics courses and also in all 300,400-level mathematics courses

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

•Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.

Typical courses of study in applied mathematics

Applied mathematics (B.S.): actuarial science concentration

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*(Mathematics 160 in summer school—if needed)*

**SOPHOMORE**
Mathematics 245 3 Mathematics 255 3
Mathematics 295 3 Mathematics 308 3
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B Accounting 201 3 B Accounting 202 3
Elective | Elective |
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**JUNIOR**
Mathematics 407 3 Mathematics 408 3
Mathematics 350 3 Mathematics Elective 3
Mathematics 412 3 Finance 337 3
B Finance 302 3 B Accounting 335 3
Elective | Elective |
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**SENIOR**
Mathematics Elective 3 Mathematics 414 or 424 3
Mathematics Elective 3 B Marketing 450 3
B Finance 321 3 or Economics 460 3
General Education Category G 3 Electives 11
Elective or B Marketing 313 3 | |
| Total | Total |
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**Total Hours 128**

(Mathematics 160 in summer school—if needed)

Applied mathematics (B.S.): corporate science concentration

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<tr>
<td>Mathematics F150 (135/F145)*</td>
<td>Mathematics F150 (135/F145)*</td>
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*(Mathematics 160 in summer school—if needed)*

**SOPHOMORE**
Mathematics 245 3 Mathematics 255 3
Mathematics 295 3 Mathematics 308 3
Mathematics 403 3 Electives 6
General Education Category B 3 Computer Science 312 3
Elective | Elective |
<table>
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<tr>
<td>15</td>
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**JUNIOR**
Mathematics 407 3 Mathematics 408 3
Mathematics 350 3 Mathematics 308 3
Mathematics 412 3 Electives 6
B Finance 302 3 Mathematics 414 or 424 3
Elective | Electives |
<table>
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<tr>
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<tbody>
<tr>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td>15</td>
<td>14</td>
</tr>
</tbody>
</table>

**SENIOR**
Mathematics Elective 3 Mathematics 414 or 424 3
Mathematics Elective 3 B Marketing 450 3
B Finance 321 3 or Economics 460 3
General Education Category G 3 Electives 11
Elective or B Marketing 313 3 | |
| Total | Total |
| 15 | 17 |

**Total Hours 128**

*(Mathematics 160 in summer school—if needed)*
68 — Mathematics

**SENIOR**
- Mathematics Elective 3
- Economics 460 or Mathematics 414 or 424 3
- General Education Category G 3
- Electives B: Marketing 313 6
- Electives 3
- Total 15

**TOTA L HOURS 17**

- Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.

**Applied mathematics (B.S.): systems science concentration**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
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<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 245</td>
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<tr>
<td>Mathematics 295</td>
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<tr>
<td>General Education Category B</td>
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<tr>
<td>Physics 231</td>
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<tr>
<td>Economics 102 Category C</td>
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<tr>
<td>Engineering 325</td>
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<tr>
<td>Mathematics 412</td>
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<table>
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<td>EHLS Activity</td>
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**TOTAL HOURS 128**

**Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average.**

**Major and related courses**

- Computer Science 150
- Mathematics (135 and/or F145)*, F150,160, 212,245, 255, 295,321,350

Five additional courses at the 300-400 level excluding 303,415,416 but including the following:
- At least one course from 308,403,407, 414,440,445,460,470
- At least one course from 408,410,412, 418,422,424,428,450,454
- Physics D230, 231

2.0 average in all mathematics courses and also in all 300,400-level mathematics courses

**Decisions concerning the most appropriate 100-400 level courses for each student should be made in consultation with mathematics advisers, particularly for those students who are seeking teacher certification in mathematics and students who are planning graduate study.**

- Minimum of 30 hours of 300 and 400 level courses
- Electives to complete 128 hours

*Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.

**Typical course of study in mathematics (B.A.)**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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(Mathematics 160 in summer school—if needed)

<table>
<thead>
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<tbody>
<tr>
<td>Mathematics 245</td>
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<tr>
<td>Mathematics 295</td>
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<tr>
<td>General Education Category B</td>
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<tr>
<td>Foreign Language (2nd year)</td>
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<tr>
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<tr>
<td>Mathematics Elective</td>
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<td>Physics 231</td>
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<td>Elective</td>
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<table>
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</thead>
<tbody>
<tr>
<td>Mathematics Electives</td>
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<tr>
<td>Mathematics Electives</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td><strong>Total 15</strong></td>
</tr>
</tbody>
</table>

**TOTAL HOURS 128**

*Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.

**MATHEMATICS MINOR**

- Required courses: Mathematics 150, 160; 212, 245, 255
- Elective courses:
  - Three courses totaling at least 9 hours from any 300-400 level mathematics courses (excluding 415, 416)
  - A 2.0 average on the 300-400 level courses as well as on all courses in the minor
  - At least two of the 300-400 level courses must be taken at this institution

*Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.

**General Education (see pages 22-24 for list of approved courses)**

- Category A: 2 approved courses in written communication in the English language (6 hours)
- Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
- Category C: 2 approved behavioral or social science courses (6 hours)
- Category D: 1 approved physical or natural science course with laboratory excluding Physics 103,104 (4 hours; approved related course below will apply)
- Category F: 1 approved mathematics course (3 hours; courses below will apply)
- Category G: 1 approved perspectives course (3 hours)

**Exercise Science, Health and Leisure Studies 021** plus one additional semester exercise science activity

**Foreign language through second college year**
MATHEMATICS COURSES
A minimum grade of C must be made on any mathematics course used as a prerequisite for any other mathematics course.

105 Elementary Algebra (4 hours institutional credit)
Review of fractions, percents, and decimals. Basic topics in algebra, including operations with signed numbers and polynomials, linear equations and inequalities, factoring, rational expressions, radicals, basic graphing techniques, and elementary applications. Placement level 05. Every semester. Credit not applicable toward any degree.

106 Intermediate Algebra (4 hours institutional credit)
The real number system, first degree equations and inequalities, exponents and polynomials, factoring, rational expressions, rational exponents and roots, linear equations and inequalities in two variables, quadratic equations, systems of equations, absolute value equations, functions and applications. Formerly Mathematics 107. Every semester. Credit not applicable toward any degree. Prerequisite: 105 with minimum grade of C or one year of high school algebra and placement level 15.

115, 116 Mathematical Concepts for Elementary Teachers (3,3)
Mathematics as a postulational system; nature of proof; systems of numeration; properties of the real number system; review of fundamental operations of arithmetic; sets; relations; functions; concepts of geometry. Every semester. Prerequisites: 2 years of high school algebra and placement level 20 or 106 with minimum grade of C. Mathematics 115 (with minimum grade of C) is prerequisite to 116.

120 Introduction to Contemporary Mathematics (3)
A study of the nature and techniques of mathematics, selected from topics such as mathematical modeling, number systems, modern geometry, probability, the history and development of mathematical ideas. Fall and spring semesters. Prerequisites: 2 years of high school algebra and placement level 20 or 106 with minimum grade of C.

135 Precalculus I (3)
Solving linear and quadratic equations and inequalities; solving polynomial equations; rational expressions; graphing techniques; functions; exponential and logarithmic functions; systems of linear equations; matrices; geometric linear programming. Every semester. Prerequisites: 2 years of high school algebra and placement level 20 or 106 with minimum grade of C. Credit not allowed in 135 after 136, 145, or 150 with grades of C or better.

136 Calculus for Management, Life, and Social Sciences (3)
Introduction to calculus: limits, differentiation of functions, optimization, marginal analysis, integration, the Fundamental Theorem of Calculus, applications of integration. Every semester. Prerequisites: 4 years of college preparatory mathematics and placement level 30 or 135 with minimum grade of C. Credit not allowed in 136 after 150.

145 Precalculus II (3)
Trigonometric functions; identities and equations; complex numbers; conic sections; sequences and other selected topics. Every semester. Prerequisites: 2 years of high school algebra, advanced mathematics, and placement level 30 or 135 with minimum grade of C. Credit not allowed in 145 after 150 with a grade of C or better.

150 Calculus I with Analytic Geometry (4)
Topics in analytic geometry; limits; derivatives of algebraic and trigonometric functions and their applications; integrals of algebraic functions. Every semester. Prerequisites: 4 years of college preparatory mathematics and placement level 40 or 145 with minimum grade of C. Credit not allowed in 135 or 136 after 150.

155 Honors Calculus (4)
Calculus of functions of one variable with applications; historical, biographical, philosophical material. Fall semester. Prerequisite: Brock Scholar, others by consent of the department head. Credit not allowed in both 150 and 155 or in 136 after 155. May be substituted for 150 in meeting all requirements.

160 Calculus II with Analytic Geometry (4)
Additional topics in analytic geometry; applications of integration; transcendental functions; hyperbolic functions; techniques of integration, infinite series. Every semester. Prerequisite: 150 with minimum grade of C.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

210 Introductory Statistics (3)
An introductory course suitable for students in a variety of disciplines, including such topics as: nature, sources, collection, and presentation of data; measures of central tendency; probability; sampling distributions; hypothesis testing; regression and correlation; analysis of variance; other non-parametric statistics. Every semester. Prerequisites: 2 years of high school algebra and placement level 20 or 106 with minimum grade of C. Credit not allowed in 210 after any other statistics course.

III Elementary Linear Algebra (3)
Systems of linear equations, matrix algebra, determinants, geometric vectors, vector spaces, linear transformations, eigenvalues and eigenvectors, inner product spaces. Every semester. Prerequisite: 150 with a minimum grade of C.

245 Introduction to Differential and Difference Equations (3)
First and second order linear differential and difference equations, systems of equations and transform methods. Formerly 250. Every semester. Prerequisite: 160 with a minimum grade of C, pre- or corequisite: 212 with a minimum grade of C.

255 Multivariate Calculus (3)
Lines, curves, and surfaces; partial derivatives, gradients, divergence and curl; multiple integrals and vector analysis. Formerly 260. Every semester. Prerequisites: 160 and 212 with minimum grades of C.

295 Foundations of Mathematics (3)
Introductory concepts of sets, functions, equivalence relations, ordering relations, logic, methods of proof, and axiomatic theories with topics from combinatorics, graph theory, or abstract algebra. Fall and spring semesters. Prerequisite: 160 with minimum grade of C. This course is a prerequisite for 321, 322, 350, 412 and 452. Mathematics majors should enroll in it during their sophomore year.

303 Discrete Structures (3)
Topics from combinatorics, graph theory, abstract algebra, and formal logic. Designed to acquaint students with some of the terminology, concepts, and techniques of several areas of discrete mathematics, especially those often applied in computer science, and to give students an appreciation for the nature and utility of precise definitions and careful logical arguments concerning their consequences. Fall and spring semesters. Prerequisites: Mathematics 160 or 225 with minimum grade of C and Computer Science 118 or 121 or 150 or equivalent. Not open to mathematics majors. Credit not allowed on both 303 and 403.

307 Applied Statistics (3)
Introduction to probability and statistical methods with applications to various disciplines. A study of some basic statistical distributions, sampling, testing of hypotheses, and estimation problems. Fall and spring semesters. Prerequisite: 160 with minimum grade of C. Credit not allowed in both 307 and 407-408.

308 Numerical Methods (3)
Accuracy and significance of approximate calculations, finite differences and interpolation, solutions of non-linear equations, systems of linear equations, numerical differentiation and integration, solutions of ordinary differential equations. Fall and spring semesters. Prerequisites: Computer Science 118 or 121 or 150 or equivalent; Mathematics 212 and Mathematics 245 with minimum grades of C.

321 Introduction to Modern Algebra (3)
Integral domains, rings, fields, groups, elementary number theory, and other selected topics. Spring semester. Required of all B.A. mathematics majors. Prerequisites: 212, 295 (or permission of instructor) with minimum grades of C.

350 Fundamental Concepts in Analysis (3)
Classical treatment of the basic concepts of calculus: limits, continuity, differentiation, Riemann integration, sequences and series of numbers and functions. Fall semester. Required of all mathematics majors. Prerequisites: 245, 255, 295 with minimum grades of C.

401 Mathematics of Interest (3)
Mathematical theory of Interest with applications, including accumulated and present value factors, annuities, yield rates, amortization schedules and sinking funds, depreciation, bonds and related securities. This class is recommended for students planning to take actuarial exams. Fall semester alternate years. Prerequisites: Mathematics 160 with a minimum grade of C or permission of the instructor.
403 Graph Theory and Combinatorics (3)
Planar graphs, circuits, graph coloring, trees, general counting principles, generating functions, recurrence relations with applications to computer science including tree traversal, grammars, languages, and finite-state machines. Fall semester. Prerequisites: Mathematics 295 with a minimum grade of C, and either Computer Science 118 or 121 or 150 or equivalent. Credit not allowed in both 403 and 303.

407 Introduction to Probability and Statistics (3)
Introduction to the theory of probability and its applications, counting techniques, sample spaces, random variables and their distributions, mathematical expectation, moment generating functions, binomial, Poisson, and normal distributions, Central Limit Theorem. Fall semester. Prerequisite: 255 with minimum grade of C.

408 Mathematical Statistics (3)
A continuation of 407 with an introduction to the theories of point and interval estimation, hypothesis testing, regression and correlation analysis, goodness of fit, chi-square, t and F distributions. Spring semester. Prerequisite: 407 with minimum grade of C.

410 Number Theory (3)
Divisibility, primes, congruences, Fermat's Theorem, number theoretic functions, primitive roots and indices, the quadratic reciprocity law. Summer on demand. Prerequisites: either 245 or 255 with minimum grades of C.

412 Linear Algebra and Matrix Theory (3)
Vector spaces, linear transformations, eigenvalue and similarity transformations, orthogonal and unitary transformations, normal matrices, Jordan form. Fall semester. Prerequisites: 212, 245, 255 with minimum grades of C.

414 Operations Research (Linear) (3)
Introduction to linear programming, duality, transportation and assignment problems, integer programming. Spring semester alternate years. Prerequisites: Computer Science 118 or 121 or 150 or equivalent; Mathematics 212 with minimum grade of C, or approval of instructor.

415 Numeric Concepts for Elementary Teachers (3)
Designed to reinforce mathematical concepts for those teaching in the elementary grades. Emphasis on the relationship between mathematical ideas and reality. Logic and set operations, algebraic systems, and number systems included. Summer on demand. Prerequisites: 115, 116 with minimum grades of C or equivalent teaching experience. Not applicable on mathematics major.

416 Geometric Concepts for Elementary Teachers (3)
Designed to reinforce the understanding and use of basic geometric concepts for those teaching in the elementary grades. The inductive and deductive approaches to geometry will be considered. Topics include parallelism, congruence, similarity, perimeter, area, volume, networks, and topological concepts. Summer on demand. Prerequisites: 115, 116 with minimum grades of C, or equivalent teaching experience. Not applicable on mathematics major.

418 Advanced Numerical Methods (3)
A more extensive treatment of the material of Mathematics 308 with emphasis of the methods of obtaining numerical solutions of ordinary and partial differential equations, and systems of linear equations. Spring semester. Prerequisites: 255, 308 with minimum grades of C, or approval of instructor.

420 Applied Statistical Methods (3)
Intermediate applied statistical analysis and model building. Covers One and Two Factor Analysis of Variance, Simple and Multiple Regression and Correlation, and Time Series Analysis. Spring semester. This course is recommended for students planning to take actuarial exams. Prerequisites: Mathematics 307, 308 or Engineering 322 with a minimum grade of C or permission of the instructor.

422 Introduction to Point Set Topology (3)
Introductory set theory, topologies and topological spaces, continuous mappings, compactness, connectedness, separation axioms and metric spaces. Summer on demand. Formerly 322. Prerequisite: 295 with minimum grade of C.

424 Operations Research (Non-Linear) (3)
Network flows, Markov chains and applications, queuing theory and applications, inventory theory, decision theory, and games. Spring semester alternate years. Prerequisites: Computer Science 118 or 121 or 150 or equivalent, Mathematics 307 or 407 with minimum grade of C, or approval of instructor.

428 Packages for Mathematical Computations (3)
The nature of libraries of procedures for solving mathematical problems, including the design parameters, selection of algorithms, problems with reliability and transportation. Several major mathematical packages will be examined in detail, including IMSL, LINPACK, EISPACK, MINPACK. On demand. Prerequisites: Computer Science 118 or consent of instructor; Math 212/245, and one of the following: Math 308, Engineering 225, Computer Science 231 with minimum grades of C.

430 The Historical Development of Mathematics (3)
Examination of central ideas, major developments, and important issues in mathematics from ancient times to the present. Historical overview of the evolution of the discipline through comparative examination of specific theories and results. Alternate fall and summer. Prerequisite: 295 with a minimum grade of C.

440 Applied Analysis (3)
Vector analysis through Stokes' Theorem and the Divergence Theorem. Topics in advanced calculus including implicit functions, Jacobians, interchange of limit processes, and uniform convergence of series of functions; introduction to power series solutions of differential equations. Spring semester alternate years. Prerequisites: 245, 255 with minimum grades of C.

445 Advanced Differential Equations (3)
Systems of differential equations; existence and uniqueness theorems; linear systems; phase plane analysis; stability theory; applications. Fall semester alternate years. Prerequisite: 245, 255 with minimum grades of C.

450 Modern Analysis (3)
Differential; inverse and implicit function theorems; functions of bounded variation, integration and measure; integration on manifolds; Stokes' and Green's Theorems; other selected topics. On demand. Prerequisite: 350 with minimum grade of C.

452 Basic Concepts of Geometry (3)
Deficiencies in Euclidean geometry, Euclid's parallel postulate, introduction to non-Euclidean geometry, consistency and validity of non-Euclidean geometry, incidence geometries, affine geometries, linear, planar, and spatial order properties. Summer on demand. Prerequisite: 295 with minimum grade of C or approval of instructor.

454 Abstract Algebra (3)
A study of special topics from advanced algebra, various algebraic structures, and the applications of algebra. On demand. Prerequisite: 321 or 412 with minimum grade of C or approval of instructor.

460 Techniques of Applied Mathematics (3)
Additional topics in vector calculus; series of orthogonal functions; integral transforms; treatment of some elementary partial differential equations arising in applications. Spring semester alternate years. Prerequisite: 245, 255 with minimum grades of C.

470 Introductory Complex Variables (3)
Complex numbers; differentiation and integration of functions of a complex variable; analytic functions; Cauchy's Theorem; power series; residues and poles; conformal mapping; contour integration. Fall semester alternate years. Prerequisites: 245, 255 with minimum grades of C.

475 Research Seminar (1)
Investigation of special topics in mathematics using the directed research technique. On demand. Prerequisite: approval of department. Graded satisfied/no credit.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.
The requirements for entrance and graduation as set forth in the catalog are in accordance with the published regulations of the National Association of Schools of Music and the Tennessee regulations for certification of teachers.

The Cadek Department of Music offers three degree programs at the undergraduate level: Bachelor of Arts with a major in music, Bachelor of Music, and Bachelor of Science with a major in music education. The B.M. degree provides four concentrations for the major: instrumental performance, vocal performance, sacred music, and theory/composition. The B.S. degree in music education provides two concentrations for the major: instrumental and vocal.

The B.A. degree is offered students who desire a strong liberal arts background with a major in music. Approximately one-third of the four year program is in music, and numerous elective hours outside the department permit considerable study in other academic areas. The B.M. degree affords the student a more concentrated course of study in the major area: approximately two thirds of the four year program is in music. The B.S. degree is especially appropriate for students who plan a career teaching public school music. It combines general education with music content and teaching methodology in a highly structured course of study. Successful completion of the program gains the student public school teaching certification. All three degree programs represent appropriate preparation for graduate study.

In addition to University admission standards, prospective music majors will stand an audition in their primary performing area which will determine the appropriate applied music course level and degree program. All music majors are required to participate in an ensemble for each semester of residence, and must accumulate a minimum of eight hours credit (seven hours for music education majors). For all music majors, a 2.0 average in music courses is required for enrollment in 300 and 400 level music courses. A senior educational experience is required of all majors.

In addition to degree requirements herein listed, other regulations for music majors appear in the current Music Student Handbook.

The following are suggested courses of study for the several degrees in music. Specific course requirements are listed by course number; general education category requirements are indicated by category number. Elective courses other than those included in general education requirements are indicated as "elective." Appropriate music ensemble requirements are indicated only as "ensemble" in the courses of study. Applied Music Study is indicated only as "Applied Music;" specific course "numbers are determined according to level of study and specific instruments studied.

### Music (B.A.)

**General Education** (see pages 22-24 for list of approved courses)

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<thead>
<tr>
<th>Category</th>
<th>Name</th>
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<tbody>
<tr>
<td>A</td>
<td>2 approved courses in written communication in the English language (6 hours)</td>
</tr>
<tr>
<td>B</td>
<td>3 approved courses other than music: one from humanities, one from fine arts, and one from either (3 hours each)</td>
</tr>
<tr>
<td>C</td>
<td>2 approved behavioral or social science courses (6 hours)</td>
</tr>
<tr>
<td>D</td>
<td>1 approved physical or natural science course with laboratory (4 hours)</td>
</tr>
</tbody>
</table>

**Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity**

**Foreign language through second college year**

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average.

### Typical course of study in music (B.A.)

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>A</td>
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</tr>
<tr>
<td>B</td>
<td>General Education Category B</td>
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<table>
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<td>G</td>
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</table>

**Total Hours 128**
### General Education
- **Category A**: 2 approved courses in written communication in the English language (6 hours)
- **Category B**: 3 approved courses other than music: one from humanities, one from fine arts, and one from either (3 hours each)
- **Category C**: 2 approved behavioral or social science courses (6 hours)
- **Category D**: 1 approved physical or natural science course with laboratory (4 hours)
- **Category E**: 1 approved mathematics course (3 hours)
- **Category F**: 1 approved perspectives course other than music (3 hours)
- **Exercise Science, Health, and Leisure Studies**: 021 plus one additional semester exercise science activity

### Major
**Core**: Music 103, 104, 107, 108, 203, 204, 207, 208, 311, 315, 316; ensemble participation required each semester of residence, minimum 8 hours credit; 4 semesters (4 hours) piano study for nonkeyboard majors. Performance majors required to present a half-recital in junior year, full recital in senior year.

One of the following concentrations:

1. **Instrumental Performance**: 8 semesters (32 hours) primary applied study, 16 hours at the 200 level and 16 hours at die 400 level; Music 303; Music 332 (for piano majors). 17-19 hours music electives other than primary applied study.
2. **Vocal Performance**: 8 semesters (32 hours) voice study, 16 hours at the 200 level and 16 hours at die 400 level; Music 217, 218, 333, 303, 11. 11 hours music electives other than primary applied study.
3. **Sacred Music**: 8 semesters (24 hours) keyboard or voice study; 4 semesters (4 hours) secondary applied study in keyboard or voice; Music 302, 305r (2 hours), 303, 310, 334, 404, 405, 406, 409r (field work). 9 hours music electives other than primary applied study.
4. **Theory and Composition**: 8 semesters (8 hours) primary instrument or voice study; Music 302, 4 hours of 305r; 4 hours from 303, 310, 328; 8 hours of 401r, for students concentrating in composition, or 407, 408, 409, 410 for students concentrating in Music Theory. 20-21 hours music electives.

2.0 average in all music courses

Seminar is required each semester of residence. A minimum of 8 semesters with a grade of “satisfactory” is required.

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

### Typical courses of study in music (B.M.)

#### **Music (B.M.)**: instrumental performance concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
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#### **JUNIOR**
- **Music 300r** | **0 Music 300r** |
- **General Education Category B** | **3 General Education Category B** |
- **General Education Category C** | **3 General Education Category C** |
- **Applied Music (Primary)** | **4 General Education Category D** |
- **Ensemble** | **4 Applied Music (Primary)** |
- **Music 303** | **3 General Education Category B** |
- **Music 311** | **3 Music Elective** |
- **Total** | **16 Total** |

#### **SENIOR**
- **Music 400r** | **0 Music 400r** |
- **General Education Category C** | **3 General Education Category G** |
- **Music 332r** | **2 Applied Music (Primary)** |
- **Applied Music (Primary)** | **4 Ensemble** |
- **Music 300r** | **3 Music Elective** |
- **Total** | **18 Total** |

**TOTAL HOURS 128-135**

1. For nonkeyboard majors. Course number to be determined by audition.
2. For piano majors.
### Music (B.M.): theory and composition concentration

**First Semester**  
**FRESHMAN**  
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**JUNIOR**  
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**TOTAL HOURS 128-131**

### Music (B.M.): vocal performance concentration

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**Second Semester**  
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**JUNIOR**  
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**SENIOR**  
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<td>Music Elective</td>
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<td>Music 303</td>
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</tbody>
</table>

**TOTAL HOURS 128-133**

1. For nonkeyboard majors. Course number determined by audition.
2. For theory majors.

### General Education (see pages 22-24 for list of approved courses)

- **Category A:** 2 approved courses in written communication in the English language (6 hours)
- **Category B:** Theatre and Speech BI 15, Art BI 11 and Philosophy B201 (9 hours)
- **Category C:** Psychology C101 plus two approved behavioral or social science courses (9 hours)
- **Category D:** 2 natural science courses to total 8 hours in natural sciences (one course must be approved laboratory science)
- **Category E:** Mathematics FI 20
- **Category F:** 1 approved perspectives course other than music (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

### Major and related courses

- Psychology 221 or 222
- Computer Science 102 or 110


18 hours approved music including: ensemble participation required each semester of residence, with the exception of student teaching semester, minimum of 7 hours credit; 7 semesters (7 hours) primary applied instrumental or vocal study; 

*Music 131, 132, 141, 142 (for piano proficiency (4 hours). All Music Education majors will take a Piano Proficiency Examination as described in the Music Department Undergraduate Student Handbook.

Music Education majors are required to present a half-recital or full recital in the senior year. The student must be registered for the appropriate instruction course the semester of the recital.

One of the following concentrations

1. **Instrumental:** Music 223; 224; 225; 226; 325,328
2. **Vocal Music:** 135, 251r or 133 and 134, 222, 310, 333, 334
Seminar is required each semester of residence. A minimum of 7 semesters with a grade of "Satisfactory" is required.

22 hours from the College of Education and Applied Professional Studies including Education 201, 433, 444r; and ESPY 400 for graduation. For certification: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter.

Minimum of 30 hours of 300 and 400 level courses.
Electives to complete 133 hours for vocal, 135 hours for instrumental.
Total hours to exceed 128 minimum.

See College of Education and Applied Professional Studies section for teacher education, licensure, and student teaching requirements.

Typical course of study in music education (B.S.): instrumental concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
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<tr>
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<td>Applied Music</td>
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**SOPHOMORE**

| Music 200r     | 0               |
| Art 111       | 3               |
| Music 030r Marching Band or Music 050* | 1               |
| Applied Music  | 1               |
| Music 204      | 3               |
| Music 208      | 1               |
| ED Curr. & Instr. 201 | 3            |
| Category D, Lab Science | 4               |
| **Total**      | 17              |

**JUNIOR**

| Apply for Student Teaching |                 |
| Music 300r                | 0               |
| Music 303                 | 2               |
| Music 030r Marching Band or Music 050* | 1               |
| Applied Music             | 1               |
| Music 315                 | 3               |
| Music 221                 | 2               |
| General Education Category G | 3               |
| Psychology 101            | 3               |
| Music 226                 | 2               |
| **Total**                 | 17              |

**SENIOR**

| Music 400r | 0               |
| Education 433 | 4            |
| Music 030r Marching Band or Music 050* | 1               |
| Applied Music | 1               |
| Music 432 | 3               |
| Music 321 | 3               |
| Music 328 | 2               |
| Music 325 | 2               |
| **Total** | 16              |

| Education 444r | 12 |

**FRESHMAN**

| Music 100r | 0               |
| Music 100r | 0               |
| Theatre and Speech B1 15 | 3               |
| General Education Category A | 3               |
| Music 031 cone band or Music 050r Orchestra | 1               |
| Applied Music | 1               |
| Music 104 | 1               |
| Music 108 | 3               |
| EHLS Activity | 1               |
| Music 132 | 1               |
| **Total** | 17              |

**SOPHOMORE**

| Apply for admission to TEP |                 |
| Music 200r | 0               |
| Music 203 Ear Training | 1               |
| Music 207 Theory | 3            |
| Music 141 Class Piano | 1               |
| Category D | 4               |
| Art 111 | 3               |
| Applied Music | 1               |
| **Total** | 17              |

**JUNIOR**

| Apply for Student Teaching |                 |
| Music 300r | 0               |
| Music 303 | 2               |
| Music 030r Marching Band or Music 050* | 1               |
| Applied Music | 1               |
| Music 315 | 3               |
| Music 221 | 2               |
| General Education Category G | 3               |
| Psychology 101 | 3               |
| Music 226 | 2               |
| **Total** | 17              |

**SENIOR**

| Music 400r | 0               |
| Education 433 | 4            |
| Music 321 El Methods | 3               |
| Music 334 | 3               |
| Music 335 | 2               |
| **Total** | 17              |

TOTAL HOURS 132

1 New course to be approved.

Music education (B.S.): vocal concentration

<table>
<thead>
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<td>Psychology 101</td>
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**SOPHOMORE**

| Music 200r     | 0               |
| Music 203 Ear Training | 1            |
| Music 207 Theory | 3               |
| Music 141 Class Piano | 1               |
| Category D | 4               |
| Art 111 | 3               |
| Applied Music | 1               |
| **Total** | 17              |

**JUNIOR**

| Apply for Student Teaching |                 |
| Music 300r | 0               |
| Music 303 | 2               |
| Music 030r Marching Band or Music 050* | 1               |
| Applied Music | 1               |
| Music 315 | 3               |
| Music 221 | 2               |
| General Education Category G | 3               |
| Psychology 101 | 3               |
| Music 226 | 2               |
| **Total** | 17              |

**SENIOR**

| Music 400r | 0               |
| Education 433 | 4            |
| Music 321 El Methods | 3               |
| Music 334 | 3               |
| Music 335 | 2               |
| **Total** | 17              |

TOTAL HOURS 128-132

- Participation in band or orchestra is required each semester.

TOTAL HOURS 132
MUSIC MINORS

Music Performance:
22 hours of music including a core of 14 hours: 105, 106, 315, 316, and 4 hours (4 semesters) of applied instruction at the 200 level or above; at least 3 of the elective hours must be at the 300 level or above with the remainder at the 200 level or above. A maximum of 2 hours of ensemble credit will be accepted. Music 107 and 108 may be substituted for 105 and 106-Minimum 2.0 average in the minor.

Music History:
20 hours of music including a core of 14 hours: 105, 106, 315, 316, and 4 hours of applied instruction; two courses from 411, 412, 413, 414, 415. Class instruction may satisfy the applied music requirement. Music 107 and 108 may be substituted for 105 and 106. Minimum 2.0 average in the minor.

Music Composition:
23 hours of music including a core of 14 hours: 105, 106, 315, 316, and 4 hours of applied instruction; additional requirements to include 103, 104, 205r (1 hour), 305r (4 hours), 370r (2 hours). Class instruction may satisfy the applied music requirements. Music 107 and 108 may be substituted for 105 and 106. Minimum 2.0 average in the minor.

PERFORMING ORGANIZATIONS
The performing organizations mentioned below are open to University students with sufficient technical ability. Regular attendance at public performances and rehearsals by the appropriate group is required.

020r Chattanooga Singers (1)
Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. Every semester. Prerequisite: audition.

022r Chamber Singers (1)
Study of repertoire for small choruses through rehearsal and performance. Every semester. Prerequisite: audition.

025r Singing Mocs (1)
Study of styles and techniques appropriate to the performance of music in the popular idiom. Every semester. Prerequisite: audition.

030r Marching Band (1)
Study of marching band functions and literature through performances at University athletic and other events which could appropriately utilize the participation of a marching musical group. Fall semester. Prerequisite: audition.

031r Concert Band (1)
Reading, rehearsing, and performing contemporary and traditional band literature. Laboratory organization for instrumental conducting and band arranging classes. Spring semester. Prerequisite: audition.

035r Wind Ensemble (1)
A select ensemble which rehearses and performs literature for larger Wind Ensembles of all periods with emphasis on music of the 20th century. On demand. Prerequisite: audition.

036r Jazz Band (1)
Study of types of styles of big band jazz. Emphasis on sight reading, improvisation, and performance. Every semester. Prerequisite: audition.

040r Opera Workshop (1)
Study of and practical experience in preparation and performance of operas and opera scenes. Attention to requirements of various style periods. Emphasis of development of musical and dramatic skills and stagecraft techniques. Every semester. Prerequisite: audition.

050r University Orchestra (1)
Rehearsal and performance of selected works from the symphonic repertoire from 1700 to the present. Every semester. Prerequisite: audition.

053r Cadek Community Orchestra (1)
Development of basic skills in performance while exploring music literature from various stylistic periods. Provides opportunities for inexperienced players to develop greater proficiency in a non-competitive atmosphere. Every semester. For music majors, no more than 2 hours credit will be counted toward degree requirement.

MUSIC COURSES

100r Seminar (0)
Every semester.

103, 104 Ear Training 1(1,1)
Studies in sight singing and dictation. Interval, melody, counterpoint, diatonic, and chromatic harmonic materials. 103 fall/104 spring semester. Class hours 2. Prerequisite: 105 or placement; 103 is prerequisite to 104.

105 Elements of Notation, Dictation, and Sight Singing (2)
Fundamentals of music theory. Designed for those taking music theory without previous experience and as the first course in music theory for music minors. Fall semester. May not be included as a music elective for music majors.

106 Conceptual Overview of Music Theory (2)
An elements-based approach to the analysis of music from a broad spectrum of styles, genres, and historical periods. A continuation of Music 105 for music minors. Spring semester. Prerequisite: Music 105.

107, 108 Theory I (3,3)
A comprehensive approach to the study of melody, counterpoint, diatonic and chromatic harmony, basic instrumentation and aural skills. Performance, composition, and analysis of music from all periods and styles. 107 fall/108 spring semester. Prerequisite: 105 or placement examination; Music 103 corequisite to Music 107/Music 104 corequisite to Music 108. Music 107 prerequisite to Music 108. Class hours 4.

110 Music Literature for Children (3)
Study of music for children; fundamentals of the musical language and basic concepts of music. Repertoire selected from a broad range of styles and media. On demand.

111 Introduction to Music (3)
Understanding basic elements and structure of music and the evolution of musical style through performance. Understanding the musical artist in historical context. Extensive use of recorded materials. Every semester. Credit not permitted toward graduation for music majors.

121 Piano Class (1)
For persons without keyboard or music reading experience. Every semester. Class hours 2.

131, 132 Piano Class (1,1)
For persons without keyboard experience. 131 fall/132 spring. Class hours 2. 131 prerequisite to 132.

133, 134 Voice Class (1,1)
For persons without vocal experience. 133 fall/134 spring semester. Class hours 2. 133 prerequisite to 134.

135, 136 Guitar Class (1,1)
For persons without guitar experience. An introduction to the technique and classical literature of the guitar. 135 fall/136 spring semester. Class hours 2. 135 prerequisite to 136.

141, 142 Piano Class (1,1)
141 fall/142 spring. Prerequisite: 132 or audition; 141 prerequisite to 142.

151r Applied Music Instruction (1)
Individual instruction for students with limited applied music experience. Four hours practice required each week. May not be accepted as applied credit for any music degree program or Performance Music Minor. Every semester. Prerequisite: audition.
153r Applied Music Instruction (1)
Individual instruction for students with limited applied music experience. Four hours practice required each week. May not be accepted as applied credit for any music degree program or Performance Music Minor. Every semester. Prerequisite: audition.

157r Applied Music Instruction (1)
Individual instruction for students with limited applied music experience. Four hours practice required each week. May not be accepted as applied credit for any music degree program or Performance Music Minor. Every semester. Prerequisite: audition.

159r Applied Music Instruction (1)
Individual instruction for students with limited applied music experience. Four hours practice required each week. May not be accepted as applied credit for any music degree program or Performance Music Minor. Every semester. Prerequisite: audition.

161r Applied Music Instruction (1)
Individual instruction for students with limited applied music experience. Four hours practice required each week. May not be accepted as applied credit for any music degree program or Performance Music Minor. Every semester. Prerequisite: audition.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

200r Seminar (0)
Every semester.

201r Ensemble (1)
Accompanying, chamber, and other ensemble music. On demand.

203, 204 Ear Training II (1,1)
Continued studies in sight singing and dictation. Aural structural analysis, advanced melodic and harmonic studies, twentieth century techniques. 203 fall/204 spring semester. Class hours 2. Prerequisite: 104/203 is prerequisite to 204.

205r Fundamentals of Music Composition (1)
Basic skills of music composition designed to prepare promising lower division students for advanced study. Analysis focusing on applied compositional skills. Modeled composition. Spring semester. Prerequisite: Music 107 or permission of instructor.

207, 208 Theory II (3,3)
A comprehensive approach to the study of musical structure. Continued study of melody, harmony, counterpoint, and aural skills. Introduction to 20th century compositional techniques. Performance, composition, and analysis. 207 fall/208 spring semester. Class hours 4. Prerequisite: 108; corequisite: 203 corequisite to 207, 204 corequisite to 208.

209, 210 Keyboard Harmony (1,1)
The use of harmonic materials at the keyboard. 209 fall/210 spring, 209 prerequisite to 210.

212 America's Musical Heritage (3)
An historical study of musical development in the United States from the Colonial period to the emergence of the native American composer and performer of distinction in the 20th century. On demand.

213 A History of Rock (3)
A consideration of the history of rock music in a social context. Fall semester only. Prerequisite: Music III or University Honors 103; open to music majors.

217, 218 Diction for Singers (2,2)
An introduction to the pronunciation of Italian, German, French, and English based on the International Phonetic Alphabet. 217 fall/218 spring semester alternate years. Open to voice majors; others by permission.

3 String Methods (2)
Class instruction of string instruments: tuning and care of instruments; teaching techniques. Violin, viola, cello, and double bass; Fall semester. Class 2 hours, laboratory 1 hour.

222 Instrumental Methods for Vocal Music Education Majors (2)
Class instruction of woodwinds, brass, and percussion instruments; tuning and care of instruments; teaching techniques. Flute, single, and double reed instruments; trombone, horn, and piston valve instruments; drum and mallet instruments. Spring semester. Class 2 hours, laboratory 1 hour. Prerequisite: Vocal Music Education Major status.

223 Woodwind Methods (2)
Class instruction of woodwind instruments; tuning and care of instruments. Teaching techniques. Single reed instruments, double reed instruments, and flute. Fall semester. Class 2 hour, laboratory 1 hour.

224 Brass Methods (2)
Class instruction of brass instruments; tuning and care of instruments. Teaching techniques. Piston valve instruments, horn, and trombone. Spring semester. Class 2 hour, laboratory 1 hour.

225 Percussion Methods (2)
Class instruction of percussion instruments; tuning and care of instruments; teaching techniques. Spring semester. Class 2 hour, laboratory 1 hour.

226 Marching Band Techniques (2)
A study of the techniques and style employed in training the marching band. Fall semester.

230r Orchestra Literature for Elementary and Secondary School Students (1)
A survey of literature available for teaching orchestral music to students from elementary through secondary levels. On demand. Class hours 2. Prerequisite: 108 or permission of the instructor. Only one hour credit may apply to a degree.

231r Wind and Percussion Literature for Elementary and Secondary Students (1)
A survey of music literature available for teaching wind and percussion instruments to students from elementary through the twelfth grade. On demand. Class hours 2. Prerequisite: 108 or permission of instructor. Only one hour credit may apply to degree.

232r Choral Literature for Elementary and Secondary School Students (1)
A survey of literature for choral ensembles from elementary through secondary levels. On demand. Class hours 2. Prerequisite: 108 or permission of the instructor. Only one hour credit may apply to a degree.

251r Keyboard Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: audition.

253r String Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: audition.

255r Voice Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: audition.

257r Woodwind Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: audition.

259r Brass Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: audition.

261r Percussion Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: audition.

300r Seminar (0)
Every semester.

302 Counterpoint (2)
An analytical survey of contrapuntal techniques. Spring semester alternate years. Prerequisite: 108, or permission.

303 Basic Conducting (2)
Techniques of the baton, basic score reading and transposition, fundamentals of conducting. Fall semester. Prerequisite: Music 207, 208.
304 Arranging and Composing for Percussion Instruments (1)
Aspects of composing and arranging peculiar to instruments of the percussion family. Nature of sound as related to specific available instruments, technical problems, and notation practice. Investigation of percussion instruments in combination with other instruments, solo contexts, and in ensembles composed entirely of percussion instruments. On demand. Prerequisite: 208 and permission of instructor.

305r Composition (1–4)
Beginning composition study concentrating on small groups and short forms. Every semester. Prerequisite: 208.

307 Orchestration (2)
Scoring for strings woodwinds, brasses and full orchestra. Piano transcriptions from orchestral scores. Fall semester alternate years. Prerequisite: 208, 207, 208.

310 Choral Conducting (2)
First semester: designed to teach the student to train choral groups, read choral scores, and conduct effective rehearsals; basic patterns for choral and orchestral conducting. Second semester: devoted to interpretation and building of repertoire of both secular and sacred choral compositions. Actual conducting of works of all periods with and without instrumental accompaniment. Spring semester. Prerequisites: 207, 208.

311 Musics of the World (3)
An introduction to the folk and ethnic music of various world cultures. Consideration of how musical styles relate to social, cultural and aesthetic practices and attitudes. Papers, projects. May be registered as Anthropology 311 or Humanities 311. Fall semester only.

315, 316 History of Music (3, 3)
A general survey of the history of music in western civilization. 315 fall/316 spring semester. Prerequisite: 101 or 108.

317 Survey of Jazz (3)
A survey course in jazz from its ethnic origins, through its chronological development, to its current styles. Every semester.

321 Elementary School Music Methods, Materials, and Observation (3)
A study of music teaching-learning methods and strategies. Basic concepts of musical organization, musical skills, and literature for the classroom. Fall semester.

322 Music Education in Early Childhood (3)
Methods and materials designed to involve the infant and young child in musical experiences as an outgrowth of play. Developmental paths to music making and learning explored through informal and formal settings. Activities including music and movement, rhythmic speech, song, imitation and improvisation, music-drama, and music pictures. On demand.

325 Band Organization and Management (2)
The techniques used in the organization, administration, and preparation of school bands. The selection, care, and repair of materials, instruments, and other equipment. Fall semester.

326 Band Arranging (2)
Band instrumentation and general principles of arranging; special reference to writing for bands having incomplete instrumentation and less experienced players. Spring semester.

328 Instrumental Conducting (2,2)
First semester: includes techniques of the baton; basic score reading; fundamentals of conducting. Second semester: includes style, nuances, musical interpretations, advanced score reading, and actual band conducting. Spring semester. Prerequisites: 207, 208, 303.

332 Piano Pedagogy (2)
Piano methods and materials. For advanced students planning to teach piano. Fall semester alternate years.

333 Vocal Pedagogy (2)
A comparative study of the major concepts in current vocal training for soloist, choral group, and voice class; analysis of corrective procedure for vocal problems; elementary study of vocal anatomy, vocal acoustics, and the psychology of singing. Fall semester.

334 Choral Arranging (2)
The study of the methods, materials, techniques of arranging and adapting choral music for elementary, secondary, and adult voices with attention to vocal ranges, score arrangement, developmental and psychological considerations, and musical style. Prerequisite: Music 207, 208.

340 Music for Children (1)
Introduction of discipline based music education concepts for implementation by teachers of children, pre K through grade 6. Every semesters. Prerequisites: THSP 115, PSY 221 or HECO 241, Music 111, Art 301; Corequisites: THSP 340, Art 340.

370r Electronic Music (2)
An introduction to and continuing experience with the aesthetics, analysis, and composition of electronic music. Tape recorder terminology; tape manipulation techniques; synthesizer technique; electronics; acoustics; composition and analysis. For music majors. Spring semester. Prerequisite: 132, 208, or permission.

397 Music, the Arts, and Ideas (3)
A comparison of music and musical values in Africa, Indonesia, India, Europe, and among various indigenous peoples; an exploration of the role of art in various societies and other aesthetic issues relating to the arts. Essay exams, papers. May be registered as Humanities 397.

400r Seminar (0–6)
Every semester.

401 1 hr Composition II (1–4)
Advanced composition study. Every semester. Prerequisites: 305, 307.

404 Liturgies and Service Structure (2)
History, content, theology of worship; similarities in Jewish and Christian worship and liturgy; application of liturgical principles to various types of worship service; service playing. On demand. Open to music majors; others by permission.

405 Ministry of Music (2)
Philosophy of music in the church; the role of music in worship; the organization of a church music program; staff relations. On demand. Open to music majors; others by permission.

406 Hymnology (2)
Historical development of the Christian hymn; criteria for use of hymns and hymn tunes; the composition of hymns. On demand. Open to music majors; others by permission.

407, 408 Advanced Analysis (2,2)
Compositional, analytic techniques, and formal procedures, with emphasis on the 20th century. 407 fall/408 spring semester alternate years. Prerequisite: 208 or permission of instructor; 407 prerequisite to 408.

409, 410 Musical Styles (2,2)
Literature of the various periods of music history, including characteristic features of musical style. 409 fall/410 spring alternate years. Prerequisite: permission of instructor.

411 Music Before 1600 (3)
A study of works, both monodic and polyphonic, characteristic of European music before 1600. On demand. Prerequisites: 208 or permission of instructor.

412 Music from 1600 to 1750 (3)
A study of works characteristic of the period and illustrative of musical trends in the era. On demand. Prerequisites: 208 or permission of instructor.

413 Music from 1725 to 1825 (3)
A study of works characteristic of the period and illustrative of musical trends in the era. Extensive examination of representative scores. On demand. Prerequisites: 208 or permission of instructor.

414 Nineteenth Century Music (3)
A study of works characteristic of the period and illustrative of musical trends in the era. On demand. Prerequisites: 208 or permission of instructor.

415 Twentieth-Century Music (3)
A study of works characteristic of the period and illustrative of musical trends in the era. On demand. Prerequisites: 208 or permission of instructor.
426 Jazz Arranging (2)
Fundamentals of composing and arranging for the contemporary jazz ensemble. On demand. Prerequisites: 208, 307 or 326, or permission of instructor.

432 Teaching Strategies and Evaluation in Secondary School Music (3)
Theories and practices in secondary school music, attention to the exceptional student, curricular developments in music education, evaluation procedures appropriate to music education. Fall semester. Prerequisite: admission to teacher education program. May not be used for graduate credit.

451r Keyboard Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: 16 hours of 255r and successful audition for the division jury.

453r String Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: 16 hours of 253r and successful audition for the division jury.

455r Voice Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: 16 hours of 259r and successful audition for the division jury.

457r Woodwind Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: 16 hours of 257r and successful audition for the division jury.

459r Brass Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: 16 hours of 259r and successful audition for the division jury.

461r Percussion Instruction (1-4)
Four hours practice per week required for each hour credit. Every semester. Prerequisite: 16 hours of 261r and successful audition for the division jury.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See “Departmental Honors,” page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.

Nursing
See College of Health and Human Services, School of Nursing.

Philosophy and Religion
Professor Klinefelter, Acting Head

The Department of Philosophy and Religion offers a 30-hour undergraduate major (B.A.) with separate concentrations in philosophy, religious studies, and philosophy and religion; and an 18-hour minor with separate concentrations in philosophy and religious studies. Through its curricular and extracurricular programs the department seeks to expose the student to a wide variety of influential philosophical and religious thinkers in both Western and non-Western cultures.

The department sponsors a student organization, the Philosophy Club, which schedules a program of speakers throughout the year.

Each discipline of philosophy and of religion is regarded separately in applying the 42-hour limit in any one department for the B.A.

Philosophy and Religion (B.A.):
Philosophy, Religious Studies, Combined Concentrations

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses other than philosophy and religion; one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category E: 1 approved mathematics course (3 hours)
Category F: 1 approved perspectives course other than philosophy and religion (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Foreign language through second college year (Department recommends Greek, Latin, German, or French)

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major
One of the following concentrations
1. Philosophy:
   30 hours philosophy beyond 100 level including Philosophy 211, 351, 353, 498r;
   one course in ethics, metaphysics, or epistemology
   2.0 average in all philosophy courses

2. Religious Studies:
   Total of 30 hours including Philosophy 351 and 353; Philosophy 498r or Religion 498r, and also including 21 hours religion with two courses chosen from each of the following groups:
   1. Religion 211, 313, 314, 320, 321, 322, 417, 493r
   2. Religion 318, 334, 337, 351, 362, 467, 484, 492r
   2.0 average in all philosophy and religion courses

3. Combined:
   Total of 30 hours excluding Philosophy 106
   15 hours philosophy including 351, 353, 498r
   15 hours religion including two courses from 318, 334, 337, 351, 362, 467, 484, 492r
   2.0 average in all philosophy and religion courses

(Religion 103 may be counted toward religious studies and combined concentrations, and one course outside the department may count toward major with any concentration if approved by department head.)

All majors in Philosophy and Religion are required to complete a senior project under the supervision of a member of the faculty. Students register for this project by taking at least three hours of Philosophy 498r or Religion 498r. Completion of a Departmental Honors project will also satisfy this requirement.

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Typical courses of study in philosophy and religion (B.A.)

Philosophy and religion (B.A.)'s philosophy concentration

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<thead>
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<th>First Semester</th>
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**SOHOMORE**

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**TOTAL HOURS 128**

*This course does not count toward major.

1Major requires 30 hours philosophy beyond the 100 level, including Philosophy 211, 351, 353, 498r, and one course in ethics, metaphysics, or epistemology. Not more than 42 hours in any one department may be applied toward a B.A. degree. One course outside the department may count toward major with approval by department head.

1Correlative courses in religion should be considered as appropriate electives.

Philosophy and Religion—79

Philosophy and Religion (B.A.)'s religious studies concentration

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**JUNIOR**

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**TOTAL HOURS 128**

*This course does not count toward major.

1Major requires at least 15 hours in philosophy and 15 hours in religion including Philosophy 351, 353, 498r, and two courses from Religion 318, 334, 337, 351, 362,467,484,492r

1Not more than 42 hours in any one department may be applied toward a B.A. degree. One course outside the department may count toward major with approval by department head.

Philosophy and Religion (B.A.)'s combined concentration

<table>
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<th>First Semester</th>
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**TOTAL HOURS 128**

*This course does not count toward major.

1Major requires at least 15 hours in philosophy and 15 hours in religion including Philosophy 351,353,498r, and two courses from Religion 318,334,337,351, 362,467,484,492r

1Not more than 42 hours in any one department may be applied toward a B.A. degree. One course outside the department may count toward major with approval by department head.

PHILOSOPHY AND RELIGION MINORS

One of the following concentrations

1. Philosophy:

18 hours of philosophy beyond 100 level including Philosophy 211,351,353; 9 of these hours must be earned in courses at 300 level or above.

Minimum 2.0 average in the minor.
2. Religious Studies:
Total of 18 hours including Philosophy 333 or 353 and 15 hours religion, with at least one course from each of the following groups:
- Religion 211, 313, 314, 320, 321, 322, 417, 493
- Religion 318, 333, 337, 351, 362, 467, 484, 492
Nine of the 18 hours must be earned in courses at 300 level or above.
Minimum 2.0 average in the minor.

PHILOSOPHY COURSES

106 Philosophy and Human Nature (3)
Interpretations of human nature and analyses of the human condition from Plato to Russell and others in the 20th century. Lectures and discussions aimed at clarification of present meanings and values. Every semester.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

201 Introduction to Philosophy (3)
An approach to the discipline through the perennial and changing issues of the field: freedom and determinism, the real and our knowledge of it, cosmological ideas, God, meaning, and moral values. Every semester.

211 Logic, Language, and Evidence (3)
An examination of accepted forms of reasoning and of the varied ways in which language functions; fallacy, definition, metaphor, and theories of meaning; examples from such areas as science, law, politics, theology, and philosophy: classical and symbolic logic; deductive techniques; induction and deduction contrasted. Fall semester.

221 Introduction to Ethics (3)

322 Ethical Theory (3)
A critical analysis of contemporary ethical theories. Emphasis on the writings of philosophers such as Moore, Stevenson, Dewey, Rawls, Baier, Hare, and Searle. Alternate years.

333 Philosophy of Religion (3)
A philosophical examination of religion, including traditional and modern arguments for the existence and nature of God, the nature of religious experience and belief, and the functions of religious language. Alternate years.

336 Aesthetics (3)
A study of the nature and value of art, of human creativity, and of aesthetic response. Close attention to theoretical analysis and to the interpretation and critique of important artistic achievements. On demand.

341 Metaphysics (3)
A study of classical and contemporary approaches to the question of what is ultimately real; consideration of modern challenges to the legitimacy of metaphysics. Alternate years.

345 Epistemology (3)
A critical examination of the nature of knowledge and the philosophical problems concerning skepticism; knowledge of the self, material objects, other minds; the past, present, and future; universal and necessary truth. Selections from both historical and recent writings. Alternate years.

348 Philosophy of Science (3)
An introduction to philosophical problems in the natural and social sciences: the nature of explanation, induction, evidence, probability, verification, causation; the role of observation; the relations among the sciences. Spring semester alternate years.

351 History of Ancient Philosophy (3)
Selections from the pre-Socratics through the late Greco-Roman writers, including Plotinus. Emphasis on Plato and Aristotle. Fall semester.

353 History of Modern Philosophy (3)
Rationalism and empiricism as developed by leading thinkers; selections from chief representatives from Hobbes and Descartes through Kant. Spring semester.

360 American Philosophy (3)
Earlier American thought in its reaction to European movements; the emergence of a genuinely American philosophy. Emphasis on James, Pierce, Santayana, Royce, Lewis, and Whitehead. Alternate years.

364 Existentialism and Phenomenology (3)
Presentations on the major figures and themes of this movement; discussions of selected passages from Kierkegaard, Nietzsche, Husserl, Heidegger, Sartre, and Ricoeur. Alternate years.

425 Ethics and the Professions (3)
An examination of ethical issues and principles related to problems and standards in the professions. Special attention to professional codes and case studies in relation to traditional and contemporary moral philosophy. Designed as a general course for students not majoring in philosophy and religion. Fall semester.

442 Philosophy of Mind (3)
A history of the philosophy of mind, from Aristotle and Descartes through the twentieth century. Emphasis on current debates, with reference to relevant scientific discoveries. Alternate years.

481r Interdisciplinary Seminar (3)
Critical inquiry into the most comprehensive questions raised by particular disciplines; reading and discussion of significant primary sources from scholars in the special field and philosophers. Two faculty members. On demand.

483 Feminist Theory (3)
A history of feminist theory from the eighteenth century to the present. Extensive reading, papers. Maybe registered as Humanities 483. Credit not allowed in both Humanities 483 and Philosophy 483.

491r Studies in Philosophy (3)
A seminar or tutorial for the intensive consideration of one philosophical problem, movement, or figure. On demand.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
Must be taken for at least three hours in one semester by all majors. Every semester.

499r Group Studies (1-4)
On demand.

RELIGION COURSES

103 Introduction to the Study of Religion (3)
Consideration of the various elements of religion and the methods for studying them; attention to beliefs, world-views, and sacred literature; rituals, myths, symbols; religious communities and organizations; types of religious experience. Every semester.

110 Introduction to Western Religions (3)
An introduction to the major religious traditions emerging in Western cultures, with emphasis on Judaism, Christianity, and Islam.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

210 Western Christianity Since 1000 (3)
See History 210.

211 Religions of the East (3)
An introduction to major world religious traditions of Asia, with emphasis on Hinduism, Buddhism, and Confucianism. Every semester.

213 A History of Judaism (3)
Examination of enduring themes or concepts in Jewish tradition from antiquity to the modern era. Particular attention to the emergence of normative Judaism and its later challengers: Hasidism, Reform, and Zionism. Fall semester.
221, 222 Biblical Literature (3,3)

236 Religion in American Life (3)
Attention to distinctly American phenomena, with the intention of assessing the present role and status of religion; consideration of such topics as separation of church and state, revivalism, the influence of immigration, sects, and cults. Fall semester.

313 Religion in the Middle East (3)
A study of non-Christian religions originating in the Middle East with particular attention to Islam as influenced by Zoroastrianism and Judaism. Alternate years.

314 Primitive Religion (3)
The place of religion in the social and cultural settings of selected peoples as evidenced through magic, myth, totemism, fetish, sacrifice, shamanism, and initiatory rites; an attempt to delineate the common elements of primitive religion. On demand.

318 Modern Judaism (3)
Exploration of religious, social, and political developments in modern Judaism, including the appearance of Zionism, the impact of the Holocaust, and efforts to overcome the tension between Zionism and the religious culture of contemporary Jews. Alternate years.

320 Religions of India (3)
Examination of the conceptual and historical development of religions on the Indian subcontinent. Attention will also be paid to the interaction among religions of India and their relationships to Indian culture. Alternate years.

321 Religions of China (3)
Examination of the conceptual and historical development of religions in China. Attention will also be paid to the interaction among religions of China, the impact of Indian religions and culture on China, and the relationship of religion to Chinese culture. Alternate years.

322 Religions of Japan (3)
Examination of the conceptual and historical development of religions in Japan. Attention will also be paid to the interaction among religions of Japan, the impact of continental Asian religions and culture on Japan, and the relationships of religion to Japanese culture. Alternate years.

334 Religion in Southern Culture (3)
Examination of the role of religion in Southern culture, past and present. Attention to the evangelical influence, African-American religion, mountain religion, Southern-based sects, the Pentecostal experience, and the cultural impact of religion in the South. Alternate years.

337 Interpretations of Religion (3)
An examination of ways in which religious belief and practice may be understood; sympathetic and opposing views drawn from several fields and represented by such authors as Feuerbach, Freud, James, Malinowski, Berger, Levi-Strauss, Yinger, Fromm, and N.O. Brown. Alternate years.

351 Early Christian Thought (3)
The development of central issues in Christian thought in the first millennium, with an emphasis on how these emerged from a historical context as responses both to the demands of faith and to the social and intellectual concerns of the time. Consideration of such figures as Tertullian, Arius, Augustine, Gregory the Great, and Bede. Alternate years.

362 Modern Christian Thought (3)
Selected movements and figures that have shaped the Christian theological tradition in the nineteenth and twentieth centuries. Alternate years.

417 Mysticism East and West (3)
The place of mysticism in the Eastern and Western religious traditions; discussion of the writings of major historical and contemporary mystics. On demand.

467 Contemporary Religious Issues (3)
Analysis of selected issues, such as church-state relations, fundamentalism, and debates over abortion, that are central to contemporary religious life. Primary attention to the American scene and some cross-cultural comparisons. Alternate years.

470 Psychology of Religion (3)
Analysis of empirical data and psychological theories involving religious beliefs, practices, and experiences. Every semester. Prerequisites: 6 units psychology or philosophy-religion. May be registered as Psychology 470.

484 Holocaust and Genocide (3)
Examination of the Holocaust, the state-sponsored effort of the Nazi regime to destroy the Jewish people between 1933 and 1945, and the relationship between the Holocaust and the more general category of genocide. Consideration of the causes of genocide and the Holocaust and their persistent presence in contemporary society. Alternate years.

491r Studies in Religion (3)
A seminar or tutorial for the intensive consideration of one problem, movement, or figure in the field of religion. On demand.

492r Studies in Western Religious Thought (3)
A seminar or tutorial for the intensive consideration of one problem, movement, or figure in Western religious thought. On demand.

493r Studies in the History of Religions (3)
A seminar or tutorial for the intensive consideration of one problem, movement, or figure in the history of religions. On demand.

497r Research (1-4)
On demand.

498r Group Studies (1-4)
Must be taken for at least 3 hours in one semester by all majors. Every semester.

499r Individual Studies (1-4)
On demand.

Physics, Geology, and Astronomy
Professor Churnet, Head

The Department of Physics, Geology, and Astronomy offers two degree programs for its majors: the B.S. in physics, and the B.S. in geology. The department also contributes to programs leading to degrees in other sciences, engineering, and preprofessional areas. In addition, the department offers minors in geology, physics, and health physics.

The geology program emphasizes hands-on experience. Many courses are supported by field examination of regional exposures of sedimentary, metamorphic, and igneous rocks.

The geology curriculum is designed to train students to pursue graduate degrees or enter the work force, particularly in the area of environmental geology.

As a fundamental science, physics is required for the education of students in many disciplines. The physics program emphasizes mathematics, but to accommodate students in less quantitative disciplines the department also offers introductory algebra-based physics. Physics majors are qualified to seek opportunities in graduate school, education, government, and industrial research.

The astronomy program is augmented by specialized equipment for astrophotography. The off-campus UTC Clarence T. Jones Observatory provides astronomy presentations to the community at large.
Physics, Geology, and Astronomy

The department offers several introductory courses which fulfill the natural science (category D) requirement. Physics 103, 230, Geology 111, General Science 111, and Astronomy 102 all contain a strong laboratory emphasis, and are excellent choices to increase one’s appreciation of nature and the physical universe.

Geology (B.S.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than geography (6 hours)
Category D: 1 approved physical or natural science course other than geology with laboratory (4 hours; approved related courses below will apply)
Category F: 1 approved mathematics course (3 hours; approved related courses below will apply)
Category G: 1 approved perspectives course (3 hours)
Exercise Science, Health and Leisure Studies 021 plus one additional semester of exercise science activity

Major and related courses

General Education Category C: 2 approved behavioral or social science courses other than geography (6 hours)
Category F: 1 approved mathematics course (3 hours; approved related courses below will apply)
Category G: 1 approved perspectives course (3 hours)
General Education Category B

Geology 111, 112, 241, 242, 303, 341, 451, 480
Any two of the following sequences: Biology D121-122, Chemistry D121-122, Physics D103-104, or Physics D230-231
English 278
Computer Science 110 or 118
Recommended: Astronomy 101 or 102, Environmental Science 150, Math 160, Physics 230, 231, 232 and Chemistry 341, 351
2.0 average in all geology courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Each geology major must also complete the requirements for either the Geology option or the Environmental Geology option:
- Geology option: Geology 321, 452, plus 7 hours of geology electives, including at least one course at the 400-level; Mathematics F150
- Environmental Geology option: Geology 123, 445, plus 8 hours of geology electives, including at least one course at the 400-level; Mathematics F136 or F150

Field work
Geology majors are encouraged to enroll in a field geology course (field camp) during the summer following the junior or senior year. In the latter case, graduation will be postponed until August and the requirement that the last 30 hours be completed at UTC will be waived. It is still required, however, that at least 30 hours be completed at UTC.

Graduate study preparation
Most graduate schools in geology require a minimum of 1 year of calculus, 1 year of calculus-based physics, and a good background in courses from biology, chemistry, and computer science, and ageology field camp. Therefore, students intending to pursue a graduate degree in geology should take those courses (beyond UTC’s major requirements) that will best prepare them for the graduate program of their choice. It is strongly recommended that the prospective graduate student also take Geology 497r.

Typical courses of study in geology (B.S.)

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology 111</td>
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</tr>
<tr>
<td>University Studies 101</td>
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<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Science</td>
<td>4</td>
</tr>
<tr>
<td>EHLS 021</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology 112</td>
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</tr>
<tr>
<td>Introductory Science</td>
<td>4</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>General Activity</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

SOPHOMORE

Geology 241 4  Geology 342 4
Elective 2  Geology Elective 3
Computer Science 110 or 118 3  General Education Category B 3
Mathematics F150 4  Elective (or Mathematics 160) 4
General Education Category G 3  English 278 3
**Total** 16 **Total** 17

JUNIOR

Geology 303 or 451 4  Geology 321 or 452 4
Geology Elective 2  Geology 480 1
Introductory Science 4  Introductory Science 4
General Education Category C 3  General Education Category C 3
Biology D121 4  Biology 122 4
**Total** 17 **Total** 16

SENIOR

Geology 451 or 303 4  Geology 452 or 321 4
Geology 490 2  Geology 497r 2
Geology Elective 4  Geology Elective 3
Geology 474 3  Elective 4
Elective 3  General Education Category B 3
**Total** 16 **Total** 16

TOTAL HOURS 128

1. Mathematics 106, 135, and F145 may be recommended to precede Mathematics F150, depending on preparation of the individual student. Students taking the Environmental Geology option may substitute Mathematics F136 for Mathematics F150.
2. Mathematics 106 and 135 may be recommended to precede Mathematics 136, depending on the preparation of the individual student.
3. Take any two of the following sequences: Biology D121-122; Chemistry D121-122; Physics D103-104 (or Physics D230-231).
4. The Environmental Geology option requires Geology 123 in place of Geology 321.
5. The Environmental Geology option requires Geology 445 in place of Geology 452.

GEOLGY MINOR

18 hours of geology including 111, 112, and 407. At least 8 hours 300 level or above. Minimum 2.0 average in all geology courses.

GEOLGY COURSES

100 Earth Science (4)
Interdisciplinary overview of the planet Earth, including the origin and evolution of its physical features, the role of modern technology in refining plate tectonic theory, and a look toward Earth's future. On demand. **Lecture 3 hours, laboratory 2 hours.**

108 Geomorphology (3)
Scientific account of the general configuration of Earth's surface and the evolution of land forms. On demand. **Lecture 3 hours.**

111 Physical Geology (4)
Introduction to geology with emphasis on the age and origin of Earth, materials that comprise Earth, and physical processes that constantly act upon Earth. Field trips. Every semester. **Lecture 3 hours, laboratory 2 hours. Prerequisite: 2 years of high school algebra or Mathematics 106.**

112 Historical Geology (4)
Geologic history of Earth with emphasis on geologic time and the evolution of life, as gleaned from the fossil record. Spring semester. **Lecture 3 hours, laboratory 2 hours. Prerequisite: Geology III or permission of the instructor.**

123 Environmental Geology (4)
Natural, mining, and industry-related environmental hazards, including interactions of water, rock, and air, and the attempts of humanity to remedy these problems. On demand. **Lecture 3 hours, laboratory 1 hour.**

199r Special Projects (1-4)
Individual or group projects. On demand. Prerequisites: receipt of an acceptable proposal, and permission of the instructor and department head. Graded on a satisfactory/unsatisfactory basis. Cumulative limit of 4 hours.
225 Oceanography (3)
Study of the oceans, including chemical and physical properties of sea water, patterns of sea-water circulation, life zones, origin and physiography of ocean basins, and mineral and energy resources of the oceans. On demand. Lecture 3 hours. May be registered as Environmental Science 225.

226 Oceanography Laboratory (1)

241 Mineralogy (4)
Crystallography, descriptive and determinative mineralogy, mineral chemistry, and methods of chemical analysis. Fall semester. Lecture 3 hours, laboratory 3 hours. Prerequisites: Geology III, Chemistry 121. Formerly Geology 341.

242 Petrology (4)
In-depth study of igneous and metamorphic rocks, including classification, genesis, and evolution. Field trips. Spring semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: Geology 241 formerly Geology 342.

303 Sedimentary Rocks and Stratigraphy (4)
Sedimentary rocks and stratigraphic correlation with emphasis on the classic stratigraphy of eastern North America, the facies concept, and paleogeographic reconstruction of the continents. Field trips. Fall semester, alternate years. Lecture 3 hours, laboratory 3 hours. Prerequisite: Geology 112.

307 Geology of Tennessee (3)
Geologic resources, structure, and history of Tennessee and adjacent areas. Lecture and field trips. On demand. Prerequisite: a previous course in geology.

321 Paleontology (4)
Study of animals that are preserved in the fossil record, particularly taxonomy and population, interpretation of faunal assemblages, and the concept of biostatigraphy. Laboratory exercises emphasize morphology and time ranges of major fossil groups. Field trips. Spring semester, alternate years. Lecture 3 hours, laboratory 3 hours. Prerequisite: Geology 112.

330 Sedimentation (4)
Interpretation of ancient depositional environments from outcrop observations, well logs, and modern-day analogs. Extensive field work. On demand. Lecture 3 hours, laboratory 3 hours. Prerequisite: Geology 303 or permission of the instructor.

405 Principles of Geochemistry (4)
Origin, distribution, and behavior of chemical elements on Earth. Applications of chemistry to geologic problems. On demand. Lecture 3 hours, laboratory and recitation 2 hours. Prerequisites: Geology 111 and 1 year of college chemistry. Calculus level math is highly recommended.

406 Lithology: Study of Rocks (4)
Identification and study of common rocks and their plate tectonic environments. Lecture 3 hours, laboratory 2 hours. Prerequisite: Consent of instructor.

407 The Dynamic Earth (3)
History, theory, and application of plate tectonics models to explain the dynamic character of the Earth. On demand. Lecture 3 hours. Prerequisite: Geology 111 or approval of instructor.

431 Sedimentary Petrology (3)
In-depth study of sedimentary rocks, including genesis and classification of clastic and chemical varieties. Field work. On demand. Variable lecture and laboratory time dependent on topic. Prerequisite: Geology 330.

436 Fossil Fuels (3)
Stratigraphic and sedimentological study of fossil-fuel deposits and the scientific basis for fossil-fuel exploration, including interpretation of gamma-ray well logs and preparation of panel diagrams, structure contour maps and isopach maps. On demand. Prerequisite: Geology III.

445 Hydrology (3)
Occurrence and behavior of water in the geologic environment, including drainage systems, erosional and depositional processes, causes and controls of flooding, ground-water systems, and water quality problems. Field work. On demand. Prerequisites: Geology 111; Chemistry 121.

450 Economic Geology (4)
Origin, distribution, and classification of mineral deposits found in igneous, sedimentary, and metamorphic rocks with an introduction to methods of exploration and mining. On demand. Lecture 3 hours, laboratory 3 hours. Prerequisites: Geology 342; Chemistry 122.

451 Structural Geology (4)
Theory and principles of rock deformation, description and classification of common geologic structures, and laboratory methods to solve structural problems. Field trips. Fall semester, alternate years. Lecture 3 hours, laboratory 3 hours. Prerequisite: Geology 242. Formerly Geology 351.

452 Field Methods in Structural Geology (4)
Methods of gathering data in the field and interpretation of field relationships, as necessary to geologic mapping and analysis of geologic structures. Extensive field work. Spring semester, alternate years. Lecture 3 hours, laboratory 3 hours. Prerequisite: Geology 351. Formerly Geology 352.

454 Geologic Mapping (3)
Mapping of lithology and structural features in sedimentary and crystalline rocks. Extensive field work. On demand. Prerequisites: Environmental Science 340 or Geology 352 and permission of the instructor. Formerly Geology 404.

474 Water Quality Survey (3)
Concepts of water quality, including sampling methods, units of concentration, and simple analytical procedures. Concepts are augmented by field and laboratory studies of ground and surface water. Field work. On demand. Prerequisites: Geology 111 or 123; Chemistry 121, 122; senior standing, and permission of the instructor. Chemistry 351 and Geology 341 are recommended.

480 Geology Seminar (1)
Seminar and discussion of topics of current interest in the earth sciences. Student presentations required. Spring semester. Prerequisite: Upper level or graduate standing.

490 Senior Seminar (2)
Culminating senior experience giving students an opportunity to design and conduct research related to geologic problems. Spring semester. Prerequisites: Geology 480, and permission of the instructor.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms) On demand. Graded on a satisfactory/no credit basis. See "Departmental Honors," page 27.

496r Geology Field Experience (1-4)
Participation in the examination of the geology of a region based on a department-sponsored geologic expedition. Pre and post-trip written reports are required. On demand. Prerequisites: introductory course in the natural sciences, and permission of the instructor.

497r Research (1-4)
On demand. Prerequisites: receipt of acceptable research proposal, and permission of the instructor and department head. Graded on a satisfactory/no credit basis. Cumulative limit of 4 hours.

498r Individual Studies (1-4)
On demand. Consent of instructor, receipt of an acceptable proposal, and permission of the department head. Graded on a satisfactory/no credit basis. Cumulative limit of 4 hours.

499r Group Studies (1-4)
On demand. Consent of instructor. Cumulative limit of 4 hours.

Physics (B.S.)
General Education (see pages 22-24 for list of approved courses) Category A: 2 approved courses in written communication in the English language (6 hours) Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each) Category C: 2 approved behavioral or social science courses (6 hours) Category D: 1 approved physical or natural science course other than physics with laboratory (4 hours; approved related courses below will apply)


**Physics, Geology, and Astronomy**

**Category F:** 1 approved mathematics course (3 hours; approved related courses below will apply)

**Category G:** 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity.

**Major and related courses**

One of the following options:

1. Two semesters of French or German

2. Computer Science 118 or Engineering 124

Mathematics F150, 160, 212, 245, 255

Chemistry D121, 122

Physics 230 (or 103 and 104)

Physics 231 and 232

Physics 341, 342, and 411

6 hours from Physics 381r, 382r, 481r, and 482r

30 additional hours from physics, astronomy, chemistry, engineering, or mathematics at the 200 level or above or from geology and biology or other fields with prior approval by the department.

Recommended: Physics 303, 307, 310, 412, and 414r are recommended for students who plan on graduate study in physics/astronomy.

At least 30 hours of physics and astronomy at the 300 and 400 level 2.0 average in all physics courses

Electives to complete 128 hours

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**Typical course of study in physics (B.S.)**

<table>
<thead>
<tr>
<th>First semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td></td>
</tr>
<tr>
<td>Chemistry D121</td>
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<tr>
<td>Mathematics F150</td>
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<td>General Education Category A</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>17</td>
</tr>
</tbody>
</table>

| **SOPHOMORE** | |
| **39 hours** | |
| Physics 231 | 4 | Physics 232 | 4 |
| Mathematics 212 | 3 | Mathematics 255 | 3 |
| Mathematics 245 | 3 | General Education Category B | 3 |
| General Education Category B | 3 | General Education Category C | 3 |
| General Education Category C | 3 | Computer Science 118 or Engineering 124 | 3 |
| EHL Activity | 1 | **Total** | 17 |

| **JUNIOR** | |
| **40 hours** | |
| Physics 341 | 4 | Physics 342 | 4 |
| Physics 307 (Or 310) | 4 | Physics 303 | 4 |
| General Education Category G | 3 | Elective | 3 |
| Physics 38 Jr | 2 | Physics 382r | 2 |
| Foreign Language* | 3 | Foreign Language* | 3 |
| **Total** | 16 | **Total** | 16 |

| **SENIOR** | |
| **39 hours** | |
| Physics 411 | 3 | Electives | 12 |
| Physics 48 Jr | 2 | Physics Electives | 3 |
| Physics 310 (or 307) | 4 | **Total** | 15 |

**TOTAL HOURS 128**

*Select a computer class (1 semester) or a foreign language (2 semesters).

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**PHYSICS MINORS**

**Physics:**

Required courses: Physics 230 (or 103 or Engineering 103 and 104), Physics 231, Physics 232 (or 104).

Elective courses: A planned program of at least 12 hours of physics at the 300-400 level selected with the prior approval of the department.

Minimum 2.0 average in the minor.

**Health Physics:**

19 hours of physics including:

A. One of the following introductory options: 103 and 104; or 230, 231, and 232; or Engineering 103, 104, Physics 231, and 232.

B. Physics 441, 442, 482r and 3 hours from 318, 412, 419, or departmentally approved special projects.

Minimum 2.0 average in the minor.

**ASTRONOMY COURSES**

**101 Introduction to Astronomy - The Solar System (4 with lab, 3 with out)**

Descriptive and conceptual introduction to the nature and origin of the solar system. Optional 2-hour laboratory illustrates concepts of practical astronomy. On demand. **Lecture 3 hours.**

**102 Introduction to Astronomy-Stars to Galaxies (4)**

Nature of stars and galaxies; the evolution and structure of the observable universe with an emphasis on understanding the experimental foundations of the science. **Fall semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: two years of high school algebra or Mathematics 106. Corequisite: Astronomy 102 laboratory.**

**199r Special Projects (1-4)**

Individual or group studies. On demand. **Prerequisites: permission of the instructor and head of the department. Cumulative limit of 4 hours.**

**300r Advanced Astronomy Laboratory (1)**

Laboratory techniques in astronomy. Applications of spectroscopy, optics, modern photographic techniques, and photometry to observational astronomy. Use of the university's observatory. On demand. **Prerequisite: Astronomy 101 or 102, or permission of the instructor. Cumulative limit of 2 hours.**

**401 Solar System Astrophysics (3)**

Application of basic physical laws to the problem of the origin and evolution of the solar system. Solar structure and energy sources, radiative transfer, the solar magnetic field, the interplanetary medium, celestial mechanics, comets, meteors, asteroids, the planets, and their satellites. On demand. **Prerequisite: Physics 342 or permission of instructor.**

**498r Individual Studies (1-4)**

On demand. **Prerequisites: permission of the instructor and head of the department.**

**499r Group Studies (1-4)**

On demand. **Prerequisites: permission of the instructor and head of the department.**

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**GENERAL SCIENCE COURSES**

**111 The Physical Environment: Atoms to Galaxies (4)**

Description of physics from three viewpoints: its historical and social significance, the processes of science, and the present content of scientific fact and theory. Topics include physics, chemistry, geology, and astronomy. Every semester. **Lecture 3 hours, laboratory 2 hours. Prerequisite: 2 units of college preparatory mathematics or Mathematics 106.**

**PHYSICS COURSES**

**103 General Physics • Mechanics (4)**

Algebra-based introduction to forces and uniform motion, conservation principles, sound and thermodynamics, with applications to problems of modern science and technology. Required in premedical, predental, prepharmacy, and physical therapy programs. Every semester. **Lecture 3 hours, laboratory 2 hours. Prerequisite: 3 units of college preparatory mathematics, or Mathematics 105 or equivalent.**
104 General Physics-Electromagnetism and Optics (4)
Algebra-based introduction to classical electricity and magnetism, optics, and the concepts of modern physics. Required in premed, predental, prepharmacy, and physical therapy programs. Every semester. Lecture 3 hours laboratory 2 hours. Prequisite: Physics 103 or permission of the instructor.

199 Special Projects (1-4)
Individual or group projects. On demand. Prerequisites: permission of the instructor and head of the department. Cumulative limit of 4 hours.

230 Principles of Physics - Mechanics and Heat (4)
Calculus-based introduction to the laws of classical dynamics, kinematics, and thermodynamics, with applications to simple physical systems. Every semester. Lecture 3 hours, laboratory 2 hours. Pre or corequisite: Mathematics 160 or permission of the instructor.

231 Principles of Physics-Electricity and Magnetism (4)
Calculus-based introduction to electric and magnetic fields, electric currents, electromagnetic induction and waves. For all engineering students. Every semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: Physics 103, 104; Mathematics 150, 160; or permission of the instructor.

232 Principles of Physics - Optics and Modern Physics (4)
Calculus-based survey of principles of optics, and of the early conceptual advances in 20th-century physics: the Bohr atom, quantum theory, relativity, nuclear physics and elementary particles. For all engineering students. Every semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: Engineering 103 and 104, or Physics 103 and 104, or 230; Mathematics 150, 160; or permission of the instructor.

303 Basic Electronics (4)
Review of simple DC and AC circuitry; applications of diodes, transistors, and operational amplifiers; introduction to digital electronics using TTL integrated circuits and their applications. Spring semester. Lecture 3 hours, laboratory 2 hours. Prequisites: Physics 103 and 104, or 231; Mathematics 160; or permission of the instructor.

304 Electronic Circuits (4)
Theory and use of basic electronic instruments for electrical measurement or control. Multi-stage amplification, feedback, oscillators, and digital/logic circuitry treated with varying emphasis. On demand. Lecture 3 hours laboratory 2 hours. Prerequisite: Physics 303 or permission of the instructor.

307 Optics (4)
Basic aspects of geometrical and physical optics, including interference, diffraction, and polarization; optical systems; wave equations and superposition; laser basics. Fall semester alternate years. Lecture 3 hours, laboratory 2 hours. Prerequisites: Physics 230, 231, 232 or Physics 103, 104; Mathematics 160; or permission of the instructor.

310 Introduction to Thermal Physics (4)
Laws of thermodynamics, kinetic theory, and statistical mechanics with applications to basic thermodynamic systems. Fall semester alternate years. Lecture 3 hours, recitation 2 hours. Prerequisites: Physics 230, 231, 232; or Physics 103, 104; Mathematics 160, Corequisite: Mathematics 255; or permission of the instructor.

318 Radiation Physics and Introductory Health Physics (3)
Introduction to ionizing radiation, its production and interaction with matter, its biological effects and its measurement. Radiation protection practices and regulatory guidelines. The uses of radiation and radioisotopes in biology, chemistry, environmental sciences, and medicine. Benefits and hazards of nuclear energy. Nuclear weapons and the effects of nuclear warfare. On demand. Prerequisite: Physics 104 or 232; or permission of the instructor.

341 Classical Mechanics (4)
Dynamics of particles and continuous media; Newton's law of motion, conservation laws, generalized coordinates, Lagrange's equations, and the principle of least action; the mechanics of continuous media, wave motion, sound, hydrostatics, rotational and irrotational flow, the equation of continuity, Laplace's equation. Fall semester. Lecture 3 hours, recitation 2 hours. Prerequisites: Physics 230, 231 or 103, 104; or permission of the instructor. Corequisite: Mathematics 245 or 255.

342 Electricity and Magnetism (4)
Basic laws of electromagnetism, electric and magnetic properties of materials, Maxwell's equations, boundary value problems, electromagnetic waves. Spring semester. Lecture 3 hours, recitation 2 hours. Prerequisite: Physics 341; Mathematics 245, 255; or permission of the instructor.

381r Methods of Experimental Physics (2)
Introduction to experimental design and techniques in areas such as harmonic motion, gravitation, timing and timing coincidence measurements, measurement of thermodynamic properties, electrical and magnetic measurements. Fall semester. Lecture 1 hour, laboratory 2 hours. Prerequisites: Physics 230, 231, 232; or Physics 103, 104. Corequisite: Physics 341 or 342, 307 or 310; or permission of the instructor. Cumulative limit of 4 hours.

382r Classical Physics Laboratory (2)
Advanced laboratory course emphasizing the measurement and analysis of the properties of classical physical systems in optics, mechanics, electricity and magnetism, thermodynamics and materials science. Spring semester. Lecture 1 hour, laboratory 2 hours. Prerequisites: Physics 230, 231, 232; or Physics 103, 104. Corequisite: Physics 341 or 342, 307 or 310; or permission of the instructor. Cumulative limit of 4 hours.

400r Physics Seminar (1)
Reports and reviews of selected physics research, including the abstracting of publications. On demand. Enrollment limited to juniors or above or permission of the instructor. Cumulative limit of 2 hours.

411 Introduction to Quantum Mechanics (3)
Basic elements and principles of quantum physics: probability waves, the Schrodinger equation, expectation values and operator formalism, the Schrodinger equation, expectation values, and operator formalism, the hydrogen atom, radiation processes. Fall semester. Prerequisites: Physics 230, 231, 232; or Physics 103, 104; Mathematics 245 or 255; or permission of the instructor.

412 Nuclear Physics (3)
Theory of nuclear structure; nuclear radiation characteristics; the interaction of radiation with matter; nuclear binding forces; the control and use of nuclear radiation. Spring semester. Prerequisites: Physics 230, 231, 232; or Physics 103, 104; Mathematics 245 or 255; or permission of the instructor.

414r Advanced Modern Physics (3)
One topic selected from biophysics, elementary particles, quantum mechanics, relativity, solid state physics, statistical mechanics, or superconductivity. Emphasis on the relation of the assumptions and predictions of the theories to the experimental evidence. Consequences of the theories illustrate the nature of physics and its applications in modern science. On demand. Prerequisites: Physics 341; Mathematics 245, 255; or permission of the instructor. Cumulative limit of 9 hours.

419 Introduction to Nuclear Reactor Physics (3)
Nuclear reactions and radiation; fission processes, neutron diffusion, reactor design variables, reactor materials and shielding, reactivity coefficients. On demand. Prerequisite: Physics 412 or equivalent, or permission of the instructor.

424 Instrumentation, Interfacing, and Microcomputers (3)
Interfacing instruments, measuring devices, and controls to mini and microcomputers. Includes voltmeters, counters, timers, temperature and other sensors, CRTs, floppy-disks, keyboards, music synthesizers, and control devices such as relays, thermostats, stepper motors, oscillators, and power supplies. Considers standard S100, IEEE-488, and RS232C bus structures. Survey of microcomputer applications. Projects involving interfacing instruments with microcomputers. On demand. Lecture 2 hours, laboratory 2 hours. Prerequisites: Physics 104, 232 or equivalent; Computer Science 110 or equivalent; or permission of the instructor.

425 Computer-Based Materials Development in Science (3)
Basic principles and practice of developing computer-based materials for science education. Projects to be chosen from a pool of topics in a specific area of science. Each module to include documentation, a tutorial, a pretest, a post test, explanatory material, a question set, a problem set, a graphics segment, etc. Modules to be prepared to publication standards. Prerequisite: CPSC 102 or equivalent. Enrollment limited to juniors or above or permission of the instructor.
430 Physics of Living Systems (3)
Introduction to basic biophysical processes occurring at the cellular level. Emphasis on energy transformations, and experimental techniques of biophysics. On demand. Prerequisites: Physics 230, 231, 232, 310, or permission of the instructor.

441 Radiation Dosimetry (3)
* Introduction to the theory and methodology of determining exposure and dose from ionizing radiation. Topics include: radioactivity and radioactive decay processes; the interaction of ionizing radiation with matter; exposure, dose and KERMA; cavity chamber theory; and instrumentation for radiation and dose measurement. On demand. Prerequisites: Physics 104 or 232, or permission of the instructor.

442 Radiation Biology (3)
Molecular effects of ionizing radiation and the relationship between molecular events and the acute and chronic effects of ionizing radiation. The human data base for estimates of the effects of low levels of ionizing radiation. Risk assessment exposure to populations. On demand. Prerequisites: Physics 104 or 232, or permission of the instructor.

481r Atomic Physics Laboratory (2)
Advanced laboratory on experimental methods used in atomic physics. Possible laboratory experiments include emission and absorption spectra of atoms and atomic ions, the Franck-Hertz experiment, the Stern-Gerlach experiment, electron-spin resonance, and nuclear magnetic resonance. Analysis of experimental results will be used to study theoretical models of physical processes. Fall semester. Lecture 1 hour, laboratory 2 hours. Prerequisites: Physics 230, 231, 232; or Physics 103, 104; Mathematics 245; or permission of the instructor. Cumulative limit of 4 hours.

482r Nuclear and Health Physics Laboratory (2)
Laboratory course in nuclear physics emphasizing the use of modern detection and counting equipment. Laboratory exercises include radiation dosimetry, radioisotope techniques, neutron scattering, gamma-gamma correlation, and the study of nuclear radiation detection. Spring semester. Maximum credit 4 hours. Lecture 1 hour, laboratory 2 hours. Prerequisites: Physics 230, 231, 232; or Physics 103, 104, 318; Mathematics 245, or permission of the instructor. Cumulative limit of 4 hours.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.

Political Science
Professor Carrithers, Head

Students majoring in political science may earn a B.S. degree, choosing one of four concentrations: Public Administration, American Studies, International and Comparative Studies, or Legal Studies.

The department offers courses in five major subfields of the discipline: political behavior and methodology (200, 202, 203, 302, 303, 401r); political theory (213, 314, 316, 41r, 424); public law and administration (221, 223, 320, 321, 322, 323, 421r, 422r, 423, 434); American institutions and processes (233, 234, 331, 333, 335, 431r); and international relations and comparative government (242, 244, 343r, 345, 347, 348, 441r, 442r). Certain students may also participate in the State Government Internship Program, the Metropolitan Government Internship Program, or the Judicial Honors Internship.

Political Science (B.S.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses other than political science: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than political science (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course other than political science (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

All Political Science majors must select a minor within the College of Arts and Sciences. Upon approval of the Department Head a student may select a minor outside the College of Arts and Sciences. Minimum of 2.0 average in minor.

Major and related courses:
One concentration from the following:

Public Administration Concentration:
3 hours Political Science 101
3 hours Political Science 102
3 hours Political Science 200
9 hours from Political Science courses at the 200 level (excluding 200) distributed among three of the five subfields listed above. Must include Political Science 223
9 hours from Political Science courses at the 300 level. Must include Political Science 324
15 hours from Political Science courses at the 400 level including at least 3 hours from the Public Administration area approved by the departmental advisor and no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 480, 481, 495r, 497r, 498r or 499r

Related courses (12 hours):
3 hours Mathematics F210
6 hours from Economics C101, C102, 306, 404, 426, 444, 450 or 455
3 hours from English 277, 279 and 300

American Studies Concentration:
3 hours Political Science 101
3 hours Political Science 102
3 hours Political Science 200
9 hours from Political Science at the 200 level (excluding 200) distributed among three of the five subfields listed above. Must include one of the following: 213, 233, or 234.
9 hours from Political Science courses at the 300 level. Must include 3 hours of appropriate American Studies courses approved by the departmental advisor
15 hours from Political Science courses at the 400 level including at least 3 hours of appropriate American Studies courses approved by the departmental advisor and no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 480, 481, 495r, 497r, 498r or 499r

Related courses (12 hours):
3 hours Mathematics F210
3 hours Computer Science 110
3 hours from Economics C101 or C102
3 hours from English 277, 279 or 300

International and Comparative Studies Concentration:
3 hours Political Science 101
3 hours Political Science 102
3 hours Political Science 200
9 hours from Political Science courses at the 200 level (excluding 200) distributed among three of the five subfields listed above. Must include Political Science 242 or 244
9 hours from Political Science courses at the 300 level. Must include Political Science 345, 347, or 348
15 hours from Political Science courses at the 400 level including 441r and 442r and no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 495r, 497r, 498r or 499r

Related courses (20 hours):
2 years of one foreign language at the college level
3 hours from Economics C101 or C102
3 hours from English 277, 279 or 300
Legal Studies Concentration:
3 hours Political Science 101
3 hours Political Science 102
3 hours Political Science 200
9 hours from Political Science courses at the 200 level (excluding 200) distributed among three of five subfields listed above. Must include Political Science 221.
9 hours from Political Science courses at the 300 level. Must include Political Science 321 or 322
15 hours from Political Science courses at the 400 level including at least 3 hours of courses from the public law subfield approved by the departmental advisor and no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 480, 481, 495r, 497r, 498r or 499r
Related courses (20 hours):
- 2 years of one foreign language at the college level
- 3 hours Philosophy 211
- 3 hours from English 277, 279 or 300
- 2.0 average in all Political Science courses

Political Science courses sufficient to fulfill the general University requirement of 128 credit hours necessary for graduation; list of courses normally prepared by the student and approved by the departmental advisor.

Political Science (B.S.): public administration concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>Political Science 101</td>
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<td>General Education Category A</td>
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<tr>
<td>General Education Category B</td>
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<tr>
<td>Economics C101 or C102</td>
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<tr>
<td>EHLS 021</td>
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<tr>
<td>General Education Category B</td>
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<tr>
<td>Elective</td>
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<tr>
<td><strong>JUNIOR</strong></td>
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<tr>
<td>2 Political Science courses at the 300 level</td>
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</tr>
<tr>
<td>English 277 or 279 or 300</td>
<td>3</td>
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<tr>
<td>General Education Category D</td>
<td>4</td>
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<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td><strong>SENIOR</strong></td>
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<tr>
<td>2 Political Science courses at the 400 level</td>
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<tr>
<td>Elective</td>
<td>9</td>
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**TOTAL HOURS 128**

Political Science (B.S.): legal studies concentration

<table>
<thead>
<tr>
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<td>Economics C101 or C102</td>
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<td>EHLS 021</td>
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<tr>
<td>Elective</td>
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<tr>
<td><strong>Total</strong></td>
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| **JUNIOR** |                 |
| 2 Political Science courses at the 300 level | 6   | 1 Political Science course at the 300 level | 3   |
| English 277 or 279 or 300 | 3   | General Education Category B | 3   |
| General Education Category D | 4   | Elective | 9   |
| **Total** | 15   | **Total** | 18   |

| **SENIOR** |                 |
| 2 Political Science courses at the 400 level | 6   | 2 Political Science courses at the 400 level | 6   |
| Elective | 9   | Elective | 9   |
| **Total** | 15   | **Total** | 18   |

**TOTAL HOURS 128**

Political Science (B.S.): international and comparative studies concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<td><strong>FRESHMAN</strong></td>
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<td>Political Science 101</td>
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<tr>
<td>General Education Category B</td>
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<tr>
<td>Economics C101 or C102</td>
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<td>EHLS 021</td>
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<td>Elective</td>
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<tr>
<td>1 Political Science course at the 200 level</td>
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<tr>
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<tr>
<td><strong>Total</strong></td>
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| **JUNIOR** |                 |
| 2 Political Science courses at the 300 level | 6   | 1 Political Science course at the 300 level | 3   |
| English 277 or 279 or 300 | 3   | General Education Category B | 3   |
| General Education Category D | 4   | Elective | 9   |
| **Total** | 15   | **Total** | 18   |

| **SENIOR** |                 |
| 2 Political Science courses at the 400 level | 6   | 2 Political Science courses at the 400 level | 6   |
| Elective | 9   | Elective | 9   |
| **Total** | 15   | **Total** | 18   |

**TOTAL HOURS 128**
POLITICAL SCIENCE COURSES

101 American Government (3)
The foundations, institutions, processes and policies of American national government with attention to the Constitution and such topics as elections, political and civil rights and liberties, federalism, public policy, public opinion, political culture, interest groups, and the role of citizens in governance. Every semester.

102 World Politics (3)
The evolution, nature, and operation of the contemporary world political system with attention to ideologies, the foreign policies of nation states, die behavior of transnational political and economic organizations, and the effects of international competition. Every semester.

199r Special Projects (1-4)
Individual or group projects. Every semester.

200 Research Methods (3)
Basic techniques in political science research. Required for political science majors. Formerly Political Science 301. Fall semester. Prerequisite: Mathematics 210.

202 Political Behavior (3)
Basic techniques in political science research. Required for political science majors. Must be taken within first 60 hours, or within first 30 hours of UTC courses by transfer students. Formerly Political Science 301. Fall semester.

203 Public Opinion (3)
Sources, content, and impact of public opinion on the political process. On demand.

213 American Political and Constitutional Thought (3)
A study of the major political and constitutional ideas that have influenced the development of the United States since its founding. Formerly Political Science 315. On demand. Recommended for pre-law majors.

221 Introduction to Judicial Process (3)
An examination of the role, operation and decision-making processes of the U.S. Supreme Court and lower courts. On demand.

223 Introduction to Public Administration (3)
Principles of government organization, management, financial control, personnel practices, and administration. On demand.

233 State and Local Government and Politics (3)
Tennessee state and local government and politics with comparisons to government and politics in the other states. On demand.

234 The Presidency (3)
The nature of the presidency as an institution. Presidential decision making and relations with other branches of government. On demand.

242 International Relations (3)
An examination of the theoretical, historical and behavioral causes of war and peace. Focus on the role of power, sovereignty, and international law on world politics. On demand.

244 Comparative Public Policy (3)
The formation and implementation of social welfare policies in developed and developing nations. On demand.

302 Political Psychology (3)
Psychological bases for political action. On demand.

303 Politics and Communication (3)
Propaganda and other means of political and social control. On demand.

314 Contemporary Political Ideas (3)
The competing ideologies of the 20th century with emphasis on contemporary political and social thought including Marxism and Fascism. On demand.

316 Theories of Politics (3)
An introduction to such theoretical concerns of Western political science as sovereignty, rights, justice, property, liberty, and equality. Readings from Plato, Aristotle, Locke, Montesquieu, Mill and Marx. Formerly Political Science 212. On demand.

320 Philosophy of Law (3)
A study of law and legal reasoning with emphasis on the nature and sources of law, moral theory and its relation to law, definitions of rights and justice, and the nature of legal and moral obligation. Recommended for pre-law majors.
321 American Constitutional Law (3)
Case studies of key Supreme Court decisions affecting the distribution of power in American society. Formerly Political Science 222. On demand. Recommended for pre-law majors.

322 Civil Liberties (3)
Case studies of key Supreme Court decisions affecting the rights and freedoms of the individual in American society. On demand. Recommended for pre-law majors.

323 Law and Politics (3)
Lawyers, judges, police, and the political process. On demand. Recommended for pre-law majors.

324 Public Policy (3)
An examination of the public policymaking process with an emphasis on actors, administration, and evaluation. On demand.

330 Urban Public Policy (3)
An introduction to the different approaches, ideas and programs advanced to address public policy urban problems. On demand.

331 Urban Politics (3)
An examination of political competition and relations among groups, institutions and classes in urban areas. Particular attention is given to how economic and fiscal concerns impact upon the political process. On demand.

333 Political Parties and the Election Process (3)
An examination of America's two-party system, political machines, third parties, modern campaign techniques, electoral behavior, and election administration. On demand.

335 Congress (3)
The contemporary Congress. The roles of congressmen and women, the distribution of power within Congress, relations with other branches of government, and prospects of reform. On demand.

336 Women in Politics (3)
An examination of the role and status of women in the American political system. Special emphasis given to the impact of selected public policies upon women. On demand.

343r Comparative Government and Politics (3)
The study of the governmental structures, processes, and ideologies of different regions of the world, comparing their political, economic, and social policies. May be repeated to focus on different regions of the world. On demand.

345 American Foreign Policy (3)
The basic foreign policy problems confronting the United States. Spring semester.

346 Comparative Politics: China (3)
A study in comparative culture, history and politics as applied to the current government in the People's Republic of China with an emphasis on the factors which have shaped the government and politics of China since World War II. On demand.

347 Politics of the Middle East (3)
A study of the contemporary politics in the Middle East with emphasis on the evolution of the Arab State System after World War II, the creation of Israel, the Arab-Israeli and other regional conflicts, and the peace process from Camp David on.

348 Politics of Immigration (3)
An examination of immigration policy in the United States with an emphasis on historical patterns, policy debates, legal ramifications, and rules and regulations of the Immigration and Naturalization Service.

350 Technology, Politics and Society (3)
An examination of the impact of technology on politics and society, with special focus on public policy shifts resulting from changes in technology. On demand.

401r Advanced Topics in Political Behavior (3)
Selected topics in political behavior. May be repeated once. On demand.

411r Advanced Topics in Political Theory (3)
Selected topics in political theory. May be repeated once. On demand.

421r Special Topics in Public Law (3)
Selected topics in public law. May be repeated once. On demand.

422r Special Topics in Public Administration (3)
Selected topics in public administration. May be repeated once. On demand.

423 Crime and Punishment (3)
An examination of the nature and implications of the major philosophies of punishment with emphasis on their ramifications for assessing the legitimacy of capital punishment. Recommended for pre-law majors.

424 Jefferson (3)
An examination of the political and social ideas of Thomas Jefferson with attention to their influence on American politics and public policy.

425 Policy Issues in Aging (3)
An introduction to the political, economic, social and health policy questions raised by phenomenon of an aging population. On demand.

431r Advanced Topics in American Institutions and Processes (3)
Selected topics in American institutions and processes. May be repeated once. On demand.

432 Southern Politics (3)
A study of the South's role in national politics with an emphasis on the demographic, economic, social and political forces which give shape to the political values and partisan preferences of the region's electorate. On demand.

434 Politics of Child Care (3)
An examination of child care policy in the United States and its implications for public policy making in general.

441r Advanced Topics in International Relations and Foreign Policy (3)
Selected topics in international relations and foreign policy. May be repeated once. On demand.

442r Advanced Topics in Comparative Government (3)
Selected topics in comparative government. May be repeated once. On demand.

461r, 462r, 463, 464 State Government Internship Program (3)
Internship conducted during the legislative session in governor's and legislative offices in Nashville. Spring semester. No more than 6 credit hours may apply toward the major degree requirements in the department. Prior approval of instructor.

471r, 472 Metropolitan Government Internship Program (1-3)
Internship conducted in various governmental offices in Chattanooga. Fall semester. No more than 6 credit hours may apply toward the major degree requirements in the department. Prior approval of instructor.

481 Judicial Honors Internship (3)
Internship conducted in the office of a local judge. Student applicants (any major) must have earned at least a 3.0 grade point average, completed 60 hours of coursework and taken and passed either Political Science 221 or Political Science 321. Selection by a Political Science Department committee.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
Enrollment limited to students with a 3.0 average in the major. On demand.

499r Group Studies (1-4)
On demand.
The Department of Psychology has developed a curriculum which meets the needs of a wide spectrum of interests. The degree options allow for choosing pre-professional or direct work entry, both in the context of a strong liberal art background. The focus is on developing reading, reciting and critical thinking while learning the context of psychology. It is designed moreover to provide a broad but intensive educational experience for students in other fields who have an interest in particular areas of psychology which may bear upon other career plans or goals. The department offers both undergraduate and graduate degrees. Requirements for the B.A. and B.S. degrees follow.

Psychology (B.A.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than psychology (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours)
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Foreign language through second college year
Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major and related courses
27 hours psychology including 101 and either Psychology 460, 461, or 412
One course from two of the following lines:
1. Philosophy 211, 348
2. History 301, 401
3. English 350, 400
No more than 6 hours of one psychology course labeled r* and no more than 9 hours of all psychology courses labeled r* will count towards the 27 hours required for the major.
2.00 average in psychology courses
Either Option A or Option B below:
Courses fulfilling the options may not be used to fulfill other requirements, including general education requirements, with the exception that courses used to fulfill either of the options may be used to fulfill the foreign language requirement.

Option A
An established minor from another department.
Option B
18 hours from one of the lines below.
At least three courses must be from the 200 level or above.
1. Biology, chemistry, physics
2. History, political science, sociology/anthropology, economics
3. Business administration, human services, military science, communication
4. Education, health and physical education (not to include service program courses)
5. Computer science, mathematics, engineering
6. English, fine arts, philosophy, history, communication, foreign language
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Psychology (B.S.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than psychology (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours)
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
35 hours of psychology including:
101, 201 or equivalent, 202, either 460 or 461 or 412
Two courses from each of the following lines:
1) Psychology 311, 312, 313, 314, 345
2) Psychology 241, 242, 243, 244, 245
No more than 6 hours of one psychology course labeled r* and no more than 9 hours of all psychology courses labeled r* will count toward the 33 hours required for the major.
2.0 average in psychology courses

Typical course of study in psychology (B.A.)

Representative Programs
It is recognized that the particular needs and interests of individual students vary widely. The accompanying typical courses of study are not intended to indicate, with the exception of the statistics and research methods course for the B.S. program, required courses of study. They are intended to serve as a model around which a student may construct his or her own program. Indicated are the general requirements for hours, limitations upon major hours for the B.A., and general education requirements.

First Semester
FRESHMAN
Psychology 101 3 Research Course 3
Foreign Language 4 Foreign Language 4
General Education Category A 3 General Education Category A 3
General Education Category B 3 General Education Category B 3
EHLS 021 1 EHLS Activity 1
Elective 3 Elective 3
Total 17 Total 17

SOPHOMORE
Psychology 3 Psychology 3
General Education Category F 3 General Education Category D 4
General Education Category C 3 General Education Category C 3
Foreign Language 3 Foreign Language 3
Total 15 Total 16

JUNIOR
Psychology 3 Psychology 3
Psychology 3 Psychology 3
Electives 6 Electives 7
Total 15 Total 16

SENIOR
Psychology 4 Elective 4
Psychology 3 Psychology 3
Major-related course 3 Major-related course 3
Major-related course 3 Electives 6
Elective 3
Total 16 Total 16

TOTAL HOUR 128
Either Option A or Option B below:
Courses fulfilling the options may not be used to fulfill other requirements, including general education requirements.

Option A
An established minor in another department

Option B
18 hours from one line below. At least three of these courses must be from the 200 level or above.

1. Biology, chemistry, physics
2. History, political science, sociology/anthropology, economics
3. Business administration, human services, military science, communication
4. Education, health and physical education (not to include service program courses)
5. Computer science, mathematics, engineering
6. English, fine arts, philosophy, history, communication, foreign language

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical course of study in psychology (B.S.)

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| SOPHOMORE | | |
| Psychology 202 | Psychology |
| Psychology | 3 |
| General Education Category F | General Education Category D |
| General Education Category B | Electives |
| Elective | |
| Total | Total |
| 16 | 16 |

| JUNIOR | | |
| Psychology | Psychology |
| Psychology | 3 |
| General Education Category C | General Education Category C |
| Electives | Major-related courses |
| Total | Total |
| 16 | 16 |

| SENIOR | | |
| Psychology | Psychology |
| General Education Category G | Electives |
| Electives | Major-related course |
| Total | Total |
| 16 | 16 |

TOTAL HOURS 128

PSYCHOLOGY MINOR
18 hours psychology including Psychology 101 and either 460 or 461; 9 hours must be upper level.
Minimum 2.0 average in the minor.

PSYCHOLOGY COURSES

100 Psychology Study Skills Laboratory (1 hour institutional credit)
Intensive study of introductory psychology with demonstrations, computer simulations, and audio-visual study aids. Focus on study skills and behaviors, derived from psychological research, and applied to Psychology 101 lecture and textbook material to enhance learning. Fall and spring semesters. Credit not applicable toward any degree. Corequisite: 101.

101 Introduction to Psychology (3)
Development of the human from infancy to adulthood; selected topics in learning, motivation, emotion, and perception integrated in an exploration of the dimensions and processes of human adjustment from the standpoint of basic psychological theory and research. Every semester. May not be taken for credit if Psychology 103 has been taken previously.

199r Special Projects (1-4)
Individual or group projects. Every semester. Maximum credit 4 hours.

201 Research Methodology: Introductory Statistics in Psychology (4)
Descriptive and inferential statistics, research design, and computer analysis of psychological data. Unique applications of quantitative analysis to problems in research techniques in psychology, consideration of requirements for rigorous analysis of special problems in research in behavioral processes. Every semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: 2 years of high school algebra or Mathematics 106; Psychology 101 or equivalent.

202 Research Methodology: Laboratory and Field Research Techniques (4)
General introduction to research methods in psychology with an emphasis on basic strategies for empirically identifying causal and correlational relationships. Topics will include laboratory and field techniques, quasi-experimental and non-experimental models, and the ethical issues involved in research. Every semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: Psychology 101 and 201 (or equivalent).

221 The Psychology of Child Development (3)
Infancy through childhood. Concepts of development and functioning derived from both research and clinical observation. Emphasis on cognitive, social, and emotional development. Child-rearing applications. Every semester. Prerequisite: 101 or equivalent. Credit not allowed in both Education 203 and Psychology 221.

222 The Psychology of Adolescence and Adulthood (3)
Psychodynamic principles of adolescence functioning. Evaluation of various theories of adolescence. Consideration of life-span development concepts and the adjustment problems related to aging. Emphasis on age-related changes. Every semester. Prerequisite: 101 or equivalent. Credit not allowed in both Education 204 and Psychology 222.

223 Psychology of Aging (3)
Theoretical and empirical introduction to the psychological development of older adults. Discussion of cognition, personality, social behavior, and sensori-motor changes as they evolve at the adult end of the life span. Examination of psychological issues in adult coping, death and dying, and work and family roles. Every semester. Prerequisite: 101 or equivalent.

241 Psychology of Individual Differences (3)
Consideration of individual differences in the dimensions of intelligence, personality, interests, and values. Discussion of group differences related to sex, age, race, social class, and intelligence. Examination of genetic and environmental factors influencing these differences. Fall semester.

242 Psychology of Black Experience (3)
Impact of cultural differences from a psychological perspective. Principles, theories and research in psychology applied to black experience. Differences in socialization, personality, and social processes. Topics include intelligence, racial identity, and psycholinguistics. Spring semester.

251 The Psychology of Personal Adjustment (3)
An overview of the major theories of adjustment and maladjustment, including classical psychoanalysis, neo-Freudian analysis, humanistic psychology, and social learning and behavior theory. Other topics will include the role of religion, economic status, and cultural context in adjustment—Every semester. Prerequisite: 101.

308 Principles of Abnormal Psychology (3)
A bio-social approach to theories of causation, development, and symptomatic behavior in emotional disorder; theoretical bases of the various therapies and of positive means of prevention. Every semester. Prerequisite: 6 hours of psychology.

311 Learning and Motivation (3)
Study of the effective conditions for various learning phenomena; roles of motivation, reinforcement, and punishment in learning. Fall semester. Prerequisite: 101, 201, 202 or equivalent or by permission of instructor.
312 Sensation and Perception (3)
Study of sensory and perceptual processes; examination of the sense organs and related neurophysiological mechanisms, and the necessary stimulus conditions for particular perceptual phenomena. Laboratory. Fall semester. Prerequisite: 101, 201, 202 or equivalent or by permission of instructor.

313 Cognitive Processes (3)
Examination of the ways in which people process information; with an emphasis on attention, memory, problem solving and language. Spring semester. Prerequisite: 101, 201, 202 or equivalent or by permission of instructor.

314 Physiological Psychology (3)
The study of the physiological bases of behavior with emphasis on the functional neural systems of the brain which mediate behavior. Laboratory designed to familiarize students with basic neuroanatomy and neurophysiological techniques used in the investigation of brain functions and behavior. Spring semester. Prerequisite: 101 or 6 hours of college biology courses, or permission of instructor.

316 Psychology of Communication (3)
An examination of complex behavioral processes within and between systems. The role of communications in thinking and problem-solving both by individuals and groups. Practical applications and problems of communication in such areas as management, market research, industry, and intelligence. Laboratory. Fall semester. Prerequisite: 101, 201, 202 or permission of instructor.

331 Social Psychology (3)
Survey of the general concepts and research areas in social psychology. Emphasis upon the interactions between the individual and society with consideration of such topics as attitudes, prejudices, conformity, deviance, socialization, and interpersonal attraction. May be registered for as Sociology 331. Every semester. Prerequisite: 6 hours of psychology or sociology. Credit not allowed, in both Psychology 331 and Sociology 331.

340 Applied Developmental Psychology (3)
An in-depth examination of interactions among 1) processes in cognitive, language, social, and emotional development of children, form birth through adolescence. Emphasis on analysis of the implications of these interactions for the welfare of current and future generations of children. Prerequisites: Psychology 221 or equivalent.

345 Psychological Tests and Measurements (3)
Principles of psychological measurements including reliability, validity, errors of measurement, techniques of test construction, and problems in assessment and prediction. Laboratory use of selected tests. Fall semester. Prerequisites: 101, 201, 202 or equivalent or by permission of instructor.

401 Intermediate Statistics in the Behavioral Sciences (3)
The use of a popular statistical package for the conduct of statistical analyses in psychology. Applications include common descriptive and inferential techniques including the analysis of variance and multiple regression analysis. On demand. Prerequisite: 201 or equivalent introductory statistics course.

406 Industrial/ Organizational Psychology (3)
Introduction to the study of organizations with emphasis upon personnel selection, criteria, and training. Special consideration of work motivation, job satisfaction, and the role of the organization in behavior. Fall semester. Prerequisite: introductory statistics course.

407 Professional Psychology (3)
Role models of the psychological practitioner in community settings. Discussion of the foundations, methods, ethics, legal issues, and relationships with other specialists involved in professional psychology. On demand. Prerequisite: 9 hours of psychology or permission of instructor.

41 Or Advanced Topics in Personality Research (3)
Intensive study of selected topics of current theoretical and research interest in personality, abnormal psychology, and individual differences as they relate to personality. On demand. Prerequisite: 101 or equivalent; 6 hours of upper division psychology, including 448; and approval of the instructor.

411 Experimental Analysis of Behavior (3)
A rigorous analysis of complex behavior from the standpoint of contemporary behavioral systems. Spring semester. Prerequisites: 6 hours psychology.
Sociology, Anthropology, and Geography

Professor Robinson, Head

Any student in good standing with the University may be admitted to the major program. Various concentrations within the major field have been designed to meet the special needs of students majoring in sociology, anthropology, or urban studies. In addition to the major programs, students may earn a minor in sociology, anthropology, or geography.

To enhance opportunities for the anthropology major and to provide services to the community, the University established the Institute of Archaeology in 1976. The institute is an instructional and research museum located in Brock Hall that specializes in archaeological investigations of 19th century industrial, domestic, and military sites. Students may use the collections and archives of the institute for academic projects. By enrolling in specified courses, students may also engage in archaeological survey and excavation, the analysis of archaeological data, the conservation of artifacts, and the organization of museum collections.

Each discipline of sociology, anthropology and geography is regarded separately in applying the 42 hour limit in any one department for the B.A. degree.

Sociology and Anthropology: Anthropology, Sociology

Concentrations (B.A.)

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than anthropology or sociology (6 hours)
Category D: 1 approved physical or natural science course other than anthropology with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course other than anthropology and sociology (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Foreign language through second college year

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average

Major

Completion of one of following concentrations

1. Anthropology:
   A statistical course (SOC 250 recommended)
   33 hours sociology and anthropology including Anthropology 152, 208, 210, 211, and 302; Sociology 314 and 394 or 9 hours of approved anthropology field and laboratory courses; 3 additional hours of sociology; additional hours of anthropology electives to complete concentration.

2. Sociology:
   A statistics course (SOC 250 recommended)
   33 hours sociology and anthropology including Sociology 151, 312, 314, 394;
   Anthropology 152 or 208 plus 18 hours of sociology/anthropology electives of which at least 9 hours are in sociology at the 300-400 level. Minimum of 3 hours selected from Soc 305, 307, 345.

   Recommended: courses in statistics and research methodology
   2.0 average in all anthropology and sociology courses

   Minimum of 30 hours of 300 and 400 level courses
   Electives to complete 128 hours

Typical courses of study for sociology and anthropology (B.A.)

Sociology and anthropology (B.A.): anthropology concentration

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TOTAL HOURS 128

*Sociology 314 and 394 may be taken in lieu of 9 hours of anthropology field and laboratory courses. Anthropology 335 offered in summer school (6 hours).

Sociology and anthropology (B.A.): sociology concentration

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TOTAL HOURS 128
Typical courses of study in sociology and anthropology (B.S.): anthropology concentration

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SOPHOMORE

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JUNIOR

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SENIOR

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TOTAL HOURS 128

*Sociology 314 and 394 may be taken in lieu of 9 hours of anthropology field and laboratory courses. Anthropology 335 offered in summer school (6 hours).

Sociology and Anthropology: Anthropology, Sociology (B.S.)

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)

Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)

Category C: 2 approved behavioral or social science courses other than anthropology and sociology (6 hours)

Category D: 1 approved physical or natural science course other than anthropology with laboratory (4 hours)

Category F: 1 approved mathematics course (3 hours; approved related courses below will apply)

Category G: 1 approved perspectives course other than anthropology and sociology (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity.

Major and related courses

Computer Science 102 or 110

One English course selected from the following: ENGL 277, 278, 279, 300 or 410 (279 recommended)

One course from MATH F120, F136, F145, F150, F155

Completion of one of the following concentrations:

1. Anthropology:
   33 hours of sociology and anthropology including Anthropology 152, 208, 210, 211, and 302; Sociology 314 and 394 or 9 hours of approved anthropology field and laboratory courses; 3 additional hours of sociology; additional hours of anthropology electives to complete concentration.

2. Sociology:
   33 hours sociology and anthropology including 151, 312, 314, 394; Anthropology 152 or 208; plus 18 hours of sociology/anthropology electives (at least 9 hours at 300-400 level) with 12 of the 18 hours in sociology. Minimum of 3 hours selected from Soc 305, 307, 345.

2.0 average in all anthropology and sociology courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

TOTAL HOURS 128
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<td>General Electives</td>
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</table>

**TOTAL HOURS 128**

### SOCIOLOGY, ANTHROPOLOGY AND GEOGRAPHY

- **Sociology**: A student may obtain a minor in sociology by successfully completing Sociology 151 plus 15 other hours in sociology, at least 9 of which are at the 300 or 400 level. Total: 18 hours. Minimum 2.0 average in the minor.

- **Anthropology**: A student may obtain a minor in anthropology by successfully completing Anthropology 152; 6 hours from Anthropology 208, 209, 210 and 211; and 9 hours of anthropology at the 300 or 400 level. Total: 18 hours. Minimum 2.0 average in the minor.

- **Geography**: A student may obtain a minor in geography by successfully completing Geography 101 and 104 plus 12 other hours in geography, at least 9 of which are at the 300 or 400 level. Total: 18 hours. Minimum 2.0 average in the minor.

### ANTHROPOLOGY COURSES

- **152 Introduction to Anthropology (3)**
  Cultural and biological development of human society as interpreted by the anthropologist from the remains of prehistoric life and die culture of contemporary humans. Every semester.

- **199r Special Projects (1-4)**
  Individual or group projects. On demand.

- **208 Cultural Anthropology (3)**
  The comparative study of culture, social organization, economics, government, education, religion, language, and arts in various primitive and present societies; cultural integration and change. Every semester.

- **209 Physical Anthropology (4)**
  The origins and relationships of extinct and present forms of humankind from the perspective of the modern syntactic theory of evolution. Mechanisms of heredity and fossil evidence of early primate and hominid populations. The nature of human variation and the development of culture in human evolution. Every semester. Lecture 3 hours, laboratory 2 hours.

- **210 Anthropological Linguistics (3)**
  A first course in the nature of language and the analysis of linguistic structures with special reference to non-Western languages. Fall semester.

- **211 Introduction to Archaeology (3)**
  The study of human prehistoric and historic past through the archaeological record. Basic techniques, methods, theoretical approaches, and major conclusions of archaeological investigation. Every semester.

- **302 Anthropological Theory (3)**
  A systematic survey of the development of major theories in anthropology with particular attention to theories of culture. Spring semester. **Prerequisite:** 9 hours of anthropology or approval of instructor.

- **306 World Prehistory (3)**
  Topics of world archaeology, covering the paleolithic in the old and new worlds and die search for die prerequisites of civilization. On demand.

### 307 Sex Roles and Culture (3)
Evolutionary and cross-cultural analysis of sex roles in human societies with special focus on the relative status of women. On demand. Formerly Anthropology 310. Prerequisites: 3 hours of anthropology or approval of instructor. May be registered as Soc 307. Credit not allowed in both Anth 307 and Soc 307.

### 311 Music of the World (3)
See Music 311.

### 315 Primate Behavior (3)
A comparative study of the biology and behavior of the nonhuman primates, especially monkeys and apes. Topics include the social organization of primates in their natural habitats, ecology, morphology, kinship, life histories, politics, play, sexual behavior, communication, intelligence, tool use, and culture. Anthropological, psychological, and biological perspectives on the ecological and evolutionary factors that have shaped primate behavior will be emphasized. Every third semester.

### 320 Tennessee Archaeology (3)
The archaeology of prehistoric and historic Tennessee. Based on archaeological research, an overview of the history of human occupation in the state of Tennessee is presented. Emphasis on local sites whenever possible. Every third semester. **Prerequisite:** Anthropology 208 or 211 or 340 or approval of instructor.

### 330 Ethnographic Through Film (3)
The study of ethnographic film in the recording and analysis of material culture and communal life. Special attention is given to the documentation of vanishing cultures, influence of the film maker on informants, non-verbal communication systems, and the film as a scientific and humanistic resource. This course will be taught every third semester. **Prerequisites:** Anthropology 208 or approval of the instructor.

### 332 People and Cultures of Africa (3)
Social and ethnological study of the peoples and cultures of Africa. Traditions and modernization analyzed in light of the contact with Western cultures. Similarities and differences among societies in Africa. African cultures compared and contrasted with those of the West. Every fourth semester.

### 333 Peoples and Cultures of India (3)
Social and ethnological study of the peoples and cultures of India. Traditions and modernization analyzed in light of the contact with the Western cultures. Uniformity and diversity of society in India compared and contrasted with that of the West. Every fourth semester.

### 334r American Indians (3)
Prehistory, ethnography, and contact history of indigenous peoples of the New World. May be repeated for credit when different topics have been specified as topics for different semesters. Every third semester. **Prerequisite:** any general education Category C course or approval of instructor.

### 335 Archaeological Field Methods (3 or 6)
Theory, method, and techniques of field research in archaeology, training and practice in surveying, photography, field recording, and other basic skills. Every summer. **Prerequisite:** approval of instructor.

### 340 Southeastern Indians (3)
Native Americans of the Southeast, their subsistence patterns, social organization, political structures, and belief systems, as derived from archaeological, documentary, and ethnohistorical sources. Emphasis is given to the late prehistoric and early historic periods. Every third semester. **Prerequisites:** Anthropology 208 or 211, or approval of the instructor.

### 350 Sex, Gender, and Language (3)
The role of language in the construction and expression of sex and gender in U.S. and other cultures. Topics include separate men's and women's languages; men's and women's different communication styles in intimate relationships, education, and the workplace; gender and identity; power; intimacy; sexual joking; and "silencing" of women. Every third semester.

### 351 Language and Communication (3)
The nature and evolution of communication, language, and speech. The relationship between language, culture, and society. Topics include nonverbal communication, animal communication, edinolinguistics, and sociolinguistics. Every fourth semester.
SOCIOLOGY COURSES

365 SociO'Cultural Perspectives on Health Care (3)
See Sociology 365.

366r Communications Laboratory (3)
Laboratory methods and field techniques of research in human and animal communication. Individual or group projects. Every third semester. Prerequisite: any general education Category C course or approval of instructor.

410 Culture and Personality (3)
The influence of cultural patterns upon the development of personality; materials from simple and complex societies; national and tribal character, and relevant theoretical viewpoints. Every third semester. Prerequisites: 3 hours of sociology, anthropology, or psychology or approval of instructor.

412 Forensic Anthropology (3)
A blend of lectures and practice which focuses on the medico-legal importance of the human skeleton in forensic investigations. Emphasis is given to the anthropological and archaeological techniques commonly used in forensic anthropology. Topics include the archaeological recovery of human remains, skeletal identification, skeletal trauma and pathology, personal identification, hair analysis, facial reproduction, and the determination of cause of death and the time interval since death. Spring semester. Prerequisites: 3 hours Anthropology or approval of instructor. Formerly ANTH 375.

440 Social and Cultural Change (3)
See Sociology 440. Formerly Anthropology 370.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
Every semester.

499r Group Studies (1-4)
On demand.

GEOGRAPHY COURSES

101 Physical Geography (3)
The physical environment with emphasis on processes that influence the distribution and pattern of landforms, water, climate, vegetation, and soil. Every semester.

103 World Geography (3)
Description and analysis of selected world regions, their internal characteristics and problems, and the nature of their interrelationships in a global context. Every semester.

104 Cultural Geography (3)
Systematic study of the distribution and locational processes of population, nutrition and health, disease, religion, agriculture, industry, cities, geopolitics, and other topics in human geography. Every semester.

199r Special Projects (1-4)
Individual or group projects. On demand.

206 Atmosphere, Weather and Climate (3)
The atmosphere about us and its interactions with human society. Atmospheric origin, composition, moisture, temperature, general circulation, and pollution problems. Jet streams and variations of weather and climate over time and space. Every fourth semester.

221 Maps and Mapping (3)
Introduction to types of maps, map construction, aerial photographs, remote sensing, digital image processing, computerized cartography, computerized map applications, and geographic information systems. Every semester.

250 World Resources (3)
Location, utilization, production, consumption, and significance of resources to society. Introduction to the vast, interlocking network of activities that produce and affect the world's use and consumption of resources. Every second semester. Lecture 3 hours. May be registered as Environmental Science 250. Credit not allowed in both Geography 250 and Environmental Science 250.

303 Geography of North America (3)
Introduction to the physical and cultural geography of North America. Every fourth semester. Prerequisite: Geography 103 or approval of instructor.

305 Geography of Asia (3)
Introduction to the physical and cultural geography of Asia. Every fourth semester. Prerequisite: Geography 103 or approval of instructor.

407 Environmental Conservation (3)
Theories, methods, and practices of environmental management and resource utilization. Emphasis on soil, forest, water, mineral, and human resources. Spring semester. May be registered as Environmental Science 407. Credit not allowed in both Geography 407 and Environmental Science 407.

409 Economic Geography (3)
Spatial influences on economic behavior, analysis of the location and spatial structure of world economic activities. Every third semester. Prerequisite: Geography 104.

415 Urban Geography (3)
History of urbanism, study of patterns of cities, spatial distribution of cities, and social and physical structure of cities of the Western world. Every third semester. Prerequisite: Geography 104 or Sociology 151. May be registered as Sociology 415.

465 Remote Sensing and Imagery Analysis (3)
Principles of aerial and satellite photography and infra-red, multispectral, and microwave sensing. Interpretation of remotely sensed data, including application to problems in a variety of environmental sciences. Every fourth semester. Lecture 2 hours, laboratory 2 hours. Prerequisites: Geography 221.

466 Geographic Information Systems (3)
Introduction to fundamental principles of geographic information systems (GIS). Applications, data structures and basic functions of GIS. GIS computer programs are used to demonstrate basic GIS functions. Every fourth semester. Lecture 2 hours, laboratory 2 hours. Prerequisite: Geography 221.

480 Geography Seminar (1)
Seminar and discussion of topics of current interest in the geography. Student presentations required. On demand.

496r Geography Field Camp (1-6)
A field methods experience (the application of theory and techniques to field problems). On demand. Prerequisites: at least 12 hours of geography courses.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.

SOCIOLOGY COURSES

125 Sociology of Social Problems (3)
Sociological perspectives on selected contemporary social problems such as crime, poverty, hunger, racial and sexual discrimination, alcohol and drug abuse, the threat of war; examination of theories and research on social problems; analysis of possible solutions. Every second semester.

151 Principles of Sociological Analysis (3)
Scientific study of human society, of how individuals and groups adjust to each other and to their social environment; examination of varying research approaches; consideration of basic concepts, theories, and principles of explanation used by sociologists. Every semester.
199r Special Projects (1-4)
Individual or group projects. On demand.

209 Population and Society (3)
The study of population growth and decline, composition and distribution, and the
interrelated effects of economics, social structures, and environment resources.
Special emphasis is placed on problems of urbanization and population policies.
Every third semester.

215 The Sociology of the Family (3)
The study of modern marriage and family institutions from sociological and social
psychological perspectives; the social factors of mate selection, kinship relationships
and sexual behavior; evaluations of research findings and emerging trends. Every
semester.

219 Deviance and Conformity (3)
A social and social psychological introduction to the nature and consequences of
"normal" and "deviant" behavior. Theories of deviance with particular attention
to role theory and labeling theory in the areas of crime and mental illness. Every
third semester.

220 Small Group Behavior (3)
Social relationships and interaction within small groups in various contexts;
review of major field and laboratory studies on leadership, communication,
problem-solving, and personal satisfactions; experience in techniques of observation,
role playing, and sociometric research. Every fourth semester.

250 Social Statistics (3)
Basic statistical techniques such as frequency distributions and graphs, the normal
curve, tests of significance, correlation, simple analysis of variance, and applications
to socio-cultural data and their interpretation. Prerequisite: Two years of Ugh school
algebra and math placement level 20 or Math 106 with minimum grade C. Credit not
allowed in 250 after any other statistics course. Spring semester.

300 Urban Sociology (3)
Analysis of how urban areas grow and age spatially organized. Examination of the
cultures, social stratification systems, and modes of governance in contemporary
American cities. Emphasis on urban problems. Prerequisite: any general education
Category C course or approval of instructor. Every third semester.

305 Minorities in American Life (3)
Character and role of racial, religious, and ethnic minorities in the U.S.; the
interplay of historical and current sociocultural processes on attitudes and behavior
for both dominant and minority groups; minority-related social problems and their
possibilities of solution. Spring semester. Prerequisite: any general education Category
C course or approval of instructor.

307 Sex Roles and Culture (3)
See Anthropology 307

310 Sociology of Religion (3)
Social and cultural interpretations of religious institutions and the relation of
religion to the social order; major emphasis upon theory and research in the
context of Western Christian civilization. Every fourth semester. Prerequisite: 3
hours of Category C, philosophy or religion, or approval of instructor.

312 History of Social and Cultural Theory (3)
Scientific theories of social relations and culture from the 19th century to the
present; the role of theory in an empirical science. Fall semester. Prerequisites: 151,
or Anthropology 208, or approval of instructor.

314 Research Methods (Sociology or Anthropology Emphasis) (3)
The nature of the scientific method and research as applied to the collection,
analysis, and interpretation of social and cultural data. An introduction to selected
basic techniques in research and the preparation of research proposals. Fall
semester. Prerequisite: A statistics course (Sociology 250 recommended); Sociology
151, or Anthropology 152 or 208, or approval of instructor.

317 Organizational Behavior (3)
Structure of social relationships in organizational life: common patterns in
development and operation of bureaucratic systems and their effect upon personal
values and individual behavior applications in modern education, industry,
government, and institutional life. Every third semester. Prerequisite: any general
education Category C course or approval of instructor.

318 Industrial Sociology (3)
Social organization and process within the formal and informal structure of the
industrial unit, evolution of stratification systems, the Industrial Revolution,
 bureaucratization and the individual, the implications of industrialization and
urbanization for human relations in the work process. Every fourth semester.
Prerequisite: any general education Category C course or approval of instructor.

321 Criminology (3)
The nature of crime, criminal statistics, causal factors, theories and procedures in
prevention and treatment. Every third semester. Prerequisite: any general education
Category C course or approval of instructor.

322 Juvenile Delinquency (3)
The nature of juvenile delinquency; factors contributing to delinquency; methods
of diagnosis and treatment of delinquent behavior; prevention of delinquency.
Spring semester. Prerequisite: any general education Category C course or approval of
instructor.

323 Sociology of Corrections (3)
Historical and cross-cultural study of adult detention, punishment, and rehabilitation
systems. Examination of political and social values as they relate to corrections.
Every fourth semester. Prerequisite: any general education Category C course or approval of
instructor.

331 Social Psychology (3)
Every semester. See Psychology 331.

335 History of Social Thought (3)
Trends in beliefs and values regarding human society and social interaction from
ancient times through the mid-19th century. Emphasis on the interrelationships
between social thought and social context. Every fourth semester. Prerequisite: 3
hours Sociology or approval of instructor.

340 Collective Behavior (3)
Analysis of the varieties of collective phenomena such as crowds, social movements,
public opinion, fads and fashion; examination of theories and research on the
social context of this behavior and the social and psychological processes within
such groups; case studies and examples from contemporary life. Every fourth
semester. Prerequisite: any general education Category C course or approval of
instructor.

345 Social Classes in America (3)
Theories and forms of social stratification; differentials in prestige, power, and
wealth; social opportunities and mobility; values and behavior at various levels of
American society. Every fourth semester. Prerequisite: any general education Category
C course or approval of instructor.

360 Sociology of Aging (3)
A basic course in social gerontology. The process of aging and the problems of the aged.
Changing values and institutional responses to the aged. Every fourth
semester. Prerequisite: any general education Category C course or approval of
instructor.

365 Socio-Cultural Perspectives on Health Care (3)
Social and cultural perspectives on health, illness, and the health professions and
institutions. Topics will include social epidemiology, health attitudes and behavior,
medical folklore, mental health, the socialization of health professionals, the
organization of health care, patient-professional relationships, health and medical
care in other cultures. Every third semester. Prerequisite: any general education
Category C course or approval of instructor.

394 Research Seminar (Sociology or Anthropology Emphasis) (3)
The use of social research techniques to report on social and cultural phenomena;
data collection and analysis, writing of a research report. Research project required
of all students. Spring semester. Prerequisites: 314.

415 Urban Geography (3)
Every third semester. See Geography 415
The Department of Theatre and Speech offers a curriculum that leads to a B.A. degree. It is geared for students who want intense performance and production training couched within a strong liberal arts environment. The goal is to produce graduates capable not only of bringing an informed awareness of the contemporary world to their art and craft, but also strong individuals who have options to use their experience in the theatre in a variety of career choices outside the professional theatre.

In line with the state of Tennessee’s recent adoption of teacher licensure for theatre (K-12) the department now offers a theatre education program for students seeking such licensure.

Production activity in the department is open to all students enrolled at the university regardless of major.
SENIOR
Theatre and Speech Elective 3
Theatre and Speech 400r 1
General Education Category G 3
Non-THSP Electives 9
Total 16

TOTAL HOURS 128

THEATRE AND SPEECH COURSES
100r Performance and Production (1)
Introductory laboratory course in performance and production. Prerequisite: Permission of department head. Graded by faculty jury. May be repeated for credit.

107 Voice and Diction (3)
Systematic training of the speaking voice for controlled articulation, volume, and tone in interpersonal communication. Every semester.

108 Oral Interpretation (3)
Systematic teaching of the principles and skills of effective oral reading with a continuing study of voice and diction. On demand.

111 Introduction to the Theatre (3)
A study of the theatre and its drama; examination of selected plays as representative types of drama, as products of a cultural milieu, and as works intended for performance. Designed to heighten the student’s perception, appreciation, and enjoyment of a variety of forms of theatre in performance. Every semester.

115 Theatre: Introduction to Performance (3)
Introduction to acting and use of total instrument of the theatre. Emphasis upon dramatic theory and literature and their relationship to performance. Every semester.

141 Theatre Practice and Theory (1)
Introduction to production organization and techniques involved in the use of the theatrical instrument. Formerly 101. Every Semester.

143 Basic Design in Theatre (3)
Introduction to the principles and practices of designing theatrical environments and costumes for plays. Study and practice in analysis of various styles and types of plays; basic visual and spatial principles; developing theatrical imagery; and communicating design ideas. Spring semester.

151 Play Analysis (3)
Nature of drama and theatre in its historical context with emphasis upon analysis of playscripts as the basis for creation of theatrical images. Formerly 105. Fall semester.
100 — Theatre and Speech

199r Special Projects (1-4)
Individual or group projects. Every semester. Maximum credit 4 hours.

200r Performance and Production (1)
Lower division laboratory course in all aspects of theatre performance and production. Project assignments in departmental productions and workshops. Every semester. Prerequisite: permission of department head. Graded by faculty jury. May be repeated for credit.

209 Business and Professional Speech Communication (3)
Study of the modes and processes of speech communication in organizations. Development of individual skills in group interaction and decision-making as well as informative and persuasive speech. On demand.

221 Acting I (3)
Fundamentals of acting and of speech for the theatre. Formerly 227. Fall semester. Prerequisite: 151 and/or permission of instructor. Corequisite: 200r.

230 Contemporary Francophone African Cinema (3)
See Modern Language 230.

255 The Theatre to the Renaissance (3)
History of the theatre as an art and as an institution from its beginnings to the 17th century. Fall semester. Prerequisite: 151 or permission of instructor.

257 The Theatre from the Renaissance to the 20th Century (3)
History of the theatre as an art and as an institution from the Renaissance to the 20th century. Spring semester. Prerequisite: 151 or permission of instructor.

280 Introduction to Film (3)
The history and language of motion pictures studied by viewing and analyzing selected film masterpieces and die ideas they explore. Every semester.

300r Performance and Production (1)
Upper division laboratory course in all aspects of theatre performance and production. Project assignments in departmental productions and workshops. Every semester. Prerequisite: 2 semesters of 300r and permission of department head. Graded by faculty jury. May be repeated only once for credit.

307 Advocacy and Debate (3)
A study of contemporary procedures in deliberation, persuasion, and debate utilizing current topics of public interest. Emphasis on the development of individual skills in rational decision-making and advocacy through actual experiences in intercollegiate and parliamentary forms of debate. Formerly 320. On demand.

308 Readers’ Theatre (3)
The study of literature through group performance and the development of skilled verbal and nonverbal expression based on the critical examination of written texts. On demand.

309 Contemporary Public Speech Communication: Concepts and Cases (3)
Study of rhetorical principles employed in addresses by contemporary leaders concerning significant current questions: practice in the application of rhetorical principles in speeches and oral reports. On demand.

331 Directing I (3)
Basic elements of play directing: play analysis, director-actor communication, and the uses of improvisation. Each student will direct a short scene and participate in diagnostic criticism. Formerly 317. Fall semester. Prerequisites: 143, 255, 257, and permission of instructor. Corequisite: 300r or 400r.

340 Theatre Arts for Children (1)
Implementation of discipline-based theatre arts concepts and creative drama techniques for the child. Laboratories in addition to regularly scheduled classes will be included. Fall and Spring semester. Prerequisites: THSP 115, PSY 221 OR HECO 240, MUS III, ART 301. Corequisites MUS 340, ART 340.

343 History of Costume (3)
Study of wearing apparel, principally in the western world from ancient Egypt to the present with a particular emphasis on clothing as a reflection of the cultural milieu. Formerly 313. Spring semester alternate years.

400r Performance and Production (1)
Upper division laboratory course in all aspects of theatre performance and production. Projects assigned in departmental productions and workshops. Every semester. Prerequisite: 2 semesters of 300r and permission of department head. Graded by faculty jury. May be repeated only once for credit.

412 Theatre for Youth (3)
All phases of producing plays for or by junior audiences examined, including the techniques of creative dramatics. On demand.

431 Directing II (3)
Directing of short scenes for laboratory presentation and participation in diagnostic criticism. Spring semester. Prerequisite: 331 and permission of instructor. Corequisite: 300r or 400r.

457 Conceptual Foundations of the Modern Theatre (3)
Studies in the concepts of selected playwrights, directors, and designers who helped to shape the directions of the twentieth-century theatre and its drama. Spring semester alternate years. Prerequisite: permission of instructor.

46lr Directed Studies in Advanced Production (1-4)
Advanced problems in design and technical theatre. On demand. Permission of department head. May be repeated for credit.

463r Directed Studies in Advanced Performance (1-4)
Advanced problems in acting, directing, and musical theatre. On demand. Permission of department head. May be repeated for credit.

485 Film Topics (3)
Directors, genres, styles, or theories of film studied by viewing and analyzing representative films. On demand.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.

University Studies

See Interdisciplinary Studies.
University Honors Program

Professor Fulton, Director

Enrollment in courses taught in the curriculum of the University Honors Program is restricted to full members of the University Honors Program.

The following courses make up the required curriculum for all full members, including Brock Scholars.

**FRESHMAN**
- University Honors 101
- University Honors 102
- University Honors 120

**SOPHOMORE**
- University Honors 214
- 6 hours from either University Honors 103
  - Art 111H, or Theatre and Speech 111H
- University Honors 217 or 218

**JUNIOR**
- University Honors 315
- University Honors 316

**SENIOR**
- Departmental Honors 495

NOTE: Requirements for the selected degree and major program must be met. Students in certain degree programs may have to obtain permission to alter the UHON curriculum schedule and/or extend their study beyond the fourth year in order to complete both UHON and degree program requirements.

For further information, contact the University Honors Program office, 202 Guerry.

101, 102 Humanities I & II (6,6)
Selected authors from the traditional corpus of Western literature with emphasis on historical and intellectual contexts; analysis of specific texts through seminar discussion and written work. 101 fall/102 spring semester. Limited to University Honors Program students; others by permission of instructor.

103 Fine Arts: Music History and Aesthetics (3)
A general review of the aesthetics and history of Western concert music. Spring semester. Limited to University Honors Program students; others by permission of instructor.

120 Development of Scientific Thought (3)
Selected topics in history of science designed to illustrate the methods by which science progresses. Creativity, characteristics of scientists, and their struggle with society will form the background for study of the advancement of science. Spring semester. Limited to University Honors Program students; others by permission of instructor.

199r Special Projects (1-4)
Individual or group project. On demand. Maximum credit 4 hours.

214 Classical and Medieval Historical and Political Thought (3)
Critical analysis of the origin and development of Western historical, political, and social theory from antiquity to the early Renaissance. Readings from the works of the central figures of the Greek city-state, Roman Empire, Medieval Church, and Renaissance Europe, including Herodotus, Thucydides, Plato, Aristotle, Livy, Tacitus, Plutarch, Augustine, Aquinas, and Machiavelli. Consideration of Gibbon as representative of historical interpretation. Spring semester. Limited to University Honors Program students; others by permission of instructor.

217 The Chinese and Japanese Traditions (3)
Readings of central texts in East Asian civilization, including Confucianism, Legalism, Taoism, Buddhism, Zen, as well as great works of literature. Discussion of texts and written analysis to facilitate comparisons with western thought. An appreciation of different intellectual traditions is a major goal. Fall semester. Limited to University Honors Program students; others by permission of instructor.

218 The Tradition of India (3)
A study of Indian culture through a reading of texts selected from classical and modern Indian literature, supplemented by lectures, audio-visual materials, and library materials. Spring semester. Limited to University Honors Program students; others by permission of instructor.

315 Origins of the Social Sciences (3)
Analysis of the origins, development and nature of the social sciences using contemporary theories and methodologies. Core texts from seminal thinkers such as Luther, Locke, Rousseau, Marx, and Durkheim will be used as case studies of the developing modern social and human sciences. Fall semester. Limited to University Honors Program students; others by permission of instructor. Prerequisite: 214.

316 Contemporary Social Science (3)
The theory, methods and findings of contemporary empirical social science with an emphasis on social scientific understandings of individuals in the context of cultures and societies. Core texts from such authors as Marx, Freud, Weber and Levi-Strauss. Spring semester. Limited to University Honors Program students; others by permission of instructor. Prerequisites: 214, 215.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.
The primary goal of the College of Education & Applied Professional Studies is twofold: to prepare qualified people to be professional leaders in various roles within educational institutions, both public and private, and to prepare qualified personnel for careers in selected professional fields unrelated to school licensure.

All eligible teacher licensure programs through the master's level are fully accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Tennessee Department of Education.

Successful completion of all degree and licensure requirements of any undergraduate program administered by the college, excluding selected program concentrations offered in the Departments of Human Ecology and Exercise Science, Health, & Leisure Studies, qualifies the graduate for initial licensure in Tennessee, provided the student scores on the National Teacher Examinations (NTE/PRAXIS) above the minimum required by the Tennessee Board of Education at the time of official application for initial licensure.

The college is organized into two schools, including four academic/administrative units for academic programming, communications, and administrative accountability. Each unit has a head who serves as the official spokesperson and administrative officer responsible for all programs, faculty, and activities assigned to that particular unit. Since an academic unit may have several programs or activities within its jurisdiction, certain faculty are identified as program coordinators for specific content areas. Program coordinators may be identified by contacting the unit head responsible for the particular program or the college office.

The programs in education are designed to provide preparations for individuals seeking to enhance their ability to perform effectively in a variety of leadership roles in educational settings. While tied to licensure or credentialing in most cases, in every case the program seeks to prepare a thoughtful, informed practitioner of learning and leading. The coursework shaped around this reflective practice model constitutes an approach that is modeled on a coherent set of beliefs about how best to prepare students to enter educational settings.
Early Childhood (PreK-3), see Human Ecology
Multidisciplinary School Learning (K-4, 5-8) (Elementary Education)
Art Education (k-12)
Music Education (K-12)
Exceptional Learning (K-12)
Secondary Education (7-12) with concentrations in English, foreign languages (French, Latin, Spanish), mathematics, natural sciences (biology, chemistry, earth and space science, physics), and social sciences (economics, geography, government, history)
Physical Education (K-12)
Health Promotion (K-12)
Theatre Education (K-12)

Additional Courses of Study
In addition to programs leading to initial teacher licensure or endorsement, the college provides courses of study in Human Ecology (child & family studies, merchandising, interior design, and food & nutrition) and Exercise Science, Health, and Leisure Studies (adult fitness, leisure studies, sports administration, and community health education).

Graduate — The School of Educational Leadership, through the Graduate Studies Division, offers NCATE accredited and Tennessee approved programs which lead to the Master of Education (M.Ed.) degree and the Master of Science (M.S.) degree with a concentration in School Psychology. For further information refer to the UTC Graduate Bulletin, the Office of Graduate Admissions, and/or the Graduate Studies Division within the college.

Also, any student desiring to pursue doctoral-level study in education or to gain admission to candidacy for the Doctor of Education (Ed.D.) degree granted by The University of Tennessee, Knoxville, may complete all degree requirements at the UTC campus. For further information contact the director of the UTK/UTC Graduate Education Center located in 120 Race Hall.

Admission to the Teacher Education Program (TEP)*

Applicants who demonstrate qualifications and characteristics reasonably expected for initial licensure and entry into the teaching profession will be considered for admission to the teacher education program. Selection of qualified students is usually made on the basis of application during the sophomore year, with the exception of transfer students who are required to complete a semester of residence at UTC before their applications will be reviewed by the TEP Committee. Applications must be filed no later than the first semester of the junior year. A student who has not been officially admitted to the TEP will not be permitted to register for certain 400-level professional education courses. Prior to formal application to the TEP, freshman, sophomore, and particularly transfer students must consult with an adviser in the College of Education & Applied Professional Studies to plan their programs. This advisory procedure also applies to students (including post-baccalaureate) seeking initial teacher licensure or endorsement.

A post-baccalaureate or transfer student must satisfy official TEP admission standards set by UTC, the Tennessee Department of Education, and the College of Education and Applied Professional Studies. A student who has earned a degree or credit hours at another institution may be required to enroll in additional courses, including the student teaching experience or practicum, to verify competency in those teaching fields for which initial teacher licensure or endorsement is being requested through a UTC recommendation.

To be considered for admission to the TEP*, a student must:

1. File a formal application signed by a College of Education & Applied Professional Studies faculty adviser. Application forms may be obtained from Education Information Center (EIC) in 203 Hunter.
2. File the complete official health report signed by a licensed physician. Form may be obtained in 203 Hunter Hall.
3. Earn a minimum 2.5 cumulative grade point average, a 2.5 average on all courses taken at UTC, and a 2.5 in Education courses with no grade lower than C. (Must have established a 2.5 minimum overall grade point average on all college-level courses attempted.)
4. Complete the Pre-Professional Skills Test (PPST) or an approved equivalent and earn at least the minimum score on each section as mandated by the Tennessee Board of Education for the particular year in which the battery is taken.
5. File the completed speech and hearing report. Form may be obtained in 203 Hunter.
6. Submit all other appropriate information (essay and resume) to the EIC in 203 Hunter Hall prior to scheduling the TEP interview.
7. Complete an interview and receive a positive recommendation from the TEP interview committee.
8. Show evidence of reasonable physical fitness, emotional maturity, high moral character, and commitment to professional education. Violations of the honor code or student behavior policies as stated in the current UTC Student Handbook may be reviewed by the TEP Committee and may impact the final decision regarding admission to the TEP and/or approval for student teaching experiences.

*The final responsibility for satisfying all requirements for official entry in the TEP rests with the student.

Applicants will receive notification of their TEP status following the interview. An applicant who is denied admission will be notified of the deficiencies and of suggested resources or activities which may correct these. Decisions of the TEP Committee may be appealed. Information may be obtained from the TEP Committee chair.

Tests for Admission to Teacher Education Programs

Individuals seeking admission to teacher education programs in Tennessee must pass the Pre-Professional Skills Test (PPST/PRAXIS) or equivalent. The Board approved two additional options for admission of teacher candidates. Applicants who have attained an ACT composite test score of 21 or above or a composite test score of 22 or above on the Enhanced ACT or who have attained a combined verbal and mathematics score on the SAT of 920 or above or 1020 or above on the Recentered SAT shall be exempt from the PPST. An applicant with a bachelor's degree from a regionally accredited institution seeking admission to a graduate level program shall be exempt from the PPST provided the admitting institution establishes appropriate test requirements. UTC will administer this specified battery of tests according to dates established by the Tennessee Board of Education. This battery of tests is administered on the approved statewide PPST dates. Refer

In addition to programs leading to initial teacher licensure or endorsement, the college provides courses of study in Human Ecology (child & family studies, merchandising, interior design, and food & nutrition) and Exercise Science, Health, and Leisure Studies (adult fitness, leisure studies, sports administration, and community health education).

Graduate — The School of Educational Leadership, through the Graduate Studies Division, offers NCATE accredited and Tennessee approved programs which lead to the Master of Education (M.Ed.) degree and the Master of Science (M.S.) degree with a concentration in School Psychology. For further information refer to the UTC Graduate Bulletin, the Office of Graduate Admissions, and/or the Graduate Studies Division within the college.

Also, any student desiring to pursue doctoral-level study in education or to gain admission to candidacy for the Doctor of Education (Ed.D.) degree granted by The University of Tennessee, Knoxville, may complete all degree requirements at the UTC campus. For further information contact the director of the UTK/UTC Graduate Education Center located in 120 Race Hall.

Admission to the Teacher Education Program (TEP)*

Applicants who demonstrate qualifications and characteristics reasonably expected for initial licensure and entry into the teaching profession will be considered for admission to the teacher education program. Selection of qualified students is usually made on the basis of application during the sophomore year, with the exception of transfer students who are required to complete a semester of residence at UTC before their applications will be reviewed by the TEP Committee. Applications must be filed no later than the first semester of the junior year. A student who has not been officially admitted to the TEP will not be permitted to register for certain 400-level professional education courses. Prior to formal application to the TEP, freshman, sophomore, and particularly transfer students must consult with an adviser in the College of Education & Applied Professional Studies to plan their programs. This advisory procedure also applies to students (including post-baccalaureate) seeking initial teacher licensure or endorsement.

A post-baccalaureate or transfer student must satisfy official TEP admission standards set by UTC, the Tennessee Department of Education, and the College of Education and Applied Professional Studies. A student who has earned a degree or credit hours at another institution may be required to enroll in additional courses, including the student teaching experience or practicum, to verify competency in those teaching fields for which initial teacher licensure or endorsement is being requested through a UTC recommendation.

To be considered for admission to the TEP*, a student must:

1. File a formal application signed by a College of Education & Applied Professional Studies faculty adviser. Application forms may be obtained from Education Information Center (EIC) in 203 Hunter.
2. File the complete official health report signed by a licensed physician. Form may be obtained in 203 Hunter Hall.
3. Earn a minimum 2.5 cumulative grade point average, a 2.5 average on all courses taken at UTC, and a 2.5 in Education courses with no grade lower than C. (Must have established a 2.5 minimum overall grade point average on all college-level courses attempted.)
4. Complete the Pre-Professional Skills Test (PPST) or an approved equivalent and earn at least the minimum score on each section as mandated by the Tennessee Board of Education for the particular year in which the battery is taken.
5. File the completed speech and hearing report. Form may be obtained in 203 Hunter.
6. Submit all other appropriate information (essay and resume) to the EIC in 203 Hunter Hall prior to scheduling the TEP interview.
7. Complete an interview and receive a positive recommendation from the TEP interview committee.
8. Show evidence of reasonable physical fitness, emotional maturity, high moral character, and commitment to professional education. Violations of the honor code or student behavior policies as stated in the current UTC Student Handbook may be reviewed by the TEP Committee and may impact the final decision regarding admission to the TEP and/or approval for student teaching experiences.

*The final responsibility for satisfying all requirements for official entry in the TEP rests with the student.

Applicants will receive notification of their TEP status following the interview. An applicant who is denied admission will be notified of the deficiencies and of suggested resources or activities which may correct these. Decisions of the TEP Committee may be appealed. Information may be obtained from the TEP Committee chair.

Tests for Admission to Teacher Education Programs

Individuals seeking admission to teacher education programs in Tennessee must pass the Pre-Professional Skills Test (PPST/PRAXIS) or equivalent. The Board approved two additional options for admission of teacher candidates. Applicants who have attained an ACT composite test score of 21 or above or a composite test score of 22 or above on the Enhanced ACT or who have attained a combined verbal and mathematics score on the SAT of 920 or above or 1020 or above on the Recentered SAT shall be exempt from the PPST. An applicant with a bachelor's degree from a regionally accredited institution seeking admission to a graduate level program shall be exempt from the PPST provided the admitting institution establishes appropriate test requirements. UTC will administer this specified battery of tests according to dates established by the Tennessee Board of Education. This battery of tests is administered on the approved statewide PPST dates. Refer
to the Education Information Office in 203 Hunter Hall or the Testing Center office in 258 Hooper Hall for test application forms and administration dates for each year.

UTC is committed to strict adherence to these Tennessee Board of Education requirements regarding official admission to the TEP. An applicant to the TEP may take the PPST an unlimited number of times.

Finally, the Tennessee Board of Education requires the National Teacher Examinations (NTE) as a prerequisite for granting the teacher's professional license. The "Core Battery" section and "Specialty Area" component are required with state approved minimal passing scores for initial licensure. Consequently, students are advised to take both the "Core Battery" and "Specialty Area" sections unless there is no Tennessee approved specialty area.

The NTE is administered on campus through the UTC Testing Center in accordance with the schedule published by the Educational Testing Service of Princeton, New Jersey, for nationwide administration of the test. Information, bulletins, and applications for the NTE are available from the Testing Supervisor located in 258 Hooper Hall.

Admission to Student Teaching*

The application for admission to the student teaching semester must be filed in the Education Information Center (203 Hunter Hall) approximately six months preceding the actual experience. If a student plans to student teach during the spring semester of an academic year, the application must be completed and on file no later than September 1 of the preceding year. For the fall semester of an academic year, the application should be completed and on file no later than the preceding March 1.

Application for student teaching is not necessarily contingent upon official admission to the TEP; therefore, a student should apply for student teaching to comply with the required deadline dates. However, a student will not be permitted to actually student teach until he or she has satisfactorily met all requirements for admission to the TEP.

Before admission to student teaching, the student must:

1. Secure official admission to the TEP.
2. Submit student teaching application (in quadruplicate) with signature of assigned faculty adviser to the EIC in 203 Hunter Hall.
3. Satisfactorily complete appropriate professional education and endorsement area courses.
4. Satisfactorily complete at least 90 percent of course work in endorsement area(s). If the percentage of course work completed is questionable, the director of student teaching and appropriate unit head within the college will make the decision.
5. Receive positive recommendation of the major department(s). For a degree candidate in Secondary Education or K-12 initial certification, the major department is that in which the teaching area concentration is based.
6. Earn a minimum grade point average of 2.5 on courses completed at UTC, a cumulative 2.5 grade point average on all courses, a 2.5 grade point average in professional education courses with no grade lower than C, a 2.5 grade point average in endorsement area courses, and senior standing.
7. Demonstrate competency in manuscript and cursive handwriting. This requirement applies to all Multidisciplinary, Early Childhood, and Exceptional Learning majors.
8. Submit five copies of a resume with cover letter to the EIC in 203 Hunter Hall.

*Final responsibility for ensuring that these requirements are met prior to being admitted to student teaching rests with the student.

All majors seeking teaching licensure will student teach for a semester. Placement of a student will include, to the extent possible, an inner-city and a suburban/rural school environment divided equally during the semester. In addition to the opportunity for dual locations, the student teacher will be expected to teach on two distinct grade levels when feasible. For example, the elementary student teacher will teach in one of grades K-4 for half of the semester and in one of grades 5-8 during the other half of the semester. Secondary student teachers will be assigned to a junior high or upper middle school, grades 7-8, for one-half semester and to a high school, grades 9-12, for the other half.

When appropriate and educationally feasible, the secondary student teacher may teach a subject matter concentration other than that for which he or she has been professionally prepared. Student teaching is evaluated on a satisfactory/fail basis. A student not satisfactorily completing student teaching will receive a failing grade and may have the opportunity to repeat the course.

Unit heads have the opportunity to recommend placement(s) for a student teacher, and the student may request a particular school(s); however, final authority for the student teaching placement and teaching assignment rests with the director of student teaching and the dean of the College of Education and Applied Professional Studies. As a general rule, a student is neither located in the school from which he or she recently graduated nor placed under the supervision of a close family relative.

Student Teaching Orientation

General orientation seminars concerning student teaching and the professional education semester are held for all prospective student teachers preceding the student teaching experiences semester. Non-attendance could delay the student teaching semester. Seminars are also held during the student teaching semester, and attendance is mandatory.

*Under special circumstances, policies, procedures, and requirements for admission to the TEP and student teaching may be waived or revised at the discretion of the dean of the College of Education and Applied Professional Studies.

Recommendation for Licensure

The School of Educational Leadership will recommend licensure for only those students who have successfully completed one or more of the UTC initial licensure or endorsement programs approved by the Tennessee Department of Education. Application for a teacher's license should be completed prior to graduation. Application forms may be obtained from the Office of Records, 128 Hooper Hall.

Tennessee regulations stipulate that the applicant for a professional license or endorsement certificate must be recommended by the designated certifying officer and dean of an approved teacher training institution. To receive this recommendation, the applicant must:
1. Obtain official admission to the TEP.
2. Earn a minimum grade point average of 2.5 in courses completed at UTC, a cumulative 2.5 grade point average on all courses, a 2.5 grade point average in professional education courses with no grade lower than C, a grade point average of 2.5 in endorsement area courses.
3. Satisfactorily complete the student teaching internship or practicum experience.
4. Fulfill specific departmental requirements in the area of concentration.
5. Achieve minimum scores on the National Teacher Examinations (NTE) mandated by the Tennessee Board of Education (Full licensure will not be granted without fulfillment of this requirement).

These criteria apply to all students desiring an initial licensure or certification recommendation from UTC.

*Final responsibility for satisfying all requirements for licensure recommendation by UTC rests with the individual applicant.

A person who does not currently hold or has never held a valid professional teacher's certificate or license must satisfactorily complete a UTC approved program or clearly document and demonstrate evidence of satisfactory knowledge and skill competencies prescribed for Tennessee licensure to earn the official UTC recommendation for licensure. To learn of the particular endorsement requirements, a student should inquire through the appropriate unit office and certification officer within the Teacher Preparation Academy. Written guidelines for earning UTC approval in the various endorsement areas may be obtained from the respective unit head responsible for the licensure endorsement area being sought.

Any student who anticipates teaching outside Tennessee is strongly encouraged to request a checksheet of certification requirements from the Department of Education Office of Certification for the state in which he or she plans to teach. Course and competency requirements to satisfy out-of-state certification standards may be in addition to Tennessee licensure requirements and UTC approved degree requirements.

Graduation with a master's degree from UTC does not guarantee licensure in any specific area. However, in some instances a student may satisfy all the Tennessee requirements for licensure by completion of a state approved master's degree program at UTC.

Application for Teacher Licensure/Certification, Endorsement*

An application for teacher licensure, adding an endorsement in a teaching area, and professional school service personnel endorsement may be obtained from the Office of Records in 128 Hooper Hall. The Tennessee Department of Education Office of Teacher Education & Accreditation requires that an application for any type of initial licensure or additional endorsement finally approved by that office must be initiated through a Tennessee institution with an approved program. This applies to in-state applicants for licensure.

*UTC does not guarantee that satisfactory completion of a program listed in the UTC Bulletin at the time of a student's initial admission to the University will meet all the licensure or certification requirements at the time the person applies for initial licensure. This means that UTC will recommend only those applicants who have met all the licensure and certification requirements effective at the time of the University recommendation.

Any student who completes a certification program at UTC, regardless of whether he or she intends to teach in Tennessee, should apply immediately for Tennessee licensure since many states require an applicant to be certified or licensed in the state where he or she graduated and/or completed an initial certification program. Licensure standards in various states change frequently; hence, it is prudent to apply for licensure immediately upon graduation or program completion.

A student or any other person seeking teacher licensure or endorsement recommendation from UTC is strongly encouraged to confer with the appropriate faculty adviser(s) within the College of Education and Applied Professional Studies upon entry into the TEP or as soon as possible to gain faculty assistance in planning course schedules and to learn of the requirements effective at that time or at the projected date of applicant's graduation.

Applications for Tennessee teacher licensure are available in the Records Office. Completed applications accompanied by official transcripts are reviewed by the UTC certification officer and forwarded to the Tennessee Department of Education Office of Teacher Licensing. The (Probationary) initial teaching license is valid for five years and is renewable. After one year of successful teaching in a Tennessee public school, the Probationary License becomes an Apprentice License, also valid for five years. After three years of successful teaching in a Tennessee public school, the Apprentice License becomes a Professional License which is valid for 10 years and renewable.

Clarification of any of the above-mentioned requirements should be requested from the appropriate unit head or the certification officer.

Career Education Resource Library

The Career Education Resource Library contains various materials for use by students in counseling, practitioners in the field, and teachers who are implementing career education in their curriculum. The center contains career games, sound filmstrips, the complete Information Needed for Occupational Entry system, numerous cassettes, and other pertinent career publications and materials. Materials are geared for grades K-12. Contact the coordinator of Counseling programs in the Graduate Studies Division office in room 209A Hunter Hall.

Science and Environmental Education Resource Center

The School of Educational Leadership provides instruction and academic support services for pre-service and in-service teacher education programs. Instructional materials focusing on environmental and energy education along with professional consultants are also available. The center is a charter member of the John Judy Environmental Education Consortium and is located in the Challenger Center at 855 E. 5th Street.

Certification Officer

The Certification Officer is responsible for processing initial applications and approval of additional endorsements for licensure to teach in the state of Tennessee. Students should refer questions concerning licensure to the certification officer. This office (212 Hunter Hall) can also provide some assistance in processing certification applications to states other than Tennessee.
Teacher Education Curriculum Laboratory

Located in 104A Hunter Hall are resource materials, K-12 textbooks, computer software products, teaching units, and curricula materials for use by students. The laboratory includes an attractive room and equipment to support the preparation of instructional materials.

Art Education (B.S.)

General Education (see pages 22-23 for list of approved courses)
Category A: English A121 and A122 (3 hours each)
Category B: Philosophy B201 and Theatre and Speech B115, and one approved course in literature (3 hours each)
Category C: Psychology C101 and one approved behavioral or social science course (3 hours each)
Category D: two physical or natural science courses to total 8 hours (one course must be an approved laboratory science)
Category F: Mathematics Fl 20 (3 hours)
Category G: one approved perspectives course (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

Major and Related Courses

Computer Science 102 or 110
Philosophy 336
Psychology 221

54 hours Art including 101,102,103,105,106,203,205,207,214,215,233,323,324; 490; two courses from Art (history) 314,315,414,431,432; and 6 hours in one studio concentration

25 hours in professional education including Education 201,321,433,444r, EPSY 400

For graduation: 2.0 average in art and 2.0 average in College of Education and Applied Professional Studies courses

For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

Typical course of study in Art (B.S.): art education

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TOTAL HOURS 128

Multidisciplinary School Learning (B.S.)

General Education (see pages 22-23 for list of approved courses)
Category A: English A121 and A122 (3 hours each)
Category B: Philosophy B201, Theatre and Speech B115, and one literature elective course (3 hours each)
Category C: Economics C102 and Political Science C101 (3 hours each)
Category D: General Science D111 and Environmental Studies D150 (4 hours each)
Category F: Mathematics Fl 15 (3 hours)
Category G: one approved perspectives course (3 hours) (Non-Western)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

Major Core and Related Courses

Major Core:
- Art B301, 340; Computer Science 102 or 110; English 228; Exercise Science, Health, and Leisure Studies 302, 330; Geography G103; History B102, B204; Mathematics 116; Music B111, 340; Theatre and Speech 107 or 109, 340; University Studies 111,340,440; plus elective (must be in teaching discipline)

Professional education: 19 hours required from Education including 201,306, 323, 411,412,413,414,423, ESPY 400

Completion of one of the following concentrations:

K-4:
- Human Ecology 241,445; Education 410 (early childhood only), 441, and non-education elective

5-8:
- Anthropology G208, Psychology 221 or Human Ecology 241
- Education 442, and non-education elective

For graduation: 2.0 average in College of Education and Applied Professional Studies courses

For licensure: 2.5 average overall, 2.5 average in major concentration, and 2.5 average in education courses with no grade less than C in latter.

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

Typical course of study in multidisciplinary school learning (B.S.)

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TOTAL HOURS 128
**JUNIOR**

*Apply for student teaching*

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<td><em>Human Ecology 445 or Anthropology G208</em></td>
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**SENIOR YEAR**

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**TOTAL HOURS 128-131**

*K-4 takes Human Ecology 445 and Education 410; 5-8 takes Anthropology G208

**Music Education (B.S.)**

**General Education** (see pages 22-23 for list of approved courses)

**Category A:** English A121, A122 (3 hours each)

**Category B:** Art BI 11, Philosophy B201, Theatre & Speech BI 15 (3 hours each)

**Category C:** Psychology C101 plus two approved behavioral or social science courses (3 hours each, total 9 hours)

**Category D:** two natural science courses to total 8 hours (one course must be approved laboratory science)

**Category F:** Mathematics F120 (3 hours)

**Category G:** one approved perspectives course other than Music (3 hours)

**Exercise Science, Health, and Leisure Studies** 021 plus one additional semester exercise science activity

**Major and Related Courses**

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<th>Course</th>
<th>Credits</th>
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<tr>
<td>Psychology 221 or 222</td>
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</table>

18 hours applied music including: ensemble participation required each semester of residence, with the exception of student teaching semester, minimum 7 hours credit; 7 semesters (7 hours) primary applied instrumental or vocal study; *Music 131, 132 plus 141, 142 for piano proficiency (4 hours).

*Art education majors will take a Piano Proficiency Examination as described in the Music Department Undergraduate Student Handbook.

One of the following concentrations:

1. Instrumental: 2 hours of Music 223, 224; 2 hours of 225; 226; 325,328
2. Vocal: Music 135, 251 or 133 and 134, 222,310,333,334

Seminar is required each semester of residence. A Minimum of 7 semesters with a grade of "Satisfactory" is required.

22 hours from the College of Education and Applied Professional Studies including Education 201,433,444, ESPY 400

For graduation: 2.0 average in music and 2.0 average in College of Education and Applied Professional Studies courses

For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

Total hours will exceed 128 minimum

**Typical courses of study in music education (B.S.)**

**Music Education (B.S.): instrumental concentration**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td></td>
</tr>
<tr>
<td>English A121</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics F120</td>
<td>3</td>
</tr>
<tr>
<td>EHLS 021</td>
<td>1</td>
</tr>
<tr>
<td><strong>Category C</strong></td>
<td></td>
</tr>
<tr>
<td>Category C</td>
<td>3</td>
</tr>
<tr>
<td>Music 100r</td>
<td>0</td>
</tr>
<tr>
<td>Music 030r or 050r*</td>
<td>1</td>
</tr>
<tr>
<td>Music 103</td>
<td>1</td>
</tr>
<tr>
<td>Music 107</td>
<td>3</td>
</tr>
<tr>
<td>Music 131</td>
<td>1</td>
</tr>
<tr>
<td>Applied Music</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**SOPHOMORE**

| Art B111       | 3               |
| Education 201  | 3               |
| **Category D** |                 |
| Category D     | 4               |
| Music 200r     | 0               |
| Music 030r or 050r* | 1             |
| Music 141      | 1               |
| Music 203      | 1               |
| Music 207      | 3               |
| Applied Music  | 1               |
| **Total**      | **17**          |

**JUNIOR**

*Apply for student teaching*

| Music 300r      | 0               |
| Music 030r or 050r* | 1             |
| Applied Music   | 1               |
| Music 224       | 2               |
| Music 226       | 2               |
| Music 307 or 326 | 2               |
| Music 316       | 3               |
| Music 315       | 3               |
| **Category C**  |                 |
| Category C      | 3               |
| **Total**       | **17**          |

**SENIOR**

| Music 432       | 3               |
| Education 444r  | 12              |
| Education 433   | 4               |
| Music 400r      | 0               |
| Music 030r or 050r* | 1             |
| Music 321       | 3               |
| Music 325       | 2               |
| Music 328       | 2               |
| Applied Music   | 1               |
| **Total**       | **16**          |

**TOTAL HOURS 128-130**

*Participation in band or orchestra is required each semester.

**Music Education (B.S.): vocal concentration**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
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<td>EHLS 021</td>
<td>1</td>
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<td>Mathematics F120</td>
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<td><strong>Category C</strong></td>
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<tr>
<td>Category C</td>
<td>3</td>
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<tr>
<td>Music 100r</td>
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<td>Music 103</td>
<td>1</td>
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<tr>
<td>Music 107</td>
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<tr>
<td>Music 131</td>
<td>1</td>
</tr>
<tr>
<td>Applied Music</td>
<td>1</td>
</tr>
<tr>
<td>Music Choral Group or Opera Workshop</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
<tr>
<td>Category D</td>
<td>Education 201</td>
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<tr>
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<td>--------------</td>
</tr>
<tr>
<td>4</td>
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</tr>
<tr>
<td>Education 201</td>
<td>Philosophy B201</td>
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**Typical course of study in Secondary English (B.S.)**

<table>
<thead>
<tr>
<th><strong>First Semester</strong></th>
<th><strong>Second Semester</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td><strong>FRESHMAN</strong></td>
</tr>
<tr>
<td>English A121</td>
<td>English A121</td>
</tr>
<tr>
<td>English B211</td>
<td>English B211</td>
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<tr>
<td>History B203</td>
<td>History B203</td>
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<td>Mathematics F120</td>
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<tr>
<td>English 431</td>
<td>English 431</td>
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<td>Total 17-18</td>
<td>Total 16</td>
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</table>

**SOPHOMORE**

<table>
<thead>
<tr>
<th><strong>First Semester</strong></th>
<th><strong>Second Semester</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td><strong>FRESHMAN</strong></td>
</tr>
<tr>
<td>English A121</td>
<td>English A121</td>
</tr>
<tr>
<td>English B211</td>
<td>English B211</td>
</tr>
<tr>
<td>History B203</td>
<td>History B203</td>
</tr>
<tr>
<td>Mathematics F120</td>
<td>Mathematics F120</td>
</tr>
<tr>
<td>Total 17-18</td>
<td>Total 16</td>
</tr>
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</table>

**JUNIOR**

<table>
<thead>
<tr>
<th><strong>First Semester</strong></th>
<th><strong>Second Semester</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td><strong>FRESHMAN</strong></td>
</tr>
<tr>
<td>English A121</td>
<td>English A121</td>
</tr>
<tr>
<td>English B211</td>
<td>English B211</td>
</tr>
<tr>
<td>History B203</td>
<td>History B203</td>
</tr>
<tr>
<td>Mathematics F120</td>
<td>Mathematics F120</td>
</tr>
<tr>
<td>Total 17-18</td>
<td>Total 16</td>
</tr>
</tbody>
</table>

**SENIOR**

<table>
<thead>
<tr>
<th><strong>First Semester</strong></th>
<th><strong>Second Semester</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td><strong>FRESHMAN</strong></td>
</tr>
<tr>
<td>English A121</td>
<td>English A121</td>
</tr>
<tr>
<td>English B211</td>
<td>English B211</td>
</tr>
<tr>
<td>History B203</td>
<td>History B203</td>
</tr>
<tr>
<td>Mathematics F120</td>
<td>Mathematics F120</td>
</tr>
<tr>
<td>Total 17-18</td>
<td>Total 16</td>
</tr>
</tbody>
</table>

**TOTAL HOURS 128-130**

**Secondary English (B.S.)**

**General Education** (see pages 22-23 for list of approved courses)

Category A: English A121, A122 (3 hours each)

Category B: Art B111, Music B11, Philosophy B201 (3 hours each)

Category C: Psychology C101 plus one approved behavioral or social science course (3 hours each)

Category D: two natural science courses to total 8 hours (one course must be an approved laboratory science)

Category F: Anthropology G208

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and Related Courses**

Computer Science 102 or 110

History B203, B204, and 323 or 324

Theatre and Speech 107 or 109

Foreign Language—one year of foreign language at college level

36 hours English including English 203, 207, 211, 212, 213, 214, 229, 300, 361, 410, 460; Humanities 385r

31 hours from the College of Education and Applied Professional Studies including Education 201, 204, 321, 331, 343, 344, ESPY 400

For graduation: 2.0 average in English and 2.0 average in College of Education and Applied Professional Studies courses

For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

**Secondary Foreign Language (B.S.): French, Latin, or Spanish Concentrations:**

**General Education** (see pages 22-23 for list of approved courses)

Category A: English A121, A122 (3 hours each)

Category B: Art B111 or Music B11, History B101, and Philosophy B201 (3 hours each)

Category C: Psychology C101 plus one approved behavioral or social sciences course (3 hours each)

Category D: two natural science courses to total 8 hours (one course must be an approved laboratory science)

Category F: Mathematics F120

Category G: Anthropology G208

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and Related Courses**

Computer Science 102 or 110

History B102

Theatre and Speech 107 or 109

Behavioral/Social Sciences elective courses to total 6 hours

Arts and Sciences elective

**One of the following concentrations**

French:

24 hours of French including 311, 312, 321, 331, 332, 401, 430

Spanish:

24 hours of Spanish including 311, 312, 321, 331, 332, 401, 430
Latin:
27 hours of Latin and Classics including 201, 202, 207 or 208, 310, 312, 350, 351, 425; Classics 310

All concentrations
31 hours from the College of Education and Applied Professional Studies including Education 201, 204, 321, 431, 433, 443, ESPY 400
For graduation: 2.0 average in language concentration and 2.0 average in College of Education and Applied Professional Studies courses
For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical course of study in secondary foreign language (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>First Semester</td>
</tr>
<tr>
<td>Art B11 or Music B11</td>
<td>Computer Science 102 or 110</td>
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<tr>
<td>English A1 21</td>
<td>English A1 22</td>
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<tr>
<td>History B101</td>
<td>History B102</td>
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<td>Mathematics Fl 20</td>
<td>Psychology C101</td>
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<tr>
<td>Arts and Sciences Elective</td>
<td>EHLS 021</td>
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<tr>
<td></td>
<td>Language Elective</td>
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<tr>
<td>Total 15</td>
<td>Total 16</td>
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<tr>
<td>SOPHOMORE</td>
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<tr>
<td>Education 201</td>
<td>Apply for admission to TEP</td>
</tr>
<tr>
<td>Concentration</td>
<td>Anthropology G208</td>
</tr>
<tr>
<td>Philosophy B201</td>
<td>Education 204</td>
</tr>
<tr>
<td>EHLS Activity</td>
<td>Concentration</td>
</tr>
<tr>
<td>Category C</td>
<td>Theatre &amp; Speech 107 or 109</td>
</tr>
<tr>
<td>Category D</td>
<td>Language Elective</td>
</tr>
<tr>
<td>Total 17</td>
<td>Total 15</td>
</tr>
<tr>
<td>JUNIOR</td>
<td></td>
</tr>
<tr>
<td>Apply for student teaching</td>
<td></td>
</tr>
<tr>
<td>Education 321</td>
<td>ESPY 400</td>
</tr>
<tr>
<td>Concentration</td>
<td>Concentration</td>
</tr>
<tr>
<td>Natural Science</td>
<td>Behavioral/Social Sci Elective</td>
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<tr>
<td>Language Elective</td>
<td>Language Elective</td>
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<tr>
<td>Total 16</td>
<td>Total 15</td>
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<tr>
<td>SUMMER</td>
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<td>Cultural Experience (430)</td>
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<td>Total 6</td>
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<td>SENIOR</td>
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<tr>
<td>Education 431</td>
<td>Education 443</td>
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<tr>
<td>Concentration</td>
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<tr>
<td>Language Electives</td>
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<td>Total 16</td>
<td>Total 12</td>
</tr>
<tr>
<td>TOTAL HOURS 128</td>
<td></td>
</tr>
</tbody>
</table>

Exercise Science, Health, and Leisure Studies
See page 116

Secondary Mathematics (B.S.):

General Education (see pages 22-23 for list of approved courses)
Category A: English A121, A122 (3 hours each)
Category B: Philosophy B 201; one approved Fine Arts course; plus 6 additional hours of Humanities/Fine Arts electives (other than History) (total 12 hours)
Category C: Psychology C101 plus one approved behavioral or social science course (3 hours each)
Category D: Physics D230 plus one laboratory science course to total 8 hours
Category F: Mathematics F150

Category G: one approved perspectives course (3 hours)
Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

Major and Related Courses
Computer Science 102 or 110, and 150
Theatre and Speech 107 or 109
Physics 231

40 hours of mathematics including Mathematics 160, 212, 245, 255, 295, 321, 350, 430, 452 AND
Mathematics 307 plus 9 hours electives in mathematics
or
Mathematics 407 and 408 plus 6 hours electives in mathematics
31 hours from the College of Education and Applied Professional Studies including Education 201, 204, 321, 431, 433, 443, ESPY 400
For graduation: 2.0 average in mathematics and 2.0 average in College of Education and Applied Professional Studies courses
For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical course of study in secondary mathematics (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>First Semester</td>
</tr>
<tr>
<td>English A121</td>
<td>English A1 22</td>
</tr>
<tr>
<td>Computer Science 102 or 110</td>
<td>Mathematics 160</td>
</tr>
<tr>
<td>Mathematics F150</td>
<td>Theatre &amp; Speech 107 or 109</td>
</tr>
<tr>
<td>Psychology C101</td>
<td>Category C</td>
</tr>
<tr>
<td>EHLS 021</td>
<td>EHLS Activity</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>Electives</td>
<td>Electives</td>
</tr>
<tr>
<td>Total 17</td>
<td>Total 15</td>
</tr>
<tr>
<td>SOPHOMORE</td>
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<tr>
<td>Education 201</td>
<td>Apply for admission to TEP</td>
</tr>
<tr>
<td>Concentration</td>
<td>Anthropology G208</td>
</tr>
<tr>
<td>Mathematics 212</td>
<td>Education 204</td>
</tr>
<tr>
<td>Mathematics 295</td>
<td>Concentration</td>
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<tr>
<td>Philosophy B201</td>
<td>Theatre &amp; Speech 107 or 109</td>
</tr>
<tr>
<td>Physics D230</td>
<td>Language Elective</td>
</tr>
<tr>
<td>Total 16</td>
<td>Total 15</td>
</tr>
<tr>
<td>JUNIOR</td>
<td></td>
</tr>
<tr>
<td>Apply for student teaching</td>
<td></td>
</tr>
<tr>
<td>Computer Science 150</td>
<td>ESPY 400</td>
</tr>
<tr>
<td>Education 321</td>
<td>Concentration</td>
</tr>
<tr>
<td>Mathematics 321</td>
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<td>Category G</td>
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<tr>
<td>Education 433</td>
<td>Education 443</td>
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<td>Mathematics 350</td>
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<td>Mathematics Electives</td>
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<tr>
<td>Total 16</td>
<td>Total 12</td>
</tr>
</tbody>
</table>

TOTAL HOURS 128

*Mathematics sequence may begin with 145 rather than 150 depending on preparation.*
Secondary Natural Sciences (B.S.):

**General Education** (see pages 22-23 for list of approved courses)
- **Category A:** English A121, A122 (3 hours each)
- **Category B:** Philosophy B201, one approved Fine Arts course, plus 6 additional hours from humanities/fine arts (other than History) (total 12 hours)
- **Category C:** Psychology C101, plus one approved behavioral or social science course (3 hours each)
- **Category D:** Chemistry D121 (4 hours)
- **Category E:** one approved mathematics course
- **Category G:** one approved perspectives course

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and Related Courses**

Required of all secondary natural science majors:
- Biology D1 21
- Chemistry 122
- Computer Science 102 or 110
- Physics D103
- Theatre and Speech 107 or 109

**University Studies 401**

31 hours from the College of Education and Applied Professional Studies including Education 201, 204, 321, 431, 433, 443, ESPY 400

All natural sciences majors are required to complete at least one of the following concentration areas:

**Biology concentration**
- Geology D111 or 112
- Mathematics 135 and F136 OR F145 and F150

**Chemistry concentration**
- Biology 122
- Physics 104
- Geology D111 or 112
- Mathematics 135 and F136 OR F145 and F150

**Earth and Space Sciences concentration**
- Mathematics 135 and F136 OR F145 and F150
- Geology D111, 112, 241, 242, 303, 321, and 480 or 490
- Astronomy D102
- Environmental Science 482
- Geography 101

**Physics concentration**
- Biology 122
- Geology D111, 112
- Mathematics F150, 160
- Physics 104
- 18 hours of physics including: Physics 231, 232, 318

**Typical course of study in secondary natural sciences: biology concentration (B.S.)**

**First Semester**  
**FRESHMAN**  
- English A121  
- Biology D121  
- Chemistry D121  
- Elective  
- EHLS 021  

**Second Semester**  
- English A122  
- Biology 122  
- Chemistry 122  
- Psychology C101  
- Theatre & Speech 107 or 109  

**Total** 15 Total 18

**SOPHOMORE**  
- Education 201  
- Mathematics 135  
- Philosophy B201  
- Physics D103  
- Category B  

**Total** 16 Total 17

**JUNIOR**  
- Computer Science 102 or 110  
- Education 204  
- Physics F136  
- Botany or Zoology  

**Total** 12 Total 17

**Senior**  
- Education 443  
- Geology D111 or 112  
- Physiology  
- Category G  
- Humanities/Fine Arts Elective  

**Total** 12 Total 17

**TOTAL HOURS 128**

**Typical course of study in secondary natural sciences: chemistry concentration (B.S.)**

**First Semester**  
**FRESHMAN**  
- English A121  
- Biology D121  
- Chemistry D121  
- EHLS 021  
- Elective  

**Second Semester**  
- English A122  
- Biology 122  
- Chemistry 122  
- Psychology C101  
- Theatre & Speech 107 or 109  

**Total** 15 Total 18

**SOPHOMORE**  
- Education 201  
- Mathematics 135  
- Philosophy B201  
- Physics D103  
- Category B  

**Total** 16 Total 16

**JUNIOR**  
- Computer Science 102 or 110  
- Education 204  
- Mathematics F136  
- Physics 104  

**Total** 17 Total 18

**For graduation: 2.0 average in natural sciences and 2.0 average in College of Education and Applied Professional Studies courses**

**For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter**

**Minimum of 30 hours of 300 and 400 level courses**

Electives to complete 128 hours
Typical course of study in secondary natural sciences: earth and space sciences concentration (B.S.)

### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
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<tr>
<td>English A121</td>
<td>3</td>
</tr>
<tr>
<td>Geology D111</td>
<td>4</td>
</tr>
<tr>
<td>Geohistory</td>
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</tr>
<tr>
<td>EHELS 021</td>
<td>1</td>
</tr>
<tr>
<td>Category B</td>
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<td>Elective</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>English A121</td>
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<tr>
<td>Geography 101</td>
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</tr>
<tr>
<td>Geology 112</td>
<td>4</td>
</tr>
<tr>
<td>Geohistory</td>
<td>4</td>
</tr>
<tr>
<td>Psychology C101</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Typical course of study in secondary natural sciences: physics concentration (B.S.)

### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology D121</td>
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### Second Semester

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### Typical course of study in secondary natural sciences: physics concentration (B.S.)

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### Second Semester

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### Secondary Social Sciences (B.S.):

#### General Education (see pages 22-23 for list of approved courses)

- **Category A**: English A121, A122 (total 6 hours)
- **Category B**: English B203, Philosophy B201, plus one approved course from Fine Arts (total 9 hours)
- **Category C**: Psychology C101 plus one course from: Sociology C125, C151, C215, or Anthropology C152 (total 6 hours)
- **Category D**: two natural science courses (one course must be approved laboratory science) (total 8 hours)
- **Category F**: Mathematics F1 20
- **Category G**: Religion G211

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

### Major and Related Courses

Required of all secondary social sciences majors:

- History B101, B102, B203, B204, 343
- Geography 101, G103
- Economics C101, C120
- Political Science C101
- Computer Science 102 or 110
- Sociology 250
- Theatre and Speech 107 or 109

31 hours from the College of Education and Applied Professional Studies including Education 201, 204, 321, 431, 433, 443, ESPY 400

All social sciences majors are required to complete at least one of the following concentration areas:

- Economics concentration
- Political Science 102
- Anthropology G208
- Economics 324, 325
- 6 hours of economics electives at the 300-400 level

### Geography concentration

- Geography 104
- Geology D111
- Environmental Science D150, 151
  - one course from each of the following groups:
    - (a) Geography 206, 250
    - (b) Geography 303, 305, 465, 466
    - (c) Geography 407, 409, 415
- Electives to total 20 hours in geography

### History concentration

- Anthropology G208
- History 301
  - one course from each of the following areas:
    - (a) United States - History 331, 332, 335, 336, 337, 338, 341, 346
    - (b) European - History 310, 311, 312, 313, 314, 315, 317, 318, 319, 323, 324, 327, 328
    - (c) Non-western - History 364, 365, 368, 370, 371, 372
    - (d) Disciplinary - History 411, 412, 414, 415, 416, 419
Political Science concentration

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<td>(b) International relations - Political Science 242, 244, 343, 345</td>
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<td>(c) Public law - Political Science 321, 322, 323</td>
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For graduation: 2.0 average in social sciences and 2.0 average in College of Education and Applied Professional Studies courses.

For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than a C in the latter.

Minimum of 30 hours of 300 and 400 level courses.

Electives to complete 128 hours.

Typical course of study in secondary social sciences (B.S.): economics concentration

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**TOTAL HOURS 128**

Typical course of study in secondary social sciences (B.S.): history concentration

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**TOTAL HOURS 128**

Typical course of study in secondary social sciences (B.S.): geography concentration

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**TOTAL HOURS 128**

TOTAL HOURS 128
Typical course of study in secondary social sciences (B.S.): political science (government) concentration

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**TOTAL HOURS 128**

Exceptional Learning K-12 (B.S.)

- General Education (see pages 22-23 for list of approved courses)
- Category A: English A121, A122 (6 hours)
- Category B: Philosophy B201, two courses from Art 111, Music 111, Theatre and Speech 111 (3 hours each, total 9 hours)
- Category C: Political Science C101 and one approved behavioral/social science course other than psychology (6 hours)
- Category D: two approved physical/natural science courses with laboratories: one from Astronomy 102, Chemistry 121,125, General Science 111, Geology 111, Physics 103,230; and one from Anthropology 209, Biology 121, Environmental Science 150 (total 8 hours)
- Category E: Mathematics F1 15 (3 hours)
- Category F: one approved perspectives course (3 hours)
- Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and Related Courses**

- Computer Science 102 or 110
- English 228
- Exercise Science, Health, and Leisure Studies 302
- History B102
- Human Ecology 445
- Mathematics 116
- Psychology C101, 221 or 222, 24L
- Theatre and Speech 109
- University Studies 340

**TOTAL HOURS 128**

Theatre and Speech (B.A.): Teacher Education K-12 concentration

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<td>Education 425</td>
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<td>Education 430</td>
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**TOTAL HOURS 128**

53 hours from the College of Education and Applied Professional Studies including Education 201,250,320,323,325,330,413,414,415,416,425,426,430,436, 461,445

For graduation: 2.0 average in College of Education and Applied Professional Studies courses

For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
### Major and related courses

**Art 340**
- Computer Science 102 or 110
- Music 340
- Psychology 221 or 222 or Education 204
- 4 hours design and technical theatre: 141, 143
- 3 hours acting: 221
- 6 hours directing: 331, 431

**Psychology 221 or 222 or Education 204**
- 4 hours design and technical theatre: 141, 143
- 3 hours acting: 221
- 6 hours directing: 331, 431

**Music 340**
- Computer Science 102 or 110
- 4 hours design and technical theatre: 141, 143
- 3 hours acting: 221
- 6 hours directing: 331, 431

**Computer Science 102 or 110**
- 4 hours design and technical theatre: 141, 143
- 3 hours acting: 221
- 6 hours directing: 331, 431

**For licensure:** 2.5 average overall, 2.5 average in teaching field, and 2.5 average in education courses with no grade less than C in the latter.

**Typical course of study in theatre and speech (B.A.)**

#### First Semester

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<tr>
<td>Theatre and Speech 141</td>
<td>3</td>
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<tr>
<td>Mathematics F120</td>
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#### Second Semester

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#### Sophomore

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<tr>
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#### Apply for admission to TEP

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<tr>
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#### TEP

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**TOTAL HOURS 128-130**

### EDUCATION COURSES

#### 101 Career and Life Planning (3)
- Focus is on helping the individual make career and life plans. A series of techniques (role playing, psychodrama, sociodrama, value clarification, and decision making) will be utilized to facilitate each student examining his or her interrelated value systems associated with education, work, leisure, and self-expression. Every semester.

#### 105 Strategies for College Reading (3 hours institutional credit)
- The course provides insights into the reading process, language expansion, content area language strategies, and improved study skills. Students will engage in a variety of activities involving reading, writing, speaking, and listening to enhance their ability to comprehend a variety of printed materials. Credit not applicable toward any degree.

#### 199r Special Projects (1-4)
- Individual projects and field components. On demand. Maximum credit 4 hours. Prerequisite: transfer student and approval of department head.

#### 200r Investigations of the School in Society (3)
- Observations and simulations involving the school as a social institution and the role of the teacher in preparation for instruction. At least 20 hours of teacher aide experience at school site are required. Every semester.

#### 201 Education in the United States (3)
- Organization and historical development of education in the United States, philosophical concepts and their influences on contemporary education, current issues. Every semester. Corequisite: 201 lab.

#### 202 Human Growth and Development: Pre-School Primary (3)
- Child development focusing on study of child, prenatal through six years, with limited attention to elementary age child. Field component required. On demand. Credit not allowed in both Education 202 and Psychology 221.

#### 203 Human Growth and Development: Child (3)
- Child development factors influencing growth; characteristics, influence of concepts on the education process. Field component required. Every semester. Credit not allowed in Curriculum and Instruction 203 and Psychology 221.

#### 204 Human Growth and Development: Adolescent (3)
- Adolescent development factors influencing growth, characteristics, influence of concepts on the educational process. Field component required. Every semester. Credit not allowed in both Education 204 and Psychology 222.

#### 207 Educational Psychology (3)
- Theories of learning and instruction applied to the classroom, as psychological environments, cognitive processes and motivation, use of tests and measures, approach to guidance. Field component required. On demand.

#### 215r Workshop and Seminar (3, 4)
- Current topics in education. Special programs and in-service courses. On demand. Prerequisite: approval of department head.

#### 250 Introduction to Special Education (3)
- A survey of special education with emphasis placed upon consideration of the history of special education, federal involvement and leadership, and the global characteristics of the target population. Field component required.

#### 306 Designing Instruction and Evaluation in the Elementary Classroom (3)
- Examines the elements of evaluation planning and management common to elementary school subjects. Students will demonstrate competency in unit development, selected component teaching skills, and evaluation planning. Prerequisite: Education 201.

#### 310 Elementary School Curriculum (3)
- The curriculum for grades one through six and the impact of technological and social change on curriculum planning and school organization. On demand.

#### 320 Nature and Characteristics of Mild Disabilities (4)
- An in-depth study of the psychological, physical, educational, medical, behavioral, and learning characteristics and needs of the mildly disabled population. Field component required. Prerequisite: Education 250.
321 Teaching of Reading in the Secondary School (3)
Integrating reading skills and teaching strategies with the teaching of content area subjects. Every semester. Prerequisites: Education 201 and 204, or permission of the instructor. Required of all secondary education majors.

323 Teaching of Reading in the Elementary School (3)
Introduction to reading as a process with the resulting product of meaning comprehension; survey of current methods, strategies, procedures, and materials for the teaching of reading. Twenty (20) hours of field placement with appropriate classroom follow-up required. Every semester. Prerequisites: Education 201, English 228. May not be used for graduate credit.

325 Nature and Characteristics of the Individual with Moderate and Severe and/or Multiple Disabilities (4)
The in-depth study of the psychological, physical, educational, medical, behavioral, and learning characteristics and needs of students with moderate, severe, or multiple disabilities. Field component required. Prerequisite: Education 250.

330 Academic and Behavioral Evaluation (3)
A study of the basic principles and techniques of educational evaluation in special education used by the classroom/resource teacher. Fall semester. Prerequisite: Education 250 or 332. Corequisite: Education 330 lab.

401 Introduction to Counseling (3)
A basic course designed to provide an orientation to the philosophy, theories, and techniques of individual and group counseling to undergraduate students who are seeking foundational understandings for future courses in the functions of counseling in modern society. On demand.

410 Materials and Methods in Early Childhood Education (3)
Study of the objectives, materials, methods, pupil activities, and evaluation of preschool education. Field component required. Spring semester. Prerequisite: admission to teacher education program. May not be used for graduate credit.

411r Teaching Social Studies in the Elementary and Middle School (1)
Designed to model effective methods and materials for teaching social studies in elementary and middle schools; emphasis will be on integrating a specific topic in a spiral curriculum. Prerequisites: Education 306, admission to teacher education program. Corequisite: Education 412, 414.

412 Teaching Science in Elementary and Middle School (1)
Focus on resources for science and environmental education instruction; includes review of national curriculum projects, regional and state initiatives, microcomputer software, and visual databases. Every semester. Prerequisites: Education 306, Environmental Science 150, General Science 111, University Studies 111. Admission to teacher education program. Corequisites: Education 411, 414.

413 Teaching Language Arts in the Elementary and Middle School (1)
This course is designed to help develop an understanding of the basic concepts of language usage in the classroom. Special consideration will be given to how the language arts (listening, speaking, writing, reading, & thinking) are learned, diagnosed, taught, and evaluated. The interrelationships of these skills will be stressed to better prepare the future teacher to utilize appropriate activities and materials while teaching children to think clearly and creatively and to communicate effectively. Prerequisite: Education 323. Corequisite: University Studies 340.

414 Teaching Mathematics in the Elementary and Middle School (1)
Designed to provide students with effective methods and materials for teaching mathematics to elementary and middle school children. Emphasis will be placed on NCTM standards and diagnostic and remedial procedures. Prerequisites: Math 116 and Education 306. Corequisites: Education 411, 412.

415 Instructional Technology for the Adolescent Exceptional Student (3)
An examination of the unique needs and particular issues which are specific to mildly handicapped adolescents and adults. The course emphasizes approaches and methodology concerning corrective and compensatory instruction.

416 Instructional Technology for the Elementary Exceptional Student (3)
An examination of the principles of clinical teaching and the individualizing of instruction for mildly handicapped elementary students. The course emphasizes instructional approaches and methodology concerning corrective and compensatory instruction.

420 Emergent Literacy (3)
Survey of emergent literacy methods, strategies, procedures, and assessment materials. The second reading course for students who are seeking Human Ecology Pre-K-3 certification. Prerequisite: Education 323.

422 Teaching Reading in the Intermediate Grades and the Middle School (3)
Teaching/learning strategies to deal with content and process of reading; emphasis on vocabulary development, comprehension strategies, basic study skills, reading in content areas. Summer semester. Prerequisite: Education 323.

423 Diagnostic and Prescriptive Teaching of Reading (3)
Field-based, classroom diagnostic/prescriptive teaching; in depth study of selected assessment instruments, instructional strategies, materials, and management procedures. Every semester. Prerequisites: Education 324 (or equivalent) or permission of instructor, admission to teacher education program. May not be used for graduate credit.

425 Procedures for Individuals with Physical and Multiple Disabilities (3)
An examination of the unique needs and particular issues which are specific to children and adults who have physical challenges or multiple disabilities or are medically fragile. The course emphasizes how instructional approaches and methodology may be altered with special emphasis on physical and health management and adaptive technology. Fall semester. Prerequisite: Education 325 or permission of instructor.

426 Instructional Procedures for Individuals with Moderate, Severe, or Multiple Disabilities (3)
An examination of the unique needs and particular issues which are specific to moderately and severely disabled children, adolescents, and adults. The course emphasizes instructional approaches and methodology concerning functional academic curriculum, social skills development, career and vocational development, personal management, recreation/leisure, and general community living skills. Fall semester. Prerequisite: Education 325 or permission of instructor.

430 Gifted and Talented Children and Adults (3)
This course examines the social, emotional, and intellectual characteristics of the gifted/talented child and focuses on the appropriate teaching/learning requirements in resource and regular classrooms. Special attention will be given to program models, curriculum development, and teaching strategies.

431r Teaching Strategies and Materials in the Disciplines (3)
Curricular and media developments appropriate for the respective discipline. Must be taken prior to student teaching. Full semester for Mathematics and Social Sciences; Spring semester for English, Foreign Languages, Natural Sciences. Prerequisites: Education 204, 201. Corequisite: Education 433. May not be used for graduate credit.

433 Designing Instruction and Evaluation in the Secondary Classroom (4)
Formulating and evaluating appropriate affective and cognitive objectives. Lesson planning and a wide range of teaching strategies will be examined. Each student will be required to demonstrate proficiency in a variety of component teaching skills via the microteaching laboratory and a self-developed teaching unit. Every semester. Prerequisite: admission to teacher education program. Corequisite: Education 431.

436 Classroom Management in Special Education (3)
An examination of the adaptation of classroom management techniques in the classroom as well as individual tutorial situations. Fall semester. Prerequisites: Education 250, admission to teacher education program.

440 Observation and Student Teaching in Early Childhood Education (Pre-K-3) (12)
Enhanced student teaching in a Pre-K or kindergarten setting and in primary grades. Schedules must permit involvement five days per week. Placements will ensure experiences in inner-city and suburban or rural schools. Every semester. Prerequisites: Education 306, 320, 410, 411, 412, 413, 414, 420, ESPY 400: admission to teacher education program; notification of intent to student teach according to School of Educational Leadership guidelines. Required of Early Childhood and Pre-K-3 majors. May not be used for graduate credit.
441 Observation and Student Teaching in Multidisciplinary School Learning (K-4) (12)
Enhanced student teaching in both kindergarten and intermediate elementary grades. Schedules must permit involvement five days per week. Placements will ensure experiences in inner-city and suburban or rural schools. Every semester. Prerequisites: Education 306, 320, 410, 411, 412, 413, 414, 423, ESPY 400; admission to teacher education program; notification of intent to student teach according to School of Educational Leadership guidelines. Required of Multidisciplinary School Learning K-4 concentration. May not be used for graduate credit.

442 Observation and Student Teaching in Multidisciplinary School Learning (5-8) (12)
Enhanced student teaching in both primary and middle grades. Schedules must permit full involvement five days per week. Placements will ensure experiences in inner-city and suburban or rural schools. Every semester. Prerequisites: Education 306, 320, 411, 412, 413, 414, 423, ESPY 400; admission to teacher education program; notification of intent to student teach according to School of Educational Leadership guidelines. Required of Multidisciplinary School Learning 5-8 concentration. May not be used for graduate credit.

443 Observation and Student Teaching in Secondary Schools (12)
Enhanced student teaching in both junior high or middle schools and in senior highschool. Schedules must permit full involvement five days per week. Placements will ensure experiences in inner-city and suburban or rural schools. Every semester. Prerequisites: Education 306, 320, 411, 412, 413, 414, 423, ESPY 400; admission to teacher education program; notification of intent to student teach according to School of Educational Leadership guidelines. Required of secondary education majors. May not be used for graduate credit.

444r Observation and Student Teaching in School Music, Visual Arts, Exercise Science, and Health Promotion (12)
Enhanced student teaching in both elementary and senior high school grades. Schedules must permit full involvement five days per week. Placements will ensure experiences in inner-city and suburban or rural schools. Every semester. Prerequisites: Education 433, specific methods courses related to the discipline, admission to teacher education program, notification of intent to student teach according to School of Educational Leadership guidelines. Required of majors in School of Music, Visual Arts, Exercise Science, Health Promotion, and Theatre. May not be used for graduate credit.

445 Observation and Student Teaching in Exceptional Learning (12)
Enhanced student teaching in two exceptional learning settings: one modified and one comprehensive. Schedules must permit full involvement five days per week. Placements will ensure involvement with students in elementary and secondary grades. Every semester. Prerequisites: Education 413, 414, 461; admission to teacher education program; notification of intent to student teach according to School of Educational Leadership guidelines. May not be used for graduate credit.

453 Speech Disabilities and Language Development (3)
Basic recognition and understanding of language development and speech disabilities. Prerequisite: admission to teacher education program.

461 Individualized Instructional Design and Clinical Teaching (3)
Examination and implementation of the principles of clinical teaching and the individualization of instruction. Includes the use of formal and informal assessment results in planning education strategy. Field component required.

480 Teaching Media (3)
The selection, use, and evaluation of technological innovations in audiovisual media, emphasis on laboratory experiences in communication media. On demand.

481 Educational Tests and Measurements (3)
Measurement of human abilities and instructional outcomes, survey of elementary statistical concepts, construction of valid and reliable tests and evaluative instruments. On demand.

482 Teaching Social Science Through Science Fiction (3)
Explores uses of science fiction in teaching social issues and the future. Emphasis on creativity and integration with traditional content. On demand.

483 Teaching Internship (9)
For the temporarily certified employed teacher. Provides close supervision in planning, implementation, and evaluation. Tailored to fit specific school setting. On demand. Prerequisite: one year full-time teaching in certifiable area, approval of College of Education and Applied Professional Studies dean. May not be used for graduate credit.

490 Workshop and Seminar (2-4)
Special problems and discussion of current topics in education. On demand. Prerequisite: senior or graduate standing.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand. Prerequisite: approval of department head.

498r Individual Studies (1-4)
On demand. Prerequisite: approval of department head.

499r Group Studies (1-4)
On demand. Prerequisite: approval of department head.

EDUCATIONAL PSYCHOLOGY

400 Survey of Exceptional Learners Educational Psychology (3)
An overview of exceptional children and youth and the philosophy of inclusion. Emphasis on individual differences among students with particular attention to students with special needs. The interrelated roles of regular and special education teachers and related professionals in adapting instruction to meet special needs will be addressed. Prerequisite: none; credit not allowed in both EDUC 250 and EPSY 400.

Exercise Science, Health, and Leisure Studies (EHLS)

Professor R. Norred, Head

EHLS is a department within the College of Education and Applied Professional Studies committed to the development and maintenance of active, creative, health-promoting lifestyles and enhancement of skilled and aesthetic performance for both the professional and the consumer. The EHLS department encompasses three disciplines pertaining to the enhancement of the "Quality of Life": exercise science, health promotion, and leisure studies. Seven (7) distinct academic career program tracks and two (2) minor courses of study are offered:

Career Program Tracks:
1. Community Health Education
2. Exercise Science: Fitness/Wellness Specialist
3. Exercise Science: Cardiopulmonary Rehabilitation
4. Exercise Science: K-12
5. Health Promotion: K-12
6. Leisure Studies
7. Sports Administration

Minor Courses of Study:
1. Athletic Coaching
2. Recreation

In addition, EHLS offers a diversified service program of physical lifetime activities primarily for the undergraduate student. Activity courses from this program may be used to fulfill the University requirement of 2 semester hours.
Furthermore, EHLS provides an exemplary intramural and club sports program as well as a variety of leisure services activities for the University community.

Exercise Science, Health, and Leisure Studies (B.S.): Exercise Science: Cardiopulmonary Rehabilitation concentration

The concentration in cardiopulmonary rehabilitation is designed for individuals interested in professional preparation in exercise testing, exercise prescription, and program administration for individuals with cardiac and/or pulmonary disease. Students completing this concentration will be prepared for the American College of Sports Medicine (ACSM) certification examinations including Exercise Test Technologist and Exercise Specialist. Additionally, graduates of this program may seek entry into graduate study.

Internship Admittance

The internship practicums in exercise science are scheduled during the final semester of the senior year. Normally, a student may not gain official approval for enrollment in either internship EHLS 479 or 480 prior to completing all coursework within the concentration. Approval of the program leader and EHLS department head is required. Current first aid/CPR certification and liability insurance are required prior to registration.

Students will be required to purchase uniforms/lab attire for their internship placement. Students must be financially prepared for travel and living expenses outside the Chattanooga area.

Internship placement is competitive and dependent on previous class and clinical work and internship site coordinator interviews. If in the judgement of the faculty there is reason to question the emotional or cognitive readiness of the student to successfully complete an internship, the faculty has the right and obligation to exclude the student from the internship.

General Education (see pages 22-23 for list of approved courses)
Category A: two approved courses in written communication in the English language (6 hours)
Category B: three approved courses: one from fine arts, one from humanities, and one from either fine arts or humanities (9 hours)
Category C: Psychology C101 and one additional approved behavioral science course (6 hours)
Category D: Chemistry D121 (4 hours)
Category F: one approved mathematics course (3 hours)
Category G: one approved perspectives course (3 hours)
Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

Typical course of study in exercise science, health, and leisure studies (B.S.): exercise science cardiopulmonary rehabilitation concentration

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<td>EHLS 314 2</td>
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<td>EHLS 456</td>
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<tr>
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*First aid, CPR certification, and professional liability insurance required prior to registration.

Exercise Science, Health, and Leisure Studies (B.S.): Fitness/Wellness Specialist Concentration

This concentration is designed for any person interested in professional preparation in exercise leadership, exercise prescription, and program administration for preventive and wellness programs in community, corporate, or hospital settings. The program of study will serve as preparation for the American College of Sports Medicine (ACSM) certification examinations including Exercise Leader and Health Fitness Instructor. In addition, graduates of this concentration may seek entry into graduate studies.

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Recommended electives: Exercise Science 100, Physics 103, Chemistry 350, 351
2.0 average required in EHLS courses
2.0 average overall for graduation
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
The internship practicums in exercise science are scheduled during the final semester of the senior year. Normally, a student must be financially prepared for travel and living expenses outside the Chattanooga area.

Internship placement is competitive and dependent on previous class and clinical work and internship site coordinator interviews. If in the judgement of the faculty there is reason to question the emotional or cognitive readiness of the student to successfully complete an internship, the faculty has the right and obligation to exclude the student from the internship.

**General Education** (see pages 22-23 for list of approved courses)

- **Category A:** two approved courses in written communication in the English language (6 hours)
- **Category B:** three approved courses: one from fine arts, one from humanities, and one from either fine arts or humanities (9 hours)
- **Category C:** Psychology C101 and one additional approved behavioral science course (6 hours)
- **Category D:** Chemistry D121 (4 hours)
- **Category F:** one approved mathematics course (3 hours)
- **Category G:** one approved perspectives course (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and related courses**

- **Human Ecology 135**
- **Chemistry 122 or 168**
- **Biology 191, 208, 209**
- **Computer Science 102 or 110**
- **2 courses from HECO 332, 335, 336, BMGT 315**
- **54 hours including Exercise Science, Health, and Leisure Studies 154, 201, 209, 300, 301, 316, 317, 318, 332, 340, 401, 407, 417, 418, 419, 453, 456, 479, 480**
- **Recommended electives: BACC 201, 202, EHLS 100**
- **2.0 average required in EHLS courses**
- **2.0 average overall for graduation**
- **Minimum of 30 hours of 300 and 400 level courses**
- **Electives to complete 128 hours**

**Typical course of study in exercise science, health, and leisure studies (B.S.): exercise science activity**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Category A</td>
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<tr>
<td>General Education Category B</td>
<td>3</td>
</tr>
<tr>
<td>Psychology C101</td>
<td>3</td>
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<tr>
<td>Chemistry D121</td>
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<td>EHLS 154</td>
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<td>EHLS 021</td>
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**Sophomore**

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<tbody>
<tr>
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<tr>
<td>Biology 191 or 208/209</td>
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<tr>
<td>HECO 135</td>
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<tr>
<td>EHLS 201</td>
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<td>CPSC102or110</td>
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**Junior**

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<tr>
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<td>EHLS 332</td>
<td>3</td>
</tr>
<tr>
<td>EHLS 401</td>
<td>3</td>
</tr>
<tr>
<td>EHLS 407</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>2</td>
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</table>

**Senior**

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<tr>
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<tbody>
<tr>
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<td>EHLS 417</td>
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<td>EHLS 453</td>
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<td>EHLS 456</td>
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<td>Elective</td>
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<tr>
<td><strong>Total</strong></td>
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</tr>
</tbody>
</table>

*CPR certification, first aid, and liability insurance required prior to registration for internships

**TOTAL HOURS 128**

**Exercise Science, Health, and Leisure Studies (B.S.): Community Health Education concentration**

**General Education** (see pages 22-23 for list of approved courses)

- **Category A:** two approved courses in written communication in the English language (6 hours)
- **Category B:** three approved courses: one from fine arts, one from humanities, and one from either fine arts or humanities (9 hours)
- **Category C:** Psychology C101 and Human Ecology C340 (6 hours)
- **Category D:** Chemistry D121 (4 hours)
- **Category F:** one approved mathematics course (3 hours)
- **Category G:** one approved perspectives course (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and related courses**

- **2 courses from CPSC 102, ECON 102, BACC 201, BMKT 313;**
- **2 courses from Biol 191, 208, 209, Chem122, ESC 410**
- **2 course from SocW 150, 450, Psy 221 or 222, HSRV 405**
- **EHLS 201, 275, 303, 479, 480**
- **27 hours from EHLS 100, 154, 302, 317, 401, 450, 451, 452, 453, 456, HECO 135**
- **(Up to 12 hours of clinical/specialty hours may be transferred in toward these hours)**
- **2.5 average in EHLS component of major courses**
- **Electives to complete 128 hours**

**Typical course of study in exercise science, health, and leisure studies (B.S.): community health education concentration**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>General Education Category A</td>
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<tr>
<td>General Education Category B</td>
<td>3</td>
</tr>
<tr>
<td>Biology 191 or 208/209</td>
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<tr>
<td>HECO 135</td>
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<tr>
<td>EHLS 201</td>
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<tr>
<td>CPSC 102or110</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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**Second Semester**

<table>
<thead>
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<th>Course</th>
<th>Credits</th>
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<tbody>
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<tr>
<td>General Education Category B</td>
<td>3</td>
</tr>
<tr>
<td>Biology 208/209 or 191</td>
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<tr>
<td>Elective</td>
<td>6</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</tbody>
</table>

**Typical course of study in exercise science, health, and leisure studies (B.S.): community health education concentration**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>General Education Category A</td>
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</tr>
<tr>
<td>General Education Category B</td>
<td>3</td>
</tr>
<tr>
<td>Biology 191 or 208/209</td>
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</tr>
<tr>
<td>HECO 135</td>
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<tr>
<td>EHLS 201</td>
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<tr>
<td>CPSC 102or110</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>General Education Category B</td>
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<td>Biology 208/209 or 191</td>
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<td>Elective</td>
<td>6</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
Typical course of study in exercise science, health, and leisure studies (B.S.)

### Exercise Science, Health, and Leisure Studies—119

Exercise Science, Health, and Leisure Studies (B.S.): Exercise Science K-12 concentration

This career program prepares students who desire teacher licensure/certification and endorsement in physical education instruction (K-12). Since graduates of this program can be certified to coach, a partial segment of the concentration is devoted to content and laboratory courses designed to ensure necessary skills for both teaching and coaching. Graduates of this concentration may seek entry into graduate studies.

**General Education** (see pages 22-23 for list of approved courses)

- Category A: two approved courses in written communication in the English language (6 hours)
- Category B: Philosophy B201, one course from fine arts, and one from either Humanities or fine arts (3 hours each, total 9 hours)
- Category C: Human Ecology C340 and Psychology C101
- Category D: Chemistry D121 (4 hours)
- Category F: Mathematics F120 (3 hours)
- Category G: one approved perspectives course (3 hours)

**Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity**

### Major and Related Courses

- Computer Science 102 or 110
- Human Ecology 135
- Theatre and Speech 109
- Biology 191, 208, 209
- Psychology 221

39 hours in Exercise Science, Health, and Leisure Studies including 100, 154, 201, 317, 318, 332, 340, 404, 407, 456, and minimum of 10 hours in professional activities as follows:

- 4 hours from EHLS 203, 204, 205
- 2 hours from EHLS 206, 207
- 6 hours from EHLS 208, 209, 210

31 hours from the College of Education and Applied Professional Studies including Education 201, 433, 444; Exercise Science, Health, and Leisure Studies 330, 401, 431, 436

For graduation: 2.5 average in EHLS courses and 2.0 average in College of Education and Applied Professional Studies courses.

For licensure: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in Education courses with no grade less than C in the latter

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

*In addition to the above requirements, students must be admitted to the Teacher Education Program before registering for advanced Education courses. See page 103.

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Exercise Science, Health, and Leisure Studies (B.S.): Health Promotion K-12 concentration

This career program prepares students who desire teacher licensure/certification and/or endorsement in health education instruction (K-12). Graduates of this concentration may seek entry into advanced graduate studies.

**General Education** (see pages 22-23 for list of approved courses)

- Category A: two approved courses in written communication in the English language (6 hours)
- Category B: Philosophy B201, one course from fine arts, and one from either Humanities or fine arts (3 hours each, total 9 hours)
- Category C: Human Ecology C340 and Psychology C101 (6 hours)
- Category D: Chemistry D121 (4 hours)
- Category F: Mathematics F120 (3 hours)
- Category G: one approved perspectives course (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

### Major and Related Courses

- Computer Science 102 or 110
- Human Ecology 135
- Theatre and Speech 109
- Biology 191, 208, 209
- Psychology 221 or 222

39 hours including Human Ecology 135, 328; Exercise Science, Health, and Leisure Studies 100, 154, 201, 303, 317, 436, 450, 451, 452, 453, 456 and electives selected in consultation with the advisor.
31 hours from the College of Education and Applied Professional Studies including Education 201, 321, 433, 444; Exercise Science, Health, and Leisure Studies 302, 401, 431

For graduation: 2.5 average in Exercise Science, Health, and Leisure Studies and Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

• In addition to the above requirements students must be admitted to the Teacher Education Program before registering for advanced Education courses. See page 103.

Typical course of study in exercise science, health, and leisure studies (B.S.): health promotion K-12 concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
<th>Total</th>
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<tbody>
<tr>
<td>Category A</td>
<td>Category A</td>
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</tr>
<tr>
<td>Category B</td>
<td>Category B</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry D121</td>
<td>Computer Science 102 or 110</td>
<td>4</td>
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<td>EHLS 021</td>
<td>EHLS 022 Activity</td>
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<tr>
<td>EHLS 100</td>
<td>EHLS 154</td>
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<tr>
<td>Elective</td>
<td>Human Ecology 135</td>
<td>3</td>
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<tr>
<td>Total</td>
<td></td>
<td>17</td>
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</tbody>
</table>

SOHOMORE
| Category G                         | Theatre and Speech 109               | 3        |
| Philosophy B201                    | Psychology C101                      | 3        |
| EHLS 302                           | Psychology 221 or 222                | 3        |
| Education 201                      | Biology 191                          | 4        |
| EHLS 201                           | Mathematics F120                     | 3        |
| Total                              |                                      | 15       |

JUNIOR
| Human Ecology C340                 | Human Ecology 328                    | 3        |
| EHLS 317                           | EHLS 450                             | 3        |
| EHLS 451                           | EHLS 452                             | 3        |
| Education 321                      | Biology 208, 209                     | 4        |
| EHLS Elective                      | EHLS 303                             | 3        |
| EHLS                               | Elective (Liberal Studies)           | 2        |
| Total                              |                                      | 18       |

SENIOR
| EHLS 401                           | Education 444r                       | 12       |
| EHLS 436                           |                                      | 3        |
| EHLS 453                           |                                      | 3        |
| EHLS 431                           |                                      | 3        |
| Education 433                       |                                      | 4        |
| Total                              |                                      | 16       |

TOTAL HOURS 128

Admission to the Teacher Education Program (TEP) for Exercise Science K-12 and Health Promotion K-12

In addition to meeting criteria for admittance to the TEP, a student desiring certification in exercise science pedagogy K-12 teacher licensure or health promotion pedagogy K-12 teacher licensure will be expected to meet the following criteria:

1. Have a minimum grade point average of 2.5 in professional exercise science, health, and leisure studies course work;
2. Successfully complete an interview with his/her TEP department committee.

Students enrolled within the teacher licensure concentrations of exercise science or health promotion are expected to maintain and demonstrate standards of ethics reasonably attributed to an educator who holds professional teacher certification.

Further, students who plan to teach outside the state of Tennessee are strongly urged to check the certification requirements of the state with the appropriate state department of education before the end of the sophomore year in order to plan her/his program appropriately.

Exercise Science, Health, and Leisure Studies (B.S.): Leisure Studies concentration

The leisure studies program is a uniquely structured track for the student with career ambitions for being employed by or serving voluntarily with an agency, public or private, the functions of which include the provision of leisure studies and activities. The focus of the major courses in the leisure studies program is directed toward die practical applications of theories and strategies learned in professional leisure studies courses.

To reinforce this intent, a student specializing in leisure studies is expected to engage in several different types of field assignments and experiences.

Internship Admittance

The internship practicums in leisure studies are usually scheduled during the senior year. Normally, a student may not gain official approval for enrollment in either internship EHLS 479 or 480 prior to completing at least 12 semester hours of course work within EHLS at UTC. Approval of program leader and EHLS department head is required.

General Education (see pages 22-23 for list of approved courses)

Category A: two approved courses in written communication in the English language (6 hours)

Category B: three approved courses: one from humanities, one from fine arts, and one from either (3 hours each, total 9 hours)

Category C: Economics C102 and Political Science C101 (3 hours each, total 6 hours)

Category D: Environmental Science D150 (4 hours)

Category F: one approved course in mathematics (3 hours)

Category G: Human Services G300 (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

Computer Science 102
Political Science 233
Sociology 305
Theatre and Speech 109

61 hours of Exercise Science, Health, and Leisure Studies including:

31 hours leisure studies component to include: Exercise Science, Health, and Leisure Studies 200, 202, 220, 304, 305, 325, 470, 479, 480; and
12 hours health component to include: Exercise Science, Health, and Leisure Studies 100, 154, 303, 453; and
18 hours exercise science component to include: Exercise Science, Health, and Leisure Studies 405, 421, 12 hours of professional activity courses 2.0 average in leisure studies component of major courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Typical course of study in exercise science, health, and leisure studies (B.S.): leisure studies concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
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<tr>
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<td>Category B</td>
<td>Category B</td>
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<tr>
<td>Economics C102</td>
<td>Political Science C101</td>
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<tr>
<td>EHL100</td>
<td>Environmental Science D150</td>
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<td>Elective</td>
<td>EHL154</td>
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<td>EHLS 021</td>
<td>EHLS 022 Activity</td>
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<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>16</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**SOPHOMORE**

| Category B     | Category A                  |
| Category F     | Political Science 233       |
| Computer Science 102 | EHL1 Prof. Activity (Team Sport)2 |
| Theatre and Speech 109 | EHLs 304         |
| EHLS 200       | EHLS Prof. Activity       |
| EHLS 202       | (Lifeline Sport)   |
|                | Human Services G300 |
|                | EHL 210            |
| **Total**      | **Total**          |
| **17**         | **17**             |

**JUNIOR**

| Sociology 305 | EHL 325 |
| EHLS 305      | EHL 303 |
| EHLS 208      | Elective |
| EHLS 209      | Elective |
| Electives     | Elective (Team Sport) |
| **Total**     | **16**   |
| **16**        | **17**   |

**SENIOR**

| EHLS 407      | EHL 405 |
| EHLS 453      | EHL 470 |
| EHLS 479      | EHL 480 |
| Elective      | EHL 022 Activity |
| **Total**     | **15**   |
| **Total**     | **15**   |

**TOTAL HOURS 128**

Exercise Science, Health, and Leisure Studies (B.S.): Sports Administration concentration

Sports Administration concentration contains foundation courses in exercise science and leisure studies as well as a business component which includes core courses selected from communications, management, marketing, economics, law, accounting, and computer science.

Sport-specific components and skills related to management and administration of sport are offered within this concentration. The concentration is designed to prepare students for careers in both the public and private sectors as well as graduate studies.

Internship Admittance

The internship practicums in Sports Administration are usually scheduled during the senior year. Normally, a student may not gain official approval for enrollment in either internship EHL 479 or 480 prior to completing at least 12 semester hours of course work within EHLS at UTC. Approval of program leader and EHLS department head is required.

Exercise Science, Health, and Leisure Studies— 121

General Education (see pages 22-23 for list of approved courses)

Category A: two approved courses in written communication in the English language (6 hours)

Category B: three approved courses: one from humanities, one from fine arts, and one from either (3 hours each, total 9 hours)

Category C: Economics C101, C102 (6 hours)

Category D: one approved physical or natural science course widi laboratory (4 hours)

Category F: one approved mathematics course (3 hours)

Category G: Human Services G300 (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity (2 hours)

Major and Related Courses

33 hours related courses to include: Computer Science 102; Communication 101 and 271; Theatre and Speech 109; Accounting 201, 202, and either 335 or 336; Marketing 313; Management 315 plus 6 hours from Management 103, 310, 332, 410

42 hours Exercise Science, Health, and Leisure Studies to include: EHLS 100, 154, 200, 304, 325, 401, 405, 407, 470, 479, 480

2.0 average in EHLS component of major courses ...

Minimum of 30 hours of 300 and 400 level courses

Electives to be selected by student and assigned academic adviser to complete 128 hours

Course of study in exercise science, health, and leisure studies (B.S.): sports administration concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>Category A</td>
<td>Category A</td>
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<tr>
<td>Category B</td>
<td>Category B</td>
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<tr>
<td>Economics C102</td>
<td>Economics C101</td>
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<tr>
<td>EHL100</td>
<td>EHL 021</td>
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<tr>
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<td>EHL 022 Activity</td>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>16</strong></td>
<td><strong>17</strong></td>
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</tbody>
</table>

**SOPHOMORE**

| Category B     | Communication 101 |
| Category F     | Accounting 202    |
| Computer Science 102 | Human Services G300 |
| Theatre and Speech 109 | Management        |
| Accounting 201 | EHL 304           |
| EHLS 200      | EHL 325           |
| **Total**     | **Total**         |
| **17**        | **17**            |

**JUNIOR**

| Marketing 313 | Management Elective |
| Communication 271 | EHL 401           |
| Accounting 335 or 336 | EHL 479         |
| EHLS 407      | Electives          |
| Electives     |                   |
| **Total**     | **Total**          |
| **17**        | **17**             |

**SENIOR**

| EHLS 401      | EHLS 479           |
| EHLS 453      | EHLS 480           |
| Management Elective | Approved Electives |
| Electives     |                   |
| **Total**     | **Total**          |
| **15**        | **14**             |

**TOTAL HOURS 128**
EHLS MINORS:
Athletics Coaching
This program is designed to address mental skills, strategies, and concepts of coaching from the allied fields of physiology, psychology, sociology, kinesiology, and management for individuals planning careers in coaching with majors other than EHLS.
21-22 hours including: 3-4 hours from Biology 191 or EHLS 201 or EHLS 317; EHLS 209,340,405,407,479; two courses from EHLS 203,204,205 or from 206,207,208 or one from 203, 204, 205 and one from 206, 207, 208
Minimum 2.0 average in the minor

Recreation
Total of 24 hours including: 6 hours of health to include EHLS 100, 154; 6 hours in three courses from EHLS 202, 220, 224, 228, 235, 237; 12 hours in four courses from EHLS 200, 304,305,325,470
Minimum 2.0 average in the minor.

EHLS: EXERCISE SCIENCE COURSES

199r Special Projects (1-4)
Individual or group projects. Every semester. Maximum credit 4 hours. Prerequisite: approval of EHLS department head.

201 Introduction to Exercise Science, Health and Sport (3)
Overview and summary of the fields of exercise science and sport activity based upon historical, social, psychological, physiological forces as they affect the individual and society; philosophy and principles of profession. Spring and fall semester.

224 Movement Education (2)
Skill development and teaching procedures in movement education; fundamental and contemporary movement patterns. Every semester.

300 Field/Clinical Experience 1(1)
An introduction to the methods, skills and procedures used in evaluating and prescribing exercise programs. Every semester. Prerequisite: EHLS 316, 317. CPR certification. Restricted to EHLS majors.

301 Field/Clinical Experience II (1)
Designed to provide the student with an opportunity to practice, apply and master additional skills presented in course work. Experiences will include evaluations, documentation and interpretation of results of exercise testing and program development. Every semester. Prerequisite: EHLS 300,316,317; corequisite EHLS 417 or permission of instructor.

314 Interpretation of EKG I (2)
An introduction to electrocardiography and the interpretation of normal and abnormal cardiac rhythms. Fall semester. Pre or Co-requisite: EHLS 317 or permission of instructor.

315 Interpretation of EKG II (2)
Further study of EKG interpretation including myocardial infarctions, stress testing and other diagnostic aids. Spring semester. Prerequisite: EHLS 314; Co-requisite: EHLS 418.

316 Laboratory Methods and Procedures in Exercise Science (1)
The study of physiological functions of the human body during exercise. Fall and spring semester. Pre- or Corequisite: EHLS 317 or equivalent.

317 Foundations of Exercise Physiology (3)
Intensive study of various physiologic processes related to exercise. Fall and spring semester. Prerequisites: Chemistry 121; Biology 208, 209; or approval of instructor.

318 Kinesiology (3)
Study of human motion; analysis of human motion as affected by gross anatomy and principles of motor learning. Spring semester. Prerequisites: Biology 190 or approval of instructor.

320 Physical Education in the Elementary School (3)
Practical aspects of planning, organizing, administering, and evaluating program activities, theories of play, principles of movement as they correspond to levels of growth and development of elementary children; teaching methods and materials in elementary physical education. Required for Multidisciplinary School Learning majors. Every semester.

332 Management in Exercise Science and Leisure Sports (3)
Basic overview and survey of management concepts and guidelines associated with exercise science and leisure sport; decision making, leadership training, effective communication, planning, organizing, controlling, time management, budget, and finance. Fall semester. Prerequisite: EHLS 201 or approval of instructor.

335 Officiating Sports (1)
Rules, interpretations, fundamentals, techniques, and mechanics of officiating seasonal sports. On demand. Prerequisite: EHLS major or approval of instructor.

340 Care and Prevention of Athletic Injuries (3)
Analysis of common athletic injuries; emphasis on practical aspects within theoretical framework; laboratory experiences. Spring semester. Prerequisite: Biology 191 or approval of instructor.

400 Current Topics and Problems in Exercise Science and Sports (3)
Investigation and exploration of selected topics and problems in exercise science and leisure sports significant for pedagogy, management, coaching in both schools and agencies providing sport and leisure services. Summer. Prerequisites: senior level and approval of instructor or graduate standing.

401 Measurement and Evaluation in Exercise Science and Leisure Sports (3)
Introduction to basic statistics, measurement, evaluation, tests of neuromuscular ability, muscular strength and endurance, balance, flexibility, motor ability, health related fitness; grading, constructing knowledge tests, measurement of human ability, and instructional outcomes. Fall semester. Prerequisites: Equivalent of EHLS 201, 332; Mathematics F120; senior level or approval of instructor; or graduate standing.

402 Philosophical Foundations of Exercise Science and Sports (3)
Identification and implication of prominent philosophical schools of thought as they impact professional decision making in exercise science and sports; emphasis upon development of a philosophical process, logical thinking, values clarification, and moral implications. On demand. Senior level or graduate standing.

404 Motor Learning in Exercise Science and Leisure Sports (3)
Conceptual understanding of the principles of performance of motor skills to include information processing and the functional properties of the motor system. On demand. Prerequisite: EHLS 317 or approval of instructor.

405 Management of Athletics and Leisure Sports (3)
Management principles, information retrieval and processing, sport law, public relations, personnel direction, faculty development, financial administration as they relate to sports, athletics, and leisure services. Spring semester. Prerequisites: EHLS 304 or 352; approval of instructor; or graduate standing.

407 Sociology/Psychology of Exercise Science and Leisure Sports (3)
Emphasis upon exercise science and leisure sports as a socio-cultural psycho-cultural force; psychological and sociological concepts applied to human performance in exercise and sports. Prerequisite: senior level or graduate standing.

408 Seminar, Current Advances in Bio-Kinetics (3)
Current advances in kinesiology and physiologic principles of exercise science, athletic coaching, and sports. Ondemand. Prerequisites: equivalent of EHLS 317 or 318; approval of instructor; or graduate standing.

417 Advanced Exercise Physiology (3)
This course details the function of organ systems emphasizing mechanisms of control and regulation during exercise. Fall semester. Prerequisites: Biology 208, 209; Chemistry 122; EHLS 317; and approval of instructor.

418 Exercise Prescription in Health and Disease (3)
This course presents a comprehensive overview of the physical, physiological, and metabolic responses of the human body to exercise testing and training in both health and disease; the processes involved in prescribing safe and effective therapeutic exercise for healthy individuals as well as for patients with heart and lung disease, diabetes, and obesity will be discussed. Spring semester. Prerequisites: EHLS 417 and approval of instructor.
419 Exercise Prescription Lab (1)
Methods and procedures utilized in exercise testing, exercise prescription and education for healthy individuals and individuals with cardiac, pulmonary or metabolic disease. Spring semester. Co-requisite: EHLS 300 and 418.

420 Cardiopulmonary Rehabilitation (3)
This course details the functions of the cardiovascular and respiratory systems emphasizing pathophysiology and treatment. Special reference will be made to exercise as a mode of therapy. Spring semester. Co-requisite: EHLS 315 and 419.

436 Exercise Science and Health Promotion for the Developmentally Challenged (3)
Lecture, demonstration, and practical experiences in the study of exercise, health, and leisure sports and their implications for the developmentally challenged; emphasis on methods and techniques for teachers, coaches, and exercise leaders in meeting the legal, ethical, and moral obligations of the developmentally challenged. Prerequisites: EHLS 302 or equivalent and junior level; or graduate standing.

479, 480 Internship in Exercise Science and Leisure Sports (6.6)
Supervised internship in leadership and administrative positions; full time contact, minimum eight weeks, concurrent integrative seminars. Every semester. Prerequisite: approval of program leader and EHLS department head.

490r Workshop and Seminar (2-4)
Special problems; in-service education for specific groups; research in professional literature and evaluation measures to topics studied. On demand.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See 'Departmental Honors', page 27.

497r Research (1-4)
Every semester. Prerequisite: Approval of EHLS department head.

498r Individual Studies (1-4)
Every semester. Prerequisite: Approval of EHLS department head.

499r Group Studies (1-4)
Every semester. Prerequisite: Approval of EHLS department head.

EHLS: PROFESSIONAL ACTIVITIES COURSES

The professional activities component consists of those courses which by nature are exercise science/coaching techniques. Courses of this type are designed primarily for the student planning to become a teacher-coach or recreation leader. A student scheduling a course within this component may expect the final grade to reflect his or her achievement in cognitive acquisitions, affective learnings, and psychomotor skills. Minimal competency levels may be established according to the professional discretion of the respective instructor, and each student will be responsible for demonstrating at least these minimal standards before receiving a passing mark.

203 Team Sports I - Football and Wrestling (2)
History, basic skills, game and match strategy, coaching techniques of football and wrestling. Spring semester.

204 Team Sports II - Baseball, Softball, and Volleyball (2)
History; analytical approach to fundamental concepts, basic skills, game strategy, coaching techniques and psychology; investigation of contemporary systems of offensive and defensive theories. Fall semester.

205 Team Sports III - Soccer and Basketball (2)
History; analytical approach to fundamental concepts, basic skills, game strategy, coaching techniques and psychology; investigation of contemporary systems of offensive and defensive theories. Spring semester.

206 Lifetime Sports I - Racquet Sports: Tennis, Badminton, and Racquetball (2)
History, basic skills, strategy, contemporary teaching and coaching techniques, skill application for recreational and competitive usage appropriate to each sport. Spring semester.

207 Lifetime Sports II - Archery, Cycling, Golf (2)
History, basic skills, strategy, contemporary teaching and coaching techniques, skill application for recreational and competitive usage appropriate to each sport. Fall semester.

208 Stunts, Tumbling, Gymnastics, and Aquatics (2)
Acquisition of fundamental skill development, contemporary teaching and coaching competencies with emphasis on application for elementary, intermediate, and advanced neuromuscular development. Fall semester.

209 Physical Fitness: Weight Training/Conditioning, Aerobics, Track and Field (2)
History, basic skills, strategy, psychology, training systems basic to coaching and teaching with emphasis on progressive program from beginning through advanced neuromuscular applications of weight training, conditioning, track and field. Fall semester.

210 Movement Exploration and Rhythmic Sequences, Ballroom, Modern, Square Dance (2)
Folk and fundamental skill acquisition; teaching progressions for artistic execution and expression; elementary forms of productions with emphasis on lesson planning for classroom presentation of movement exploration and rhythmic sequences: Aerobic, Folk and Square Dance. Spring semester.

EHLS: HEALTH PROMOTION COURSES

100 Personal Health (3)
Significant data and facts helpful in making intelligent decisions about personal health; crucial issues of personal, family, and social living. Every semester.

154 Safety and First Aid (3)
Nature and causes of accidents; safety measures for prevention and emergency treatment of common accidents; Red Cross certification may be given in advanced first aid and CPR. Every semester.

199r Special Projects (1-4)
Individual or group projects. Every semester. Maximum credit 4 hours. Prerequisite: approval of EHLS department head.

275 Directed Field Experience in Community Health (3)
Supervised leadership in a community health setting. Prerequisite: EHLS 201.

302 School Health Program (3)
Investigation of the role of the teacher in planning and implementing a comprehensive school health program. Every semester. Prerequisite: Teaching candidate or approval of instructor.

303 Community and Environmental Health (3)
Interrelationship studies involving home, public health, non-official organizations/ agencies for improved public health and health care delivery. Spring semester.

320 Environmental Health (3)
Major ecological problems relative to individuals, schools, and communities with emphasis upon the teaching-learning process. On demand.

431 Teaching Strategies and Materials in Exercise Science and Health (3)
Curricular and media developments appropriate for the respective discipline. Fall semester. Prerequisites: EHLS senior, Teaching candidate.

450 Safety and Consumer Health Education (3)
Investigation into epidemiologic aspects of accidents; procedures for developing preventive programs; intelligent selection of health products, health services, health insurance plans, and health careers. Fall semester alternate years. Prerequisites: approval of instructor and senior or graduate standing.

451 Family Life Studies (3)
Extended study of problem issues related to family life and human sexuality; development of learning units for use in schools and community. Spring semester alternate years.

452 Problems in Health: Aging and Death Education (3)
Analysis of concepts and attitudes toward aging, death, bereavement, prevention and control of communicable and degenerative diseases. Spring semester. Prerequisites: EHLS 100, 302, 303, or equivalent; senior or graduate standing or approval of instructor.

453 Substance Use, Misuse, and Abuse (3)
Extended study of problems and issues related to use, misuse, and abuse of alcohol and other drugs; development of learning units for use in schools and community. Fall semester alternate years.
124 — Exercise Science, Health, and Leisure Studies

455 Methods and Strategies in Health Promotion (3)
Investigation of current curricula and teaching strategies employed in health education. Fall semester alternate years. Prerequisites: approval of instructor; senior or graduate standing.

456 Research Methods in Exercise Science and Health Promotion (3)
Study of health problems and current professional literature; review of new approaches in techniques and methodology used in health research. Spring and fall semester. Prerequisite: approval of instructor or EHLS senior or graduate standing.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors", page 27.

497r Research (1-4)
Every semester. Prerequisite: approval of EHLS department head.

498r Individual Studies (1-4)
Every semester. Prerequisite: approval of EHLS department head.

499r Group Studies (1-4)
Every semester. Prerequisite: approval of EHLS department head.

EHLS: LEISURE STUDIES COURSES

199r Special Projects (1-4)
Individual or group projects. Every semester. Maximum credit 4 hours. Prerequisite: approval of EHLS department head.

200 Introduction to Leisure Studies (3)
Comprehensive survey of recreational implications for the American way of life; philosophic and historic foundations, career opportunities, and responsibilities. Fall semester.

202 Camping and Outdoor Education (2)
Study of the professional camping field and how it relates to the concept of outdoor education. Fall semester.

220 Leisure Studies Skills (2)
Skills relating to a variety of recreational activities and programs. Spring semester.

227 Skill Concentration (2)
Proficiencies in sports skills essential for the professional physical educator and recreation leader. On demand. Class hours to be arranged. Prerequisite: for EHLS majors only.

304 Organization and Administration of Leisure Studies (3)
Survey of types of programs, their objectives, content and methods, facilities, budgeting, public relations, personnel management, and policy development. Spring semester.

305 Therapeutic Recreation (3)
Development of programs for physically or mentally ill or convalescent patients: handicapped, retarded, elderly, and other special populations groups. Fall semester.

325 Leadership and Programming in Leisure Studies (3)
Development of competencies needed for effective recreation leadership and recreation programming techniques for use in a variety of recreational settings. Spring semester.

470 Current Topics and Issues in Leisure Studies (3)
Survey of problems and concerns facing recreation leadership; management, facilities development, environmental impact, and special population groups. Spring semester. Prerequisite: above junior level.

479, 480 Internship in Exercise Science and Leisure Studies (6,6)
Supervised internship in leadership and administrative positions; full-time contact, minimum eight weeks, concurrent integrative seminars. Every semester. Prerequisites: approval of program leader and EHLS department head.

495r Departmental Honors (1-3” hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors", page 27.
Human Ecology

*Associate Professor J. Avery, Acting Head*

The Department of Human Ecology offers four concentrations:

—Merchandising
—Interior Design
—Food and Nutrition
—Child and Family Studies

Human Ecology is an integrative field of study which deals with people in their environments and the reciprocal relationships that humans have with their environments. It encompasses professional study in the areas of child and family studies (including early childhood education), food and nutrition, interior design, and merchandising.

**Human Ecology (B.S.): child and family studies concentration**

General Education (see pages 22-23 for list of approved courses)

Category A: two approved courses in written communication in the English language (6 hours)

Category B: Theatre and Speech Bl 15, History B204, and Music Bl 11 or B317 (9 hours)

Category C: Political Science C101 and Psychology C101 or C241 (6 hours)

Category D: Environmental Science D150

Category E: Anthropology G208

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and Related Courses**

ArtBl1lorBl301
Philosophy 201
English 228
Political Science 223

University Studies 111
Mathematics 116

Computer Science 102 or 110

Human Ecology core: 202, 208, C340, 402


Completion of one of the following options:

Option A: (Early Childhood teacher licensure: PreK-3) 33 hours including Education 201, 306, 320, 410, 411, 412, 414, 420, 440, ESPY 400

Option B: (Child and Family Studies) 27 hours including Human Ecology 304, 306, 332, 405; Education 101, 401; Management 332; Mathematics F210; Sociology 151

For graduation: 2.0 average overall, 2.0 average in College of Education and Applied Professional Studies courses

For licensure: 2.5 average overall, 2.5 average in major, and 2.5 average in Education courses with no grade less than C in the latter

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

**Typical course of study in human ecology (B.S.)**

**child and family studies (Early Childhood/PreK-3)**

(Option A)

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**Typical course of study in Human Ecology: (B. S.)**

**child and family services (Option B)**

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**TOTAL HOURS 128**
Human Ecology (B.S.): merchandising concentration

**General Education** (see pages 22-23 for list of approved courses)

- **Category A**: English A121, A122 (6 hours)
- **Category B**: three approved courses: one from humanities, one from fine arts, and one from either (9 hours; approved related courses below will apply)
- **Category C**: two approved behavioral or social science courses (6 hours; approved related courses below will apply)
- **Category D**: one approved physical or natural science course with laboratory (4 hours)
- **Category F**: one approved mathematics course (3 hours; approved related course below will apply)
- **Category G**: one approved perspectives course (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

**Major and Related Courses**

- Psychology C101
- Sociology C125
- Mathematics F210
- Computer Science 110
- Theatre and Speech 109
- Human Ecology Core: 202, 208, C340, 402
- Merchandising Core: Human Ecology 120, 210, 211, 310, 316, 416, 417, 419

Completion of one of the following options:

A. Apparel:
   - 18 hours in Human Ecology including 312, 313, 317, 318, 413, 415
   - 24 hours including Accounting 201; Economics C101, C102; Management 315; Marketing 313, 361, 364, 365
B. Textiles:
   - 15 hours in Human Ecology including 313, 318, 411, 412, 415
   - 23 hours including Accounting 201; Chemistry D121, 122; Economics C101, C102; Management 315; Marketing 313
C. Visual:
   - 30 hours in Human Ecology including 121, 220, 223, 225, 312, 317, 320, 321, 324, 412
   - 9 hours including Art 105, B214, 215

2.0 average in all Human Ecology courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

Typical course of study in Human Ecology (B.S.): merchandising

All merchandising students take a common core of courses their first year. During their second and subsequent years, variations occur depending on area of specialization. A typical course of study is listed below for merchandising major with common and specialization courses noted.
Human Ecology (B.S.): interior design concentration

The Interior Design program reserves the right to keep one example of the work of each student in each studio course. Sophomore year portfolio review is required for continuation.

General Education (see pages 22-23 for list of approved courses)
Category A: English A121, A122 (6 hours)
Category B: three approved courses: one from humanities, one from fine arts, and one from either (9 hours; approved related courses below will apply)
Category C: two approved behavioral or social science course (6 hours)
Category D: one approved physical or natural science course with laboratory (4 hours)
Category E: one approved physical or natural science course with laboratory (4 hours)
Category F: one approved mathematics course (3 hours)
Category G: one approved perspectives course (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

Major and Related Courses
Computer Science 110; Art B214, 215
Human Ecology Core:
- Human Ecology 202, 208, C340,402
- 59 hours from Human Ecology including 120,121,211,220,223, 225,320,321, 322,324,326,327,329,405,412,420,421,422,423,424
- 2.0 average in all Human Ecology courses
- Minimum of 30 hours of 300 and 400 level courses
- Electives to complete 128 hours

Typical course of study in Human Ecology (B.S.): interior design concentration

First Semester

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Senior

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<td>Human Ecology 405</td>
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**Total Hours:** 128

Human Ecology (B.S.): food and nutrition concentration

General Education (see pages 22-23 for list of approved courses)
Category A: English A121, A122 (6 hours)
Category B: three approved courses: one from humanities, one from fine arts, and one from either (9 hours; approved related courses below will apply)
Category C: two approved behavioral or social science courses (6 hours)
Category D: one approved physical or natural science course with laboratory (4 hours)
Category F: one approved physical or natural science course with laboratory (4 hours)
Category G: one approved perspectives course (3 hours)

Exercise Science, Health, and Leisure Studies 021 plus one additional semester exercise science activity

Major and Related Courses
Economics C101,C102
Chemistry 111 or D121
Computer Science 110
Mathematics F210
Political Science C101 or 244
Psychology C101
Sociology C151
Theatre and Speech 109

Human Ecology Core: 202, 208, C340,402
- 2* hours from Human Ecology including 135,236,237,330,332,334,335,336, 350,430,431,432,434,436 and one of the following options:
  a. 15 hours from Biology 191, 208, 209, 210; Chemistry D121,122,351, 352, 466
  or
  b. 15 hours from Accounting 201,335, 336; Management 315,332; Marketing 313

Typical course of study in Human Ecology (B.S.): food and nutrition

First Semester

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Second Semester

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Junior

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Senior

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128 — Human Ecology

SENIOR

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TOTAL HOURS 128

HUMAN ECOLOGY MINOR

Food and Nutrition: 18 hours including HECO 135, 236, 335, 434 and 6 hours selected from HECO 237, 330, 332, 334, 336, 436

Minimum of 8 hours at the 300-400 level

Minimum 2.0 average in the minor

HUMAN ECOLOGY COURSES

120 Design Fundamentals (3)
A study of design as related to the individual and his or her environment; review of the basic theories regarding principles and elements of design with emphasis on using design to solve utilitarian as well as aesthetic problems. Every semester.

Lecture 1 hour, Studio 4 hours. (Formerly Human Ecology 101)

121 Architectural Drafting (3)
A basic architectural drafting course, including the study of symbols and drafting techniques necessary to the understanding and drawing of architectural plans. Spring semester. Studio 6 hours. Prerequisite: Human Ecology 120.

135 Nutrition (3)
An introduction to nutrition with an integrated emphasis on the scientific, psychological, sociological, and economic aspects of nutrition; impact of optimal nutrition on human development; application of knowledge to the home and school situation. Every semester. (Formerly Human Ecology 105)

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

202 Orientation to the Human Ecology Profession (1)
Introduction to human ecology as an area of study focusing on basic concepts that form the foundation of the discipline; history, philosophy, and career options in human ecology. Every semester.

205 Family Relations: Preparation for Marriage (3)
A functional approach to understanding cultural and social influences on dating, love, mate selection, sex, and early marriage in America. Every semester.

208 Human Environments (3)
Presentation of ecosystem model and its application to the enhancement of individual and family well being; examination of the biosocial nature of human beings, the nature of human environments, and the relationship between people and their environments. Every semester.

210 Introduction to Merchandising (3)
An introduction to the fashion industry from concept to consumer, including psychological/sociological influences upon consumer decision making; course examines trends, cycles, consumer groups, distribution of fashion goods with emphasis on trade issues; analysis of marketing and merchandising activities of all levels of fashion industry. Fall semester. (Formerly Human Ecology 311)

211 Consumer Textiles (3)
Modern fibers, yarns, fabrics, and finishes for apparel and home furnishings; trade practices and consumer problems. Spring semester and summer. Lecture 2 hours, lab 2 hours. (Formerly Human Ecology 201)

220 Interior Space Design (3)
The study of space planning utilizing the application of techniques for analyzing floor plans through the use of symbols and terminology common to the practice of interior design. Spring semester. Studio 6 hours. Prerequisite: Human Ecology 121.

III Color Systems (3)
Experimentation in color systems and their use in interior design; analysis of psychological impact of color systems on people; correlation of color scheme to total room design; development of skills for various media and tools used in color planning. Fall semester. Lecture 1 hour, lab 4 hours. Prerequisite: Human Ecology 120.

223 Fundamentals of Visual Presentation (3)
An introduction to basic skills, materials, and techniques employed in the visual and verbal presentation of interior design concepts. Fall semester. Studio 6 hours. Prerequisite: Human Ecology 121. Corequisite: Human Ecology 220.

225 Elements of Interior Design (3)
A study of components basic to the art of interior design: wall treatments, window treatments, floor coverings, fabric selections, furniture selections. Spring semester. Prerequisites: Human Ecology 120, 220, 223. (Formerly Human Ecology 315)

236 Food Science (3)
Basic scientific concepts related to the selection, care, and preparation of foods; emphasis on chemical and physical properties and their interaction with environmental variables. Fall semester. Lecture 2 hours, lab 2 hours. Prerequisite: Human Ecology 135. (Formerly Human Ecology 206)

237 Food Management and Marketing (3)
Nature of the American food market, marketing procedures, resource management, regulations in the food industry; socioeconomic, cultural, and psychological influences in food nutrition behaviors; marketing nutrition education. Spring semester alternate years.

241 Child Development and Observation (3)
Growth and development of children from birth to adolescence; instruction in observation skills and directed participation in observational activities. Every semester. Lecture 2 hours, lab 2 hours. (Formerly Human Ecology 301)

304 Management for Effective Living (3)
The management process as applied to the home and personal environment; use and development of human and material resources in relation to values and goals; emphasis on time management, money management, and financial security. Every semester.

306 Housing (3)
Contemporary trends in housing; emphasis on life styles. Fall semester.

310 Socio-Psychological Aspects of Textiles and Apparel (3)
The examination of the meaning that textiles and clothing carry about people, situations and culture from an individual and a group perspective; textiles and clothing cues that provide a frame of reference for interpreting more abstract social processes, including how people relate to one another. Spring semester. Prerequisites: Human Ecology 210, Psychology 101, Sociology 125.

312 History of Fashions (3)
History of fashion from Egyptian period to the present; includes aesthetic, economic, social, and psychological factors influencing fashion; analysis of fashion fundamentals and trends with implications for fashion merchandising. Fall semester.

313 Merchandising Applications (3)
Examines the philosophy, concepts, characteristics, and techniques underlying the planning and control of sales and inventories in manufacturing and retailing; the principles of effective merchandising through mathematical problems. Spring semester. Prerequisites: Accounting 201, Human Ecology 210, Mathematics 210.

314 Fashion Sketching (3)
A study of sketching techniques used by fashion professionals; includes proportion, movement, sketching garments, rendering fabrics, analysis of current fashion illustrations, and designing an illustration. Fall semester. Prerequisite: Human Ecology 120 or equivalent.

316 Fashion Advertising and Promotion (3)
Principles of sales promotion and analysis of the activities utilized by retail and wholesale firms to influence the sale of merchandise; includes advertising, display, special events, publicity, fashion shows, and personal selling. Fall semester. Prerequisite: Human Ecology 210. (Formerly Human Ecology 370)
317 Visual Merchandising (3)
A comprehensive study of the aspects of displaying merchandise from planning to execution at the retail level; focus on both interior and exterior visual presentation including signage, windows, colors, lighting, mannequins, fixtures, floor planning, and promotions. Every other Fall semester. Prerequisites: Human Ecology 120, 210.

318 Textiles and Apparel Quality and Sewn Product Analysis (3)
Examination of the marketing and merchandising decision making involved in textiles and apparel and analysis of sewn products from a quality perspective. Fall semester. Prerequisites: Human Ecology 120, 210, 211.

320 Historic Furnishings (3)
The study of design characteristics of historical furniture including the dominant, socio-economic influences leading to the development of each style - Egyptian to Victorian. Fall semester.

321 Contemporary Furnishings (3)
A study of characteristics of furnishings and interiors of the late nineteenth century and the twentieth century; includes furniture designers, interior designers, design movements, and effects of the Industrial Revolution and the consequent use of machinery in the production of furniture. Spring semester. (Formerly Human Ecology 403)

322 History of American Domestic Architecture (3)
A comprehensive survey, period feature-by-feature, of the styles that have had the greatest impact on the development of American architecture. Fall semester.

324 Interior Lighting Design (3)
The study of illumination principles, design criteria, and systems applied to architectural interiors in public and private space. Fall semester. Studio 6 hours. Prerequisite: successful completion of juried portfolio review.

325 Images of Western Living (3)
Perspectives of the near environment of Western people using a study of styles of architecture, furniture, and clothing of selected historical periods; exploration of the combination of economic, geographic, social, and cultural patterns which influenced their development; focus on evaluating styles and understanding their current impact. Every semester. (Formerly Human Ecology 390)

326 Residential Interiors (3)
Advanced study of space planning criteria and the selection of furnishings, equipment, materials, and finishes for the residential market; design considerations for special populations (e.g., disabled, aged) explored. Fall semester. Studio 6 hours. Prerequisite: successful completion of juried portfolio review.

327 Fundamentals of Kitchen & Bath Planning (3)
A study of the aesthetic and technical elements of kitchen and bath design. Spring semester. Studio 6 hours. Prerequisite: Human Ecology 326.

328 The Consumer and the Market (3)
Consumer affairs in America: rights, responsibilities, issues, challenges, and forces influencing consumer demand and decision making; the marketplace in today's economy; consumer resources and protection. Every semester.

329 Codes and Specifications (3)
The study of interior subsystems and their application to architectural spaces; emphasis on specification guidelines including product performance; building codes; fire, safety, and health regulations. Spring semester.

330 Experimental Food Science (3)
Chemical and physical factors affecting food preparation, including experimental methods and individual experimentation in selected food problems. Spring semester alternate years. Lecture 2 hours, lab 2 hours. Prerequisites: Biology 210, Chemistry 122, Human Ecology 236.

332 Life Cycle Nutrition (3)
Application of the principles of nutrition in dietary management for meeting the physiological, psychological, and social needs of individuals and groups throughout the life cycle; focus on the postulated nutrient requirements in various environments and economic levels. Fall semester. Prerequisite: Human Ecology 135 or knowledge of basic principles of nutrition.

334 Community Nutrition (3)

335 Advanced Nutrition (3)
Food nutrients in physiological and biochemical processes of the body; emphasis on their relationship to health and human development. Fall semester. Prerequisites: Chemistry 351, 352 or equivalent; Human Ecology 135 or equivalent. (Formerly Human Ecology 305)

336 Sports Nutrition (3)
The study of principles of nutrition and human energy systems as applied to fitness and sport. Spring semester. Prerequisites: HECO 135, BIOL 208, 209.

340 Family Relations: Family Interaction (3)
Family relationships and alliances at each stage of the family life cycle; the family as a small group: role, status, and power interactions of spouses, siblings, and generations; crises and adjustments. Every semester.

350 Communication in Family and Consumer Services (3)
Responsibilities, ethics, and techniques for the professional in presenting information and materials to the public through radio, newspaper, television, and live performances; general areas of public relations. Every semester.

402 Seminar (2)
Professional procedures in consumer and family related professions including trends, developments, challenges, opportunities, ethics, and business procedures. Every semester. Prerequisite: approved of department head.

405 Human Ecology Practicum (3)
Directed field experience in a selected professional area of human ecology, including a weekly seminar and faculty supervision within an approved institution, agency, or business establishment; written application to department head required three months prior to the semester in which the student plans to register for the course. Every semester. Prerequisites: senior status in human ecology and approval of department head.

411 Advanced Textiles (3)
Presents practical knowledge for evaluating textiles for specific end use and compliance with industry and government performance programs and regulations; also provides the chemical nature and structure of fibers, dyes, finishes, and bleaching agents in relation to their performance capabilities. Fall semester. Prerequisites: Chemistry 121, Human Ecology 211. Corequisite: Chemistry 122.

412 Historic Textiles (3)
The development of textiles from ancient times to the twentieth century with emphasis upon fiber, color application, fabric construction, and design motifs particular to select countries or cultures. Spring semester. Prerequisite: Human Ecology 211.

413 Fashion and Retail Buying (3)
Principles of merchandise buying, planning, and inventory control for retail stores with emphasis on computer applications for merchandise planning; includes procedures for calculating open-to-buy, assortment, and dollar planning; the role of the buyer is also analyzed. Fall semester. Corequisites: Human Ecology 416, 417, 419.

415 Textiles and Apparel Economics (3)
Examination of the textile and apparel complex as a significant economic sector; provides an overview of the global textile and apparel industries and consideration of the U.S. textiles complex and market within an international context. Fall semester. Prerequisites: Economics 101, 102; Human Ecology 210.

416 Merchandising Management (3)
This course presents the general characteristics of merchandising management and explores the attributes necessary for available positions in textiles, apparel, and retail merchandising management today. First half of fall semester only. Prerequisite: oil required merchandising courses. Corequisites: Human Ecology 413, 417, 419. Must be taken the last or next to last semester before graduation.
This course fully prepares students for their required field internship including assigning each student to his or her intern business. First half of fall semester only. Prerequisites: all required merchandising courses; an approved internship application one year prior to anticipated internship. Corequisites: HumanEcology 416, 419. Must be taken the last or next to last semester before graduation.

Directed field experience that is required of all merchandising students. Provides a paid full-time work assignment that gives students a better understanding of the real merchandising function. Assignments are made in HECO 417. Second half of fall semester. Prerequisites: all required merchandising courses; an approved internship application one year prior to anticipated internship. Must be taken the last or next to last semester before graduation. Graded Satisfactory/Fail.

General characteristics of management terminology and procedures in the interior design field with a major emphasis placed on the ability to systematize and control the flow of operations, money, materials, and commitments. Spring semester. Prerequisite: successful completion of juried portfolio review.

Advanced problems in design dealing with complex interior and environmental problems devoted to the development of a complete student portfolio and a major design proposal - the senior design thesis - a full semester of work on a self-initiated project based on a strong sense of professionalism and design maturity; a set of working drawings of this project will be presented as part of a juried Senior Exhibition. Spring semester. Studio 6 hours. Prerequisite: successful completion of juried portfolio review.

Development of creative ideas in commercial design projects which integrate interior design elements to achieve predetermined goals. Fall semester. Studio 6 hours. Prerequisite: successful completion of juried portfolio review.

Contract interior space planning factors as they relate to office landscape systems design and barrier-free requirements. Spring semester. Studio 6 hours. Prerequisite: Human Ecology 422.

A study of the process of the design of textiles for interior use; focus on the designs, construction, and specification of textiles as related to wall, window, and flooring needs; computer-aided techniques applied where appropriate. Spring semester. Studio 6 hours.

Management, organization, and administration of food service in institutions. Fall semester.

Principles, methods, and techniques in planning, purchasing, production, and service of food in quantity; selection and use of equipment; quality standards; laboratory experiences in approved local institutions. Spring semester. Prerequisites: Human Ecology 450.

A continuation of Human Ecology 430 with emphasis on production, manpower, facility, and financial planning in food service and hospitality systems. Fall semester. Prerequisites: Human Ecology 430, 431.

The study of diet as it relates to prevention and treatment of disease. Experiences in nutritional assessment techniques. Dietary calculations for obesity, diabetes mellitus, cardiovascular disease, and gastrointestinal disorders. Fall semester. Prerequisites: HECO 135, 335, BIOL 208, 209.

Application of diet designed for the prevention and treatment of diseases which are influenced by food intake; laboratory experiences in diet calculations, nutritional assessment techniques, and patient charting skills. Spring semester alternate years. Lecture 3 hours, lab 2 hours. Prerequisite(s): Biology 208, 209 or Human Ecology 335. (Formerly Human Ecology 401)

The study of diet and disease; application of appropriate nutritional therapies for endocrine disorders, hypermetabolic conditions, immune system disorders, pulmonary diseases, cancer, liver and renal disease. Spring semester. Prerequisites: HECO 434.

Explores the developmental needs which characterize the infant period; reviews the various aspects of infant development in families and group care settings; instruction in observation skills and directed participation in observational activities. Lecture 2 hours, lab 2 hours.

A study of the family system as it assumes the child rearing function and parents the developing child throughout the stages of the family life cycle; special attention is given to parenting under "special" circumstances, i.e., divorced and single parents, stepparents, dual career parents, handicapped children, and others; attention given to interaction pattern research, the development of skills, and the reciprocal nature of parent/child relationships; instruction in observational skills and directed participation in parent programs. Lecture 2 hours, lab 2 hours.

On demand. See "Departmental Honors," page 27.

On demand.

On demand.

On demand.
College of Engineering and Computer Science

Professor Dr. Gregory A. Sedrick, Acting Dean

The College of Engineering and Computer Science is the organizational unit of the University which is responsible for engineering, engineering management, computer science, and industrial technology management programs. Programs are offered which lead to the Bachelor of Science in Engineering degree, the Bachelor of Science degree with a major in industrial technology management, the Master of Science degree in engineering, the Master of Science degree with a major in engineering management, the Bachelor of Science degree with a major in computer science, and the Master of Science degree with a major in computer science. The engineering programs are described under the common heading of engineering. Industrial technology management and computer science programs are described under separate headings immediately following the engineering descriptions. Graduate programs are discussed in a separate publication.

Programs and-Administrative Heads
Professor Edwin Foster, Director
Civil Engineering (Structural)
Professor Terrance Carney, Acting Head
Computer Science (Information Systems, Scientific Applications, Systems Architecture)
Electrical Engineering (Instrumentation and Control, Power)
Professor William Gurley, Director
Chemical Engineering, Environmental Engineering, Mechanical Engineering (Mechanics, Thermal Science)
Assistant Professor Philip Kazemensky, Acting Director
Engineering Management, Industrial Engineering, Manufacturing Engineering, Industrial Technology Management,

Freshman Engineering and Transfer Program
Professor Mike Jones, Director

The full-time faculty providing instruction for the above programs have extensive experience in engineering or computer science, professional practice, research, and higher education. In addition, the college draws on the talents of adjunct faculty who are employed in professional capacities in a variety of industrial and governmental settings.

Also, the Cranston Pearce Center for Applied Engineering and Technology provides research and development opportunities for both faculty and students. Projects range from basic design and product development to large scale system studies on power distribution networks. The basic purpose of the center is to help stimulate economic development of the region through an infusion of technology into the marketplace. This center works in conjunction with the Center of Excellence in Computer Applications and with the Burkett Miller Chair of Excellence in Management and Technology to pursue appropriate technology applications.

The B.S. Engineering program is accredited by the Engineering Accreditation Commission/Accreditation Board for Engineering and Technology (ABET), the national accrediting agency for engineering programs. The Cooperative Engineering program is also nationally accredited by ABET. Graduate programs are discussed in a separate catalogue.

Transfer Credit
Credits received by transfer for required engineering courses in either engineering or industrial technology management programs require a grade of C or better. Although equivalents will be awarded for D grades, students must retake the courses.

Engineering
Bachelor of Science in Engineering (B.S.E.) Program
The engineering curriculum provides a four year program with emphasis on engineering fundamentals, design, projects and team experience, mathematics, laboratory sciences, communication, humanities and social sciences. The program is structured around an interdisciplinary core of prescribed courses which provide the student with a broad-based background in the engineering sciences. The specialty courses, taken in the junior and senior
years, provide for in-depth study in a focused area of engineering, such as electrical or mechanical engineering.

In addition to providing an emphasis on engineering fundamentals, the B.S.E. program equips the student with an understanding of engineering economic analysis, statistical analysis tools, an appreciation of total quality management principles, and strong decision making skills. These capabilities are developed not only through formal coursework, but also through design projects.

The engineering design experiences begin with freshmen team design projects and are continued throughout the curriculum. These projects emphasize the application of engineering principles, economics, communications, safety, considerations and ethics.

Following three years of design building-block experiences, senior students work collectively in a year-long design project. This capstone experience involves a comprehensive and interdisciplinary approach to defining issues and reaching reasonable solutions to a complex engineering task. This experience allows the student to appreciate that many, if not most, engineering projects require an integration of more than one discipline, and it allows the student to participate, in a multidisciplinary environment as part of a team in making decisions and reaching closure on a project.

Since engineering functions are increasingly dependent upon computers, the study of the computer and its use is integrated throughout the curriculum. Introduction to the computer begins with a course in engineering computations taken during the freshman year. A computer application and numerical methods course follows during the sophomore year. Together, these courses provide the background for the use of the computer during the remainder of the engineering program.

Laboratories are an integral part of the engineering programs. They develop an understanding of engineering instrumentation, experimental techniques, fundamental principles, and communications skills. Consequently, laboratory courses are required in each of the four years of study toward the engineering degree.

Engineering (B.S.E.)

General Education (see pages 22-24 for list of approved courses)

Each B.S.E. engineering student must complete one of the following general education sequences:

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<th>Economics</th>
<th>History</th>
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<td>A</td>
<td>English A121.A122 (6 hours)</td>
<td>English A121.A122 (6 hours)</td>
<td>English A121.A122 (6 hours)</td>
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<tr>
<td>B</td>
<td>Philosophy B221.B425 One fine Arts course (9 hours)</td>
<td>3 approved courses: one from humanities one from fine arts and one from either (9 hours)</td>
<td>History B101.B102 one fine arts course (9 hours)</td>
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<tr>
<td>C</td>
<td>2 approved behavioral science courses (6 hours)</td>
<td>Economics C101.C102 (6 hours)</td>
<td>2 approved behavioral science course (6 hours)</td>
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<tr>
<td>D</td>
<td>1 approved physical or natural science course with lab (4 hours, approved related courses below will apply)</td>
<td>1 approved physical or natural science course with lab (4 hours, approved related courses below will apply)</td>
<td>1 approved physical or natural science course with lab (4 hours, approved related courses below will apply)</td>
</tr>
<tr>
<td>F</td>
<td>1 approved mathematics course (3 hours, approved related courses below will apply)</td>
<td>1 approved mathematics course (3 hours, approved related courses below will apply)</td>
<td>1 approved mathematics course (3 hours, approved related courses below will apply)</td>
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<tr>
<td>G</td>
<td>History G14 or History G221 or Chemistry G33H (3 hours)</td>
<td>Political Science G102 or History G221 (3 hours)</td>
<td>History G221 or History G14 or Chemistry G311 (3 hours)</td>
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Exercise Science, Health and Leisure Studies 021 plus one additional semester physical education activity

Major and related courses

Major and related courses vary depending upon the specialization (see below); however, all B.S. Engineering courses will require at least:

- Mathematics F150,160,212, 245, 255
- Chemistry D121 (counts as Category D)
- Physics 231
- Engineering Core (47 to 57 hours)
- Speciality Courses: 24 hours minimum (including senior design)
- Electives depend on program selected

Minimum degree requirements: 134 hours (144 for co-op graduates)

2.0 average in all engineering courses

Minimum of 30 hours of 300 and 400 level courses

Specializations

In general, all engineering students take a common core of courses during their first two years. Specialization courses are taken during the third and fourth year. A student may qualify for a second specialization by taking a minimum of 8 additional senior specialty hours and by meeting the specific requirements for the second specialty. Only one B.S.E. degree will be awarded, but the permanent academic record will indicate the second specialization. The requirements for the specializations are as follows:

Chemical Engineering

Special requirements of this concentration dictate accurate advising regarding prerequisite courses, etc., as early as the freshman year.

- General Education requirements (see above)
- Major and related courses:
  - Mathematics F150,160,212, 245, 255
  - Chemistry D121 122,351,352,371,372
  - Physics 231
  - Specialty Engineering Courses: 26 hours including 331, 405,430, 432, 433, 434,435,493,494* 2.0 average in all engineering courses
  - Total hours: 144 (154 for co-op graduates)

*For qualified students. Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493.494.

Civil Engineering (Structural)

- General Education requirements (see above)
- Major and related courses:
  - Mathematics F150,160,212, 245, 255
  - Chemistry D121
  - Physics 231,232
  - Specialty Engineering Courses: 24 hours including 460,462,465,468,493,494* plus approved elective
  - 2.0 average in all engineering courses
  - Total hours: 136 (146 for co-op graduates)

*For qualified students. Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493.494.

Electrical Engineering

(Two tracks: Instrumentation and Control or Power)

- General Education requirements (see above)
- Major and related courses:
  - Mathematics F150,160,212, 245, 255
  - Chemistry D121
  - Physics 231, 232

*For qualified students. Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493.494.

*For qualified students, Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493, 494.

Environmental Engineering

General Education requirements (see above)
Major and related courses
Biology 121
Chemistry D121, 122, 341, 351
Environmental Science 150, 410
Geology 111,445
Mathematics F150,160, 212, 245, 255
Specialty Engineering Courses: 20 hours including 331, 430, 433, 435, 437, 493,494*
2.0 average in all engineering courses. Total hours: 144 (154 for co-op graduates)

*For qualified students, Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493, 494.

Industrial Engineering

General Education requirements (see above)
Major and related courses
Mathematics F150, 160, 212, 245, 255
Chemistry D121
Physics 231, 232
Specialty Engineering Courses: 22 hours including 354, 450, 457, 493, 494* plus approved electives. 2.0 average in all engineering courses. Total hours: 134 (144 for co-op graduates)

*For qualified students, Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493, 494.

Engineering Management

General Education requirements (see above)
Major and related courses
Mathematics F150, 160, 212, 245, 255
Chemistry D121
Economics C101,C102
Physics 231
Specialty Engineering and Related Courses: 34 hours including Engineering 358, 435, 456, 457, 458, 493, 494*. Accounting 201, 202, 305 or 306; Psychology 406.
2.0 average in all engineering courses. Total hours: 138 (148 for co-op students)

Manufacturing Engineering

General Education requirements (see above)
Major and related courses
Mathematics F150, 160, 212, 245, 255
Chemistry D121
Economics C101, C102
Physics 231
Specialty Engineering Courses: 29 hours including 354, 358, 371, 372,450, 456,457,458,493,494*
2.0 average in all engineering courses. Total hours: 136 (146 for co-op students)

*For qualified students, Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493, 494.

Mechanical Engineering

(Two tracks: Mechanics or Thermal Science)

General Education requirements (see above)
Major and related courses
Mathematics F150,160, 212, 245, 255
Chemistry D121
Physics 231, 232
Specialty Engineering Courses (Mechanics): 24 hours from 348, 405, 442,447,493,494*, plus two courses selected from 444,445,446 or 468.
Specialty Engineering Courses (Thermal Science): 24 hours including 331, 405,440,441,443,447, 493,494*, either 438 or 439 plus approve elective. 2.0 average in all engineering courses. Total hours: 136 (146 for co-op graduates)

Typical courses of study in engineering (B.S.E.)

In general all engineering students take a common core of courses during their first two years and then take courses in their area of specialization during their third and fourth years. The typical first two years for all students are listed below, followed by the remaining years for students in each of the areas of specialization.

Engineering Core

Chemical, Environmental, and Manufacturing Engineering differ from this sequence; see under Areas of Specialization.

First Semester

<table>
<thead>
<tr>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering 102</td>
</tr>
<tr>
<td>Engineering 103</td>
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<tr>
<td>Engineering 113</td>
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<tr>
<td>Engineering 112</td>
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<td>Engineering 124</td>
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Second Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>Engineering 104</td>
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<td>Engineering 114</td>
</tr>
<tr>
<td>Mathematics 160</td>
</tr>
<tr>
<td>Mathematics 212</td>
</tr>
<tr>
<td>Chemistry DJ 21</td>
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<tr>
<td>General Education Category A</td>
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<tr>
<td>Total</td>
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<tr>
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SOPHOMORE

<table>
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<tr>
<th>Course</th>
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<tr>
<td>Engineering 225</td>
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<td>Engineering 246</td>
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<tr>
<td>Engineering 247</td>
</tr>
<tr>
<td>Mathematics 245</td>
</tr>
<tr>
<td>Physics 231</td>
</tr>
<tr>
<td>General Education Category C</td>
</tr>
<tr>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>18</td>
</tr>
</tbody>
</table>

*All students should check with adviser to see if they are eligible for Mathematics 150. If they are not eligible for Mathematics 150, they should consult with the School of Engineering to determine which courses to take.

Areas of Specialization

Chemical Engineering—

Students in this area generally vary from the engineering core for the first three years by taking Chemistry 121 and 122 during the freshman year, Chemistry 351 and 352 during the sophomore year, and Chemistry 371 and 372 during their junior year. The additional chemistry courses are taken in lieu of engineering and physics. These students must consult their advisers at the beginning of their freshman year in order to give consideration to prerequisites and program integration.
### First Semester

**FRESHMAN**
- Engineering 102 3
- Engineering 103 3
- Engineering 113 1
- Engineering 112 1
- Engineering 124 3
- Mathematics 150 4
- Chemistry D21 4
- Total 19

**Second Semester**
- Engineering 104 3
- Engineering 114 1
- Mathematics 160 4
- Mathematics 212 3
- Chemistry 122 4
- General Education Category A 3
- Physical Education 021 1
- Total 19

### Sophomore

**Engineer 225** 3
- Physics 231 4
- Mathematics 245 3
- Chemistry 351 4
- General Education Category A 3
- EHLS Activity 1
- Total 18

**JUNIOR**
- Engineering 246 3
- Engineering 247 1
- Engineering 328 3
- Engineering 329 1
- Engineering 340 4
- Engineering 352 3
- Engineering 371 1
- Engineering 372 3
- General Education Category B 3
- Total 17

**SENIOR**
- Engineering 405 3
- Engineering 410 1
- Engineering 432 3
- Engineering 435 1
- Engineering 439 3
- General Education Category B 3
- General Education Category G 3
- Total 17

### Total HOURS 144

### Civil Engineering (Structural)—

**JUNIOR**
- Engineering 303 3
- Engineering 328 3
- Engineering 329 1
- Engineering 340 3
- Engineering 371 1
- Engineering 372 1
- Total 14

**SENIOR**
- Engineering 352 3
- Engineering 410 Seminar 1
- Engineering 460 3
- Engineering 462 4
- Engineering 493 3
- Engineering elective 3
- Total 17

### Total HOURS 136

### Electrical Engineering (Instrumentation and Control)—

**JUNIOR**
- Engineering 303 3
- Engineering 328 3
- Engineering 329 1
- Engineering 371 1
- Engineering 372 3
- General Education Category B 3
- Total 17

**SENIOR**
- Engineering 410 Seminar 1
- Engineering 470 3
- Engineering 478 4
- Engineering 473 3
- Engineering 493 3
- General Education Category B 3
- Total 17

### Total HOURS 143

### Electrical Engineering (Power)—

**JUNIOR**
- Engineering 303 3
- Engineering 325 3
- Engineering 340 3
- Engineering 352 3
- Engineering 371 1
- Engineering 372 3
- General Education Category B 3
- Total 19

**SENIOR**
- Engineering 410 Seminar 1
- Engineering 470 3
- Engineering 478 4
- Engineering 473 3
- Engineering 471 3
- Engineering 479 1
- General Education Category B 3
- General Education Category G 3
- Total 17

### Total HOURS 142

### Environmental Engineering—

Students in this area generally vary from the engineering core for the first three years by taking Chemistry 121 and 122 during the freshman year, Chemistry 341, Biology 121, and Environmental Science 150 during the sophomore year, and Chemistry 351 and Geology 445 during the junior year. The additional chemistry, biology, geology and environmental science courses are taken in lieu of engineering and physics courses. These students must consult their advisors at the beginning of their freshman year in order to give consideration to prerequisites and program integration.

**FRESHMAN**
- Engineering 102 3
- Engineering 103 3
- Engineering 112 1
- Engineering 124 3
- Mathematics 150 4
- EHLS Activity 1
- Total 19

**SOPHOMORE**
- Engineering 225 3
- Biology 121 4
- Mathematics 245 3
- Chemistry 351 4
- General Education Category A 3
- EHLS Activity 1
- Total 17

**JUNIOR**
- Engineering 303 3
- Engineering 328 3
- Engineering 329 1
- Engineering 371 1
- Engineering 372 3
- General Education Category B 3
- Total 17

**SENIOR**
- Engineering 405 3
- Engineering 410 1
- Engineering 432 3
- Engineering 435 1
- Engineering 439 3
- General Education Category B 3
- General Education Category G 3
- Total 17

### Total HOURS 136
### JUNIOR

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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<tr>
<td>Engineering 340</td>
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<td>Engineering 371</td>
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### SENIOR

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<tr>
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<tr>
<td>Engineering 405</td>
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<tr>
<td>Engineering 447</td>
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<td>Engineering 410 Seminar</td>
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<tr>
<td>Engineering Elective*</td>
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<tr>
<td>Engineering Elective*</td>
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### SENIOR

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<td>Engineering 493</td>
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<tr>
<td><strong>TOTAL HOURS 136</strong></td>
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### Mechanical Engineering (Thermal Science)—

<table>
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<tr>
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<tbody>
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<td>Engineering 447</td>
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<td>Engineering 410 Seminar</td>
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<td>Engineering Elective*</td>
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*Two courses selected from 445, 446, and 468.

### TOTAL HOURS 136

### JUNIOR

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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Manufacturing Engineering—</td>
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<tr>
<td>Engineering 225</td>
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<td>Engineering 246</td>
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<td>Engineering 247</td>
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<td>Mathematics 245</td>
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<td>Physics 231</td>
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<tr>
<td>Economics C101</td>
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<td><strong>TOTAL HOURS 138</strong></td>
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### TOTAL HOURS 136

### SENIOR

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<th>Course</th>
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<tbody>
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<td>Engineering 352</td>
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<td>Engineering 411 Seminar</td>
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</tr>
<tr>
<td><strong>TOTAL HOURS 136</strong></td>
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</tr>
</tbody>
</table>
Career Preparation for Other Fields
By carefully selecting electives, students may prepare to pursue careers outside engineering. For example, a student may desire to study medicine, law, business, or a number of other disciplines. Such plans usually require additional coursework beyond that required for the engineering degree. However, engineering study is considered to be excellent preparation for such careers.

For guidance and assistance concerning any special program, the student should contact one of the directors or the dean of the College of Engineering in order that an appropriate course of study can be developed.

Industrial Technology Management Program
Assistant Professor Philip Kazemersky, Acting Director

The industrial technology management program is an interdisciplinary program leading to a Bachelor of Science (B.S.) degree. The purpose of the program is to provide quantitative and qualitative engineering and business skills for problem solving. The program is intended as advanced preparation for the engineering technologist to serve a leadership role in a technical organization.

Industrial Technology Management (B.S.)
General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral science courses (6 hours; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours; approved related course below will apply)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course other than engineering (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
Math F145, F150, 160
Chemistry D121
Economics C101, C102
Engineering 211, 352, 354, 358, 380, 410, 452, 453, 455, 456, 457, 458
Accounting 201, 202, 302
Management 211, 212, 310, 311, 452
Finance 302
Marketing 313
Psychology 406
Technical Electives 23 hours: The hours may come from 100 and 200 level engineering or physics. They may also come from an engineering technology curriculum. Advisement should be sought from program faculty as early as possible.
2.0 average in all engineering, accounting, finance, management, marketing and technical elective courses.

Minimum of last 60 hours taken from a four year degree granting institution. Minimum of 30 hours of 300 and 400 level courses
Total hours: 128 (minimum)

Note: No more than 32 hours may be taken in the School of Business and credited toward the degree.

Typical course of study in industrial technology management (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
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<tr>
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<td>Chemistry D121 4</td>
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<tr>
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<tr>
<td>Technical Elective-Programming 3</td>
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<td>General Education Category B 3</td>
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<td>Technical Electives 3</td>
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<td>Engineering 211 3</td>
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<tr>
<td>Mathematics 160 4</td>
<td>Management 212 3</td>
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<tr>
<th><strong>SENIOR</strong></th>
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<td>Engineering 456 3</td>
<td>Psychology 406 3</td>
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<td>Engineering 455 3</td>
<td>Management 452 3</td>
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<tr>
<td><strong>TOTAL</strong> 15</td>
<td><strong>TOTAL</strong> 16</td>
<td></td>
</tr>
</tbody>
</table>

Cooperative Engineering Program
Professor Michael Jones, Adviser

In addition to the basic four-year program a five-year optional cooperative program is available. In this program students alternate between a term in school and a term in industry. Typical students will receive their baccalaureate degrees after five years and will obtain approximately 20 months of industrial work experience. This program is designed to: (1) provide practical experience which relates academic studies to industry requirements, (2) give the student a better understanding of human relations in industry, and (3) assist the student financially. The financial benefits to the student are usually adequate to cover most of the student's college expenses while obtaining the B.S.E. degree.
This program is open to any UTC engineering student who is in good academic standing, whose class work and school activities indicate that he or she is dependable and capable, and who is acceptable to a cooperating company. In general, a student is admitted to this program at the end of the freshman year.

More specific information concerning the program is given in the following:

(1) **Scholastic requirements** A student must have at least a 2.5 cumulative grade point average (out of 4.0) to be enrolled in the program. Further, the student must maintain a 2.25 cumulative grade point average to remain in the program. If the student fails to attain at least a 2.0 average in any semester while participating in the program, the student will be terminated from the program.

In general it is expected that co-op students will maintain a grade point average considerably above the 2.25 minimum.

(2) **Registration** Co-op students are required to register each term (including each term in industry) as a co-op student. A nominal fee will be assessed the student for registration during the work term.

(3) **Cooperative Seminar** A co-op student is expected to register and participate in Engineering 390r (Co-operative Seminar) during the term in school immediately following a work assignment. This seminar is especially designed to provide for discussing and reporting on projects conducted as a part of the cooperative work assignment.

(4) **Reports Student** participants and employers are requested to file a brief statement with UTC concerning the student's work at the end of each work term.

(5) **Work Schedule** Co-op students are expected to attend school full-time during their first year and last year in the program. They will alternate each term (between school and work) during the three years between their first and last year in the program. (A term is considered to be either first semester, second semester, or summer term.) Typical co-op schedules follow the list of engineering courses. Note that a work term precedes each registration for Engineering 390r.

(6) **Co'Op Graduate** A co-op student will be certified as a co-op graduate on his or her permanent record if upon graduation he or she has completed at least 52 weeks of co-op work experience and meets the degree requirements below.

**Degree Requirements**

A B.S.E. cooperative engineering student graduate completes all degree requirements of the B.S.E. graduate listed above, plus 10 additional hours in Engineering 390r, Cooperative Seminar.

**ENGINEERING COURSES**

A minimum grade of C must be made in any engineering course used as a prerequisite for any other engineering course.

**001-007 Cooperative Work Experience (0)**

Consecutive cooperative engineering work terms as a part of the cooperative engineering program. Student participation in off-campus work terms in industry (work term defined as either first semester, second semester, or a three month summer term in industry). Every semester.

**102 Engineering Graphic Communication (3) CORE**

Multiview projection, sectional views, auxiliary views. Sketching. Construction of graphs, descriptive geometry, including points, lines, and planes in auxiliary views. Every semester. Lecture 2 hours, laboratory 2 hours. Corequisite: Mathematics 145 or equivalent.

**103 Basic Engineering Science (3) CORE**


**104 Vector Statics (3) CORE**


**112 The Freshman Seminar for Engineer (1) CORE**

An introduction to the engineering profession, engineering education and computer skills in a engineering career. Applicable computer skills such as word processing, spreadsheet, graphing, presentation and communications programs. Fall and Spring. Pre or corequisite: MATH 135. Course graded satisfactory/no credit.

**113 Freshman Engineering Laboratory (1) CORE**

Laboratory experiments to support and enhance the topics listed from Engineering 103. Introduction to professional aspects of engineering, including ethics and observation of engineering practice. Written and oral presentations included. Continues objectives of Engineering 112. Every semester. Formerly Engineering 105 Laboratory 3 hours. Corequisite: ENGR 103

**114 Freshman Engineering Design (1) CORE**

Introduction to the design process in engineering including: historical perspective, problem definition, idea generation, and simple decision making. Design exercises culminating in a conceptual, group design project, with application of basic engineering science. Computer aided design (CAD) experience included. Continues objectives of Engineering 112. Written and oral presentation included. Every semester. Formerly Engineering 106. Laboratory 3 hours. Corequisite: 104.

**124 Introduction to Engineering Computations (3) CORE**

Flow diagram representation of processes. Construction of computational algorithms for computer solution. Experience in solution of typical engineering problems with a Reverse Polish Notation (RPN) calculator and in FORTRAN by digital computer. Introduction to the use of plotters and graphics terminals. Every semester. Lecture 3 hours. Prerequisite: Mathematics 145 or equivalent.-

**190r Special Introductory Topics in Engineering (1-4)**

Introductory treatment of a fundamental area in engineering, varying from term to term. On demand. Prerequisite: approval of instructor and dean.

**200 Structures in Architecture (3)**

The history, esthetics, functional beauty, and behavior of architectural structures will be presented along with the economic, environmental, social, political, and scientific factors which were effected and affected by them. On demand. Lecture 3 hours. Prerequisite: high school algebra and geometry.

**211 Pollution Controls (3)**

The emergence and solution of pollution problems. Discussion of fundamental ideas and policies contributing to pollution problems. Pollution is examined from industrial, political, and social perspectives. Included are role-playing experiences designed to illustrate the effects of various policies on the quality of life in a simulated community. Fall semester. Lecture 3 hours. Prerequisite: sophomore standing.

**225 Engineering Computations and Numerical Techniques (3) CORE**

Application of the FORTRAN programming language to the solution of representative engineering problems by the digital computer. Experience in program design, implementation, and documentation. Applications of numerical techniques to solution of linear and nonlinear equations, sets of equations, curve-fitting, integration, ordinary differential equations. Fall and Spring. Lecture 3 hours. Prerequisite: Engineering 124 with grade of Cor better. Pre or corequisite: Mathematics 245.
246 Mechanics of Materials (3) CORE  
Stress-strain concepts and relations. Bending, shear, torsion, and deflections. Euler columns, repeated loading and connections. Every semester. Lecture 3 hours. Prerequisites: 102, 104 with grades of Cor better. Corequisites: 247, Mathematics 245.

247 Mechanics Laboratory (1) CORE  
Laboratories that include measurement and accuracy, hardness and impact strength, modulus of elasticity, torsion, beam bending. Design project: analysis, design and test of a structure. Emphasis on individualized project. Every semester. Laboratory 3 hours. Corequisite: 246.

248 Dynamics (3) CORE  
Rectilinear, curvilinear, and rotary motion. D’Alembert’s principles of work and energy. Impulse and momentum, impact. Three-dimensional kinematics and dynamics. Every semester. Lecture 3 hours. Prerequisites: 304 with grades of Cor better. Corequisite: Mathematics 245.

270 Electrical Circuits and Systems (3)  

271 Electrical Circuits Laboratory (1) CORE  
Introduction to laboratory instrumentation, measurement techniques, electrical circuit elements and circuit behavior for DC, AC and transient sources. Digital computer analysis of electrical circuits. Spring semester and summer. Laboratory 3 hours. Corequisite: 272.

272 Electrical Circuits (3)  

303 Thermodynamics (3) CORE  
Classical thermodynamics with emphasis on first and second laws of thermodynamics. Property relationships, chemical, equilibrium, and cycle analysis. Fall semester and summer. Lecture 3 hours. Prerequisites: 104 with grade of Cor better, Mathematics 245.

307 Fluid Mechanics (3) CORE  
Fluid statics and kinematics; fluid dynamics including Bernoulli, continuity and momentum equations; fluid measurements; viscosity; compressible and incompressible flow; laminar and turbulent flow; flow in pipes and open channels; model studies; lift and drag. Fall and spring semester. Lecture 3 hours. Prerequisite: Engineering 225 with grade of Cor better. Mathematics 255. Corequisite: Engineering 308.

308 Fluid Mechanics Laboratory (1) CORE  
Laboratories that include pressure, quantity and property measurements: impulse, momentarm and energy concepts; hydrostatic and buoyancy forces: open channel flow; pump and turbine applications; open channel flow; wind tunnel studies. Design experience. Fall and spring semester. Lecture 3 hours. Corequisite: 307.

322 Probability and Statistics for Engineering (3) CORE  
Introduction to probability and statistical methods with application to engineering problems. Discrete and continuous distributions. Elementary sampling, point estimation, interval estimation, and hypothesis testing. Fall, Spring and Summer. Lecture 3 hours. Prerequisites: Engineering 124 with grade of Cor better. Mathematics 255.

325 Signals and Systems (3)  

328 Control Systems (3) CORE  
Classical feedback control systems for continuous time systems. Block diagrams and performance criteria. Root locus, frequency methods and state space approach. Fall semester. Lecture 3 hours. Prerequisites: 225, 248, 271, and 270 or 272 with grades of Cor better. Corequisite: 329.

329 Control Systems Laboratory (1) CORE  
Experimental and simulation studies of dynamic engineering systems. System identification and feedback controller design. Fall semester. Laboratory 3 hours. Corequisite: Engineering 328.

331 Chemical Process Principles (3)  
Quantitative relations of chemical reactions and physico-chemical processes. Calculations based on gases, vapors, humidity, and process material balances. Study of industrial processes involving thermophysics, thermochemistry, and heat balances. Formerly 431. Spring semester. Lecture 3 hours. Prerequisites: 303 with grade of Cor better, Chemistry 121.

340 Engineering Materials Science (3) CORE  
Study of the science of solid materials, including metals, ceramics, plastics, and semiconductors. Nature and fundamental characteristics stressed. Atomic and macroscopic perspectives. Fall semester and summer. Lecture 3 hours. Prerequisites: Chemistry 121, Physics 231.

348 Kinematics & Dynamics of Machinery (3)  
Kinematic analysis of plane mechanism linkages, analysis and synthesis of cam-follower mechanisms, and gear trains. An introduction to the synthesis of planar mechanisms-linkages and static and dynamic force and torque analysis of plane mechanisms with balancing using the computer. Spring semester. Lecture 3 hours. Prerequisites: 248 with grade of Cor better, Mathematics 255.

352 Engineering Economy (3) CORE  
Economic decisionmaking for engineering systems. Choice of alternatives by equivalent annual cost, rate-of-return, present worth, and benefit-cost methods. Tax influences, statistical decisionmaking, replacement policy. Lecture 3 hours. Corequisites: Engineering 380 or permission of instructor.

354 Work Measurement and Design (3)  
Techniques for analysis and improvement of work methods; principles of motion economy, process charts, work sampling, standard data development, performance rating, predetermined time systems, and wage incentive systems. Emphasis on machine interfaces (ergonomics) and productivity improvements. Computer applications and design project included. Spring semester. Lecture 2 hours, laboratory 3 hours. Prerequisite ENGR 322 or BMGT 211 with a grade of Cor better.

358 Manufacturing Processes (3)  
In-depth study of the proper selection and sequencing of manufacturing processes including: foundry, hot and cold forming of metals, welding, heat treating, machine operations, thermal processing, and inspection. Lecture 3 hours. Prerequisite: 340 with grade of Cor better.

371 Electronic and Machinery Laboratory (1) CORE  

372 Electronics and Machinery (3) CORE  
Analog and digital electronics and electric machines. Semiconductors, transistor amplifiers. Digital signals and circuits, microprocessors. Electric power; polyphase circuits, magnetic circuits and rotating electric machines. Fall semester. Lecture 3 hours. Prerequisites: 271, 272 with grades of Cor better, Physics 232. Corequisite: 371.

373 Automatic Control Systems Analysis and Design (3)  
375 Electromagnetic Fields and Waves (3)
Elementary fields and waves; static electric and magnetic fields; potential and vector fields; Gauss's Law; Ampere's Law; line integrals; vector calculus methods; Biot-Savart Law; time varying electric and magnetic fields; Maxwell's equations. Spring semester. Lecture 3 hours. Prerequisites: 372 with grade of C or better; Physics 232; Mathematics 245, 255.

377 Advanced Electronics (3)

378 Advanced Electronics Laboratory (1)
A series of projects in advanced electronics culminating in a major design project. Spring semester. Laboratory 3 hours. Corequisite: 377.

379 Dynamic Systems Laboratory (1)
Laboratory exercises in the simulation of dynamic systems and the design of automatic controls. Includes use of MATLAB for analysis and ACSL for simulation and design verification. Spring semester. Laboratory 3 hours. Corequisite: 373.

380 Introduction to Engineering Design (3) CORE
Introduction to the design process in engineering. Consideration of design lifecycle that includes design methodology, decision making, technical project management, quality and reliability engineering, concurrent engineering, teamwork, written and oral communication. Includes team design project. Lecture 2 hours. Project 3 hours. Prerequisites: completion of 56 hours in Engineering CORE, including 225 with grades of C or better. Every semester. Corequisite 352 or approval of instructor.

390r Cooperative Seminar (2-4)
Seminar for developing, discussing, and reporting projects carried on as a portion of the cooperative work assignment. Written and oral report required. Every semester. Maximum of 15 cumulative hours. Course graded on satisfactory/no-credit basis.

405 Heat and Mass Transfer (3)
Fundamental principles of heat, mass, and momentum transfer; application to macroscopic systems. Special emphasis on heat transfer by conduction and convection; analogy between heat and mass transfer. Design experience included. Fall semester. Lecture 3 hours. Prerequisite: 307, 308 with grades of C or better.

410, 411 Seminar (1, 0) CORE
Professional, ethical, and technical aspects of engineering. Fall semester, 410; spring semester, 411. Both seminars required. Course graded on satisfactory/no-credit basis. Normally taken as corequisite with 493, 494.

430 Chemical System Design (3)
Application of systems design techniques to the design of chemical processes. Discussion of case studies including separation processes, heat exchanger networks, and process utilities. Individual or group design problems. Spring semester. Lecture 3 hours. Prerequisites: 380, 432, or 437,435 with grades of C or better. Corequisites: 433 and 484 or ESC 410.

432, 433 Chemical Operations I and II (3, 3)
Fundamental variables of chemical operations; generalized treatment of mass-transfer operations including separation processes. Multi-component phase equilibria. Application of fundamental principles of chemical operations for systems with simultaneous heat, mass, and momentum transfer. Design projects both semesters. 432 fall semester/433 spring semester. Lecture 3 hours. Prerequisites: 307, 308, 331 with grades of C or better.

434 Chemical Kinetics and Reactor Design (3)
Concepts of chemical kinetics applied to reactor design. Effects of temperature, pressure, concentration, and catalysis on rates of chemical reactions. Design of batch, batchmix, tubular, and fluidized bed reactors. Individual or group design project. Spring semester. Lecture 3 hours. Prerequisites: 331,405 with grades of C or better, Chemistry 371 •

435 Chemical Processes Laboratory (1)
Laboratory exercises in chemical processes, such as binary distillation, batch distillation, stripping, rectification, flooding, and gas absorption. Design projects. Fall semester. Laboratory 3 hours. Prerequisite: 331 with grade of C or better. Corequisite: 432 or 437.

437 Waste Management (3)
Survey of the regulations pertaining to industrial and municipal wastes. Including but not limited to toxic and hazardous wastes. Survey of approved disposal techniques. Design considerations. Case studies. Individual or group design project. Fall semester. Prerequisite: 331, Chemistry 341, 351.

438 Advanced Fluid Dynamics (4)
Equations of continuity, momentum, and energy in three-dimensional vector formulation. Reduction to two- and one-dimensional flows for cases of engineering interest. Applications to students' areas of specialty. Laboratory work included. Individual design projects included. Fall semester. Lecture 4 hours. Prerequisite: 307 and 308 with grades of C or better.

439 Internal Combustion Engines (4)
Thermochemical phenomena in internal combustion engines. Topics include testing techniques, combustion, detonation, carburetion, equilibrium, and disassociation. Ideal and real fluid behavior in analysis of internal combustion engines. Experimental verification in the laboratory. Design experience included. Spring semester. Lecture 3 hours; laboratory 3 hours. Prerequisites: 303, 307, 308, 331,405 with grades of C or better.

440 Advanced Fluid Dynamics (3)
Principles of continuity, momentum, and energy applied to flow measurements, turbomachinery, open channel flow, compressible flow, and computational fluid mechanics using text and/or supplemental software. Design experience. Fall semester. Lecture 3 hours. Prerequisites: 303, 307, 331, 405 with grades of C or better.

441 Energy Conversion (3)
Broad based energy conversion as applied to steam power, gas turbines, internal combustion engines, and nuclear power systems with combustion analysis using appropriate computer software for analyzing equilibrium combustion products. Design experience. Spring semester. Lecture 3 hours. Prerequisites: 303, 307, 331, 405 with grades of C or better.

442 Machine Design (3)
The analysis and design of machine elements including fatigue-failure analysis of shafts, springs, screws, brakes, clutches, chains, belts, welds and rivets, lubrication of journal, ball and roller bearings, and spur, helical, bevel, and worm gears. Spring semester. Lecture 3 hours. Prerequisites: 248, 348 with grades of C or better.

443 Thermal Component Design (3)
Design of individual components of thermal systems. Economic tradeoffs in sizing, choice of materials, number of passes, and other design criteria. Examples of heat exchangers, refrigerators, steam cycle components, and modern, innovative concepts. Spring semester. Lecture 3 hours. Prerequisites: 307, 308, 331, 380, 405 with grades of C or better. Formerly 436.

445 Mechanical Vibrations (3)
Free and forced vibrations of damped and undamped systems; single and multiple degrees of freedom using lumped parameter analysis. Matrix rotation: sweeping and rotation techniques. Design experience included. Spring semester. Lecture 3 hours. Prerequisites: 248, 348 with grades of C or better; Mathematics 245, 255.

446 Advanced Mechanics of Materials (3)
Statically indeterminate structures; introduction to theory of elasticity; special topics in mechanics of materials. Design experience included. Fall semester. Lecture 3 hours. Prerequisites: 246 with grade of C or better; Mathematics 245, 255.

447 Mechanical Engineering Laboratory (2)
Laboratory will provide experiences with instrumentation required for measuring temperature, pressure, rotational speed, strain, velocity, liquid and gas flow rates, and combustion products. The lab will include fatigue, vibration, energy conversion and utilization testing, and data acquisition. Design experience. Fall and Spring semesters. Lecture 1 hour plus laboratory 3 hours. Prerequisites: 303, 307, 308, 331, 348 with grades of C or better. Corequisites: 405, 445.
450 Industrial Engineering Design (3)
Design of operations, facilities, and project controls. Topics include process organization, materials handling, information handling, scheduling, and resource allocation. Case studies. Design project included. Spring semester. Lecture 3 hours. Prerequisite: 380 with grade of Cor better.

453 Project Design (3)
This course will examine the design-manufacturing interface. The emphasis is on design of products for manufacturing including: functional design, design for manufacturability, value analysis, part and process simplification, design for automated assembly, design for reliability and maintainability, planning, and alternative manufacturing methods. Design project. Spring semester. Lecture 3 hours. Prerequisite: ENGR 358, 380, with grades of Cor better.

455 Industrial Safety Engineering (3)
History, accident cost analysis, methods, and techniques developed for reducing and preventing accidents in industry, motivating safety, plant inspection, guarding of equipment, health hazards and their control, accident records and reports, employee selection, placement and counseling. Primarily elective for B.S. in engineering management. On demand. Lecture 3 hours.

456 Computer Integrated Manufacturing Systems (3)
Basic concepts of modern manufacturing and related control systems. Techniques include flow-line production, numerical control, industrial robots, CAM, group technology, and flexible manufacturing systems. Design applications. On demand. Lecture 3 hours; laboratory work included. Prerequisites: 225, 322 with grades of Cor better, Mathematics 160 or equivalent.

457 Quality Control (3)
Detailed study of theory and methods for the design and analysis of quality systems. Statistical Process Control (SPC) including control charts for attributes and variables, and process capability analysis. Acceptance sampling. Fall semester. Lecture 3 hours; laboratory work and design experience included. Prerequisite: ENGR 322 or BMGT 211 with grade of Cor better.

458 Industrial Plant Layout (3)
Types and techniques of plant layout and location. Methods and computer algorithms for laying out activities and equipment. Scheduling strategies that effect layout including push versus pull operation, batch sizes, and dispatching rules. Group Technology cell formation methods. Material handling. Data collection for plant layout, including process flow charts. Simulation of manufacturing layouts. Spring semester. Lecture 3 hours with design experience.

460 Structural Engineering Analysis and Design (3)
Analysis and design of framed structures due to moving and fixed loads; influence lines; deflections of beams and trusses. Analysis of statically indeterminate beams, trusses, bents, and frames. Fall semester. Lecture 3 hours. Prerequisites: 246 with grade of Cor better, Mathematics 245, 255. Corequisite: 380.

462 Soil Mechanics, Foundations and Substructures (4)
Physical properties of soils, foundation explorations, and principles of design of dry and subaqueous foundations. Fall semester. Lecture 4 hours, laboratory experience included. Prerequisites: 246, 307, 308 with grades of Cor better.

465 Structural Engineering Design (4)
Design criteria in structures. Behavior of steel structures and reinforced concrete columns and beams. AISC and ACI codes. Design project included. Spring semester. Lecture 4 hours. Prerequisite: 445 or 446 or 460 with grade of Cor better.

468 Elementary Structural Matrix Methods (3)
Review of matrix algebra and vectors, development of member stiffness and flexibility matrices. Design project included. Spring semester. Lecture 3 hours. Prerequisite: 445 or 446 or 460 with grade of Cor better.

470 Microprocessors and Digital Logic (3)
Design of combinational and sequential electronic circuits. Practical microprocessor principles: structure, programming and interfacing. Design of electronic systems treating the microprocessor as a system component. Fall semester. Lecture 2 hours. Projects 3 hours. Prerequisites: 371, 372 with grades of Cor better, and either 377, 378, with a grade of Cor better or CPSC 252.

471 Electrical Machinery (3)

472 Electrical Energy Systems (4)
Power system component modeling; transmission lines, machines, transformers. Load flow analysis, system dispatching and control. Fault analysis, symmetrical components, system protection. Transient stability. Design projects included. Spring semester. Lecture 4 hours. Prerequisite: 471 with grade of Cor better.

473 Communication Systems (3)
Definitions and basic concepts of analog and digital modulation techniques. Fourier and Laplace transform techniques used to study transmission of signals through linear filters, time-bandwidth relationships. Amplitude, frequency, and pulse modulation techniques described and analyzed. Periodic sampling and the Nyquist sampling criterion. Fall semester. Lecture 3 hours. Prerequisites: 322, 325 with grades of Cor better.

474 Optical Fiber Communication (3)

477 Electronic Instrumentation (3)
Development of instrumentation systems to gather design data and to verify performance. Characteristics of typical sensors. Signal conditioning techniques and circuits. Specification and design of systems to acquire and condition data from an array of sensors. Laboratory work and design projects included. Spring semester. Lecture 3 hours. Prerequisites: 377, 378 with grades of Cor better.

478 Sampled Data and Nonlinear Control Systems (4)
Analysis and design of automatic control systems operating on discontinuous data and depending on either incremental or sampled continuous processes. Consideration of nonlinear systems analysis and design. Design project. Fall semester. Lecture 4 hours. Prerequisites: 373, 379 with grades of Cor better.

479 Electrical Machinery Laboratory (1)
Experimental study of transformer and machine behavior. Design project included. Fall semester. Laboratory 3 hours. Corequisite: 471.

49 Ir Special Topics in Engineering (1-4)
Advanced treatment of a specialized area in engineering, varying from term to term. On demand. Prerequisite: approval of instructor and dean.

493 Senior Design Experience I (3) CORE
First semester of interdisciplinary group design project. Definition of engineering problem, completion of feasibility study, and preliminary design. Oral and written presentation of progress and results. Every semester. Prerequisites: 380 with grade of Cor better, completion of all lower division engineering courses, and senior standing. Corequisite: 410 or 411.

494 Senior Design Experience II (4) CORE
Second semester of interdisciplinary group design project. Completion of detailed and final design phases of engineering problem initiated in 493, including a model. To be completed in sequence. Oral and written presentation of progress and results. Every semester. Prerequisites: 493 with grade of Cor better. Corequisites: 410 or 411.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.
## Engineering (B.S.E.) Group A Cooperative Schedule*

* EE students must vary. See following schedules for guidance

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### Engineering (B.S.E.) Group B Cooperative Schedule

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## Engineering (B.S.E.) Group A Cooperative Schedule For Electrical Engineers

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**Note this change in the schedule for EE's**

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## Engineering (B.S.E.) Group B Cooperative Schedule for Electrical Engineers

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Computer Science

Professor Carney, Acting Head

The Computer Science program provides the B.S. degree in computer science. Computer science majors take at least a 49-hour sequence of computer science courses and take additional courses in an area of concentration. The concentration of study augments the computer science courses and is a specialization in which the student can apply his or her knowledge of computers. Three concentrations are available: information systems, scientific applications, and, systems architecture.


General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category E: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses

Computer Science core courses: Computer Science 150, 160, 250, 251, 260, 301, 312, 320, 350, 460, 490r
12 hours of upper division (300 or 400 level) computer science electives

English 277 or 278
Mathematics F150, 160
Mathematics F150, 160, 212, 245, 255, 303, 308 and one of the following: 412, 414, 418, 428, 445 or 460; either Engineering 322, or Mathematics 407 and Mathematics 408; two of the following sequences: Biology D121 and 122 or Geology D111 and 112, Chemistry D121 and 122, Physics D103 and 104 or D230 and D231

Systems Architecture
Mathematics F150, 160, 212, 245, 255, 303; Physics D230, 231; Engineering 271, 272, 371, 372; either Engineering 322, or Mathematics 407 and Mathematics 408

All majors must attain a minimum grade of C in all computer science core courses as a condition for graduation.

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Typical courses of study in computer science (B.S.)

Computer science (B.S.): information systems concentration

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TOTAL HOURS 128

Computer science (B.S.): scientific applications concentration

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<tr>
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<tr>
<td>Total</td>
<td>14</td>
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<tr>
<td></td>
<td>TOTAL HOURS 128</td>
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</table>

**Computer science (B.S.): systems architecture concentration**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
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<td>FRESHMAN</td>
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<td>Computer Science 150</td>
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<td>13</td>
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<td>TOTAL HOURS 128</td>
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**COMPUTER SCIENCE MINOR**

23 hours in computer science including 150, 160, 251, 312, 350; one 400 level computer science course; one additional 300-400 level computer science course. At least two 300-400 level courses must be taken at this institution.

Minimum 2.0 average in the minor.

**COMPUTER SCIENCE COURSES**

102 Introduction to Computing (3)

Overview of the electronic computer's history, technology, capabilities and limitations. An appreciation of the role of computers in society is developed and computer use is surveyed. Dedicated recitation sections concentrate on developing practical application skills in various disciplines. Lecture 2 hours, recitation 2 hours. Credit not allowed in both CPSC 102 and 110. Every semester. Prerequisites: Placement level 20 or Math 106 with a grade of C or better.

110 Computer Information Systems I (3)

Survey of computer applications in business. Introduction to the use of microcomputer hardware and software in information systems. Fundamentals of systems analysis and design. Ethical and social issues. Credit not allowed in both CPSC 102 and 110. Every semester. Prerequisites: Placement Level 20 or Math 106 with a grade of C or better.

111 Computer Information Systems II (3)

A study of the analysis, design, and implementation of business computer systems; system life cycle models; methods and techniques for systems development; advanced concepts in microcomputer application packages; introduction to a programming language such as BASIC. Every semester. Prerequisite: 110.

118 Computer Programming with FORTRAN (3)

An introduction to the concepts and techniques of computer science. Emphasis is placed on the design of efficient algorithms using the FORTRAN language. Every semester. Prerequisite: Mathematics 135 or 145.

150 Fundamentals of Computer Science I (4)

An introduction to computer science concepts and computer software development using a higher level language. Algorithms, flowcharting, programming, and documentation of numerical and non-numerical problems. Introduction to computer science terminology and concepts such as computer hardware and computer application areas. Lecture 3 hours and laboratory 2 hours. Every semester. Prerequisite: 4 years of college preparatory mathematics; Math Placement Score of 30 or better or Math 135 or 145.

160 Fundamentals of Computer Science II (4)

Continued development of programming style using abstract data structures and top down design. Debugging and testing of large programs. Emphasis on algorithm development. List processing, Recursion. Stacks, Trees, Searching and Sorting. Lecture 3 hours and laboratory 2 hours. Every semester. Prerequisite: 150 with a grade of C or better.

199R Special Projects (1-4)

Individual or group projects. On demand. Maximum credit 4 hours.

250 Digital Logic and Introduction to Computer Hardware (4)

Number representation and arithmetic; basic digital devices and their Boolean representations; introduction to logical circuit design and simplification using Boolean algebra and Karnaugh maps; combinational logic building blocks such as multiplexers, demultiplexers, encoders, decoders, comparators, adders, ALUs; analysis and design of sequential logic circuits; sequential logic building blocks such as storage registers, shift registers and counters. Lecture 3 hours and laboratory 2 hours. Every semester. Prerequisite: 150 with a grade of C or better.

251 Introduction to Operating Systems (3)

Basic operating system principles, job control languages and operating system internals. The hardware/software interface, file systems; resource management; command languages; segmentation, paging and virtual memory; other virtual resources. Detailed examination of two or more current operating systems, such as Windows, UNIX or Novell NOS. Prerequisite: 160 with a grade of C or better.

260 Computer System Organization and Assembly Language Programming (4)

Structure of digital computers; introduction to machine language, symbolic coding, and assembly language; register sets, instruction types, and addressing modes; assembler directives and macros; low-level input/output techniques; interrupts; memory management, segmentation, and paging; operating system introduction. Lecture 3 hours and laboratory 2 hours. Prerequisite: 250 with a grade of C or better.

301 Systems Programming (3)

Structure and design of programs whose inputs are programs. Assemblers, interpreters, compilers, loaders and supervisors. Introduction to formal programming languages, syntactic descriptions, symbolic functions and manipulations. Fall semester and Summer. Prerequisites: 260 and Math 303 with grades of C or better.
Computer Science—145

312 Data Structures and Algorithms (3)
A study of data structures and the algorithms used to process them. Algorithms for handling strings, stacks, lists, trees, and graphs. Sorting and searching techniques. Recursive and non-recursive algorithms. Efficiency considerations. Spring and Summer semesters. Prerequisites: 160 and Mathematics 303 with grades of C or better.

320 Topics in Operating Systems (3)
Concepts and issues of operating system principles; procedure activation, storage allocation, system structure, performance evaluation, memory management, concurrent processes and programming, process management, security and recovery procedures. An introduction to distributed operating systems; communication, synchronization and system structure in distributed systems. Prerequisite: 250, 251, and Math 303 with grades of C or better.

335 File and Data Base Processing (3)
A study of file directory organizations. Creation and maintenance of sequential, direct, and indexed sequential files. File sorting and searching techniques. Data compression and data encryption. Data base concepts. Hashing techniques and address overflow. Primary and secondary key usage. Inverted and linked list files. Prerequisite: 251 with grade of C or better.

350 Software Engineering 1 (3)
A study of systems analysis and design aspects of software engineering to include information systems and the systems analyst, tools and techniques of systems analysis, and the life cycle concept of system development. Spring semester. Prerequisites: 160, English 277 or 278; with grades of C or better.

410 Programming Languages (3)
The study of the structure, design, and implementation of computer programing languages, including procedural, object-oriented, logic programing, and functional languages. Topics include language syntax and semantics, procedure and data abstraction, binding times, exception processing, support for concurrency, and language programming paradigms. Prerequisites: 251 and 312 with grade of C or better.

420 Computer Graphics Applications and Algorithms (3)
Computer graphics systems, system software, data structures for graphics devices and display processors, representational algorithms and packaged graphics software. Fall semester. Prerequisite: 312 with grade of C or better.

430 Topics in Simulations (3)
Digital simulation. A study of simulation languages and simulation techniques for solving many types of research problems from management, engineering, and science; simulation of large systems, design of simulation experiments for optimizations; applications using simulation languages. On demand. Prerequisites: 312 with grade of C or better and an approved sequence in statistics.

435 Data Base Management Systems (3)
Concepts and methods in the definition and management of data bases; physical and logical data base design; the relational model; programming in a data base environment; topics in data base security, integrity, recovery and concurrence. Fall semester. Prerequisites: 251 and 312 with grades of C or better.

440 Wide Area Networks (3)
The design, preparation, and delivery of information, applications, and services using client/server computing over a wide-area network. The network and implementation tools may vary to meet current development trends. Prerequisite: 312 with a grade of C or better.

445 Automata, Complexity, and Computability (3)
An introduction to the classical and contemporary theory of computation including automata, formal languages, Turing machines, recursive functions, computatability and uncomputability, complexity, and the classes of P and NP. Spring semester. Prerequisites: 160 with grade of C or better and Mathematics 303.

450 Software Engineering II (3)
A study of software development including the philosophy and techniques of software engineering and emphasizing analytical techniques useful to software designers. The course will include numerous programming assignments that will emphasize the areas of the design process; top-down, bottom-up, and structured programming approaches; different levels of test thoroughness; test approaches; test models; software reliability; and management techniques. Fall semester. Prerequisites: 301 and 350 with grades of C or better.

460 Computer Architecture (3)
An advanced course in computer architecture. Topics include classical uniprocessor architecture, computer arithmetic, instruction sets, control systems, I/O operations, memory hierarchies, cache and virtual memory mechanisms, basic principles of multiprocessing, microprogramming, serial and pipelined arithmetic processors, and RISC architecture. Spring semester and Summer. Prerequisite: 260 and 320 with grade of C or better.

480 Introduction to Artificial Intelligence (3)
Artificial intelligence; simulation of cognitive behavior and self-organizing systems; heuristic programming including the use of list processing languages; data representation; pattern matching structures; applications in symbolic mathematics; survey of examples from representative application areas. Every semester. Prerequisite: 312 with a grade of C or better.

490r Group Software Project (3)
A group design effort which will concentrate on developing a major software project. Oral and written presentations of progress and final results required. Every semester. Prerequisites: 320, 350 with grades of C or better, and senior standing.

495 r Departmental Honors (1-3 hours per term, 4 hours for the two terms) On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.
College of Health and Human Services

Professor G.M. Janeksela, Dean

The College of Health and Human Services offers six programs leading to baccalaureate degrees. These programs are criminal justice, human services, nursing, physical therapy, legal assistance studies, and social work. In addition to the undergraduate degrees, Master of Science degrees in Criminal Justice and Nursing are offered. The Masters of Science in Criminal Justice includes concentrations in Correctional Psychology, Criminal Justice, System Application, or Education, the Masters of Science in Nursing includes concentrations in Clinical Specialist, Education, Administration, or Nurse Anesthesia. The Military Science Department offers an Army Officer Education Program which may lead to a commission to serve in the United States Army, the Army National Guard, or the Army Reserve.

Each program is designed to prepare professional personnel to work in a variety of settings related to meeting human needs. The faculty and philosophy of the college emphasize the interdisciplinary relationships of the various fields of knowledge and practice. The college also houses two non-academic units: The Center for Community Career Education, and the Tennessee Early Intervention System. The Center for Community Career Education is a non-profit career and educational counseling and training center. The Tennessee Early Intervention System coordinates services for children with special needs who are under the age of three.

Military Science

Reserve Officers Training Corps (ROTC)

The primary objective of the Army Officer Education Program at UTC is to develop and commission men and women who have the qualification and potential for service as officers in the United States Army, the Army National Guard, or the Army Reserve.

Intermediate objectives are to provide students with an understanding of the fundamentals of responsibility, integrity, and self-discipline, as well as an appreciation of the citizen's role in national defense. The application of the decision-making process to a variety of situations is given major emphasis. Through study and application of the principles of leadership and management, the military science student develops confidence, self-discipline, and other desirable qualities that will contribute to success in any career. The advanced course offers the opportunity for a commission as a second lieutenant in the U.S. Army, the Army National Guard, or the Army Reserve. Advanced course students receive a $150/month subsistence allowance up to 20 months (total $3,000). Students attending Camp Challenge or Advanced Camp receive approximately $740 at the end of each camp.

Scholarships
See under the financial aid section of this catalog.

Books and Uniforms
All books, uniforms, and materials needed for participation in the military science program are furnished at no cost to the student.

Education Delays
Newly commissioned officers may delay their entry on active duty in order to pursue graduate studies in a recognized field of study.

Four-Year Program
The four-year program consists of a basic course and an advanced course. Each course normally requires four academic semesters to complete.

Basic Course (no obligation incurred)
The basic course consists of Military Science 101 and Military Science 102 during the freshman year and Military Science 201 and Military Science 202 the sophomore year. During the courses the student is taught basic survival skills, mountaineering and rappelling techniques, map reading and land navigation, weapons familiarization, marksmanship, Army organization, leadership fundamentals, first aid, and physical fitness. All of these skills prepare and develop the student should he/she desire to continue into the advanced course.

Advanced Course
The advanced course consists of Military Science III (junior year) and Military Science IV (senior year). Three hours in class, three
hours of physical training (PT), and a two (2) hour leadership laboratory on Thursday are required each week. In leadership laboratory, the student develops, through practical application, the basic military skills necessary for the completion of advanced camp and commissioning.

Two-Year Program
The two-year program consists of the last two years (the advanced course) of the regular four-year program. The program is open to selected students who have four (4) full semesters of academic study remaining at UTC or any other accredited institution in the Chattanooga area. Selectees must have either completed three years of junior ROTC, have the required amount of prior military service, or completed six week ROTC Camp Challenge. Additionally students must have attained 54 college credit hours and junior level status. Applicants must meet the same enrollment criteria as those students who enter the advanced course after completing the regular basic course.

Camp Challenge - (4 Credit Hours)
No service obligation is incurred for attendance. Camp Challenge is a six-week training course conducted at Fort Knox, Kentucky, usually during the summer vacation period between the student’s sophomore and junior years. This is an exciting and challenging camp which introduces the student to military life. Students are allowed to fire military weapons systems, are introduced to map reading and land navigation, first aid and CPR techniques, military tactics and physical training. Students earn over $740.00 plus room and board. Successful completion of the camp qualifies the student for entry into the advanced program.

Requirements for Enrollment
The general requirements for enrollment in the basic course program are:
1. Be a citizen of the United States and of good moral character.
2. Be not less than 17 years of age or have parental consent.
3. By physically and medically qualified.
4. Be enrolled as a full-time student at UTC or accredited, cross-enrolled institution in the Chattanooga area.
5. Execute a loyalty oath and not be a conscientious objector.

All students enrolled in the advanced course program must meet the following admission requirements:
1. Have either completed the ROTC basic course program; have three years of junior ROTC; have the required amount of prior military service; or, have completed the six-week ROTC Camp Challenge.
2. Possess qualifications for becoming an effective Army officer.
3. Have, at the time of enrollment, a minimum of four (4) full semesters of academic work remaining; either graduate or undergraduate.
4. Meet scholastic screening requirements and have attained 54 college credit hours and junior level status.
5. Meet all general requirements as outlined above for enrollment in the basic course program.
6. Be selected for enrollment by the department head/ professor of military science.

*Note: Graduate students are also eligible to participate in the Advanced Program pending the same enrollment requirements.

Removal from candidacy for commission
1. A student once formally enrolled in the advanced course may be disenrolled from the ROTC program in die event he/she is placed on academic probation by institutional authorities as the result of substandard academic performance.
2. Students may be disenrolled from the Advanced ROTC Program for failure to meet physical or academic standards for disciplinary reasons, or for lack of officer-like aptitudes.
3. Once disenrolled a student is no longer eligible for a commission but may continue to take the course for academic credit only.

Obligations
A student incurs NO OBLIGATION to the military by participating in freshman or sophomore military science courses. The courses offer a cadet the opportunity to evaluate the prospect of military science and also to qualify for the advanced program beginning the junior year. When a cadet enters the advanced program, he or she is obligated to accept a commission as a second lieutenant in the active Army, Army National Guard, or United States Army Reserve (USAR) upon graduation.

Military Science Curriculum

<table>
<thead>
<tr>
<th>Basic Military Studies</th>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>MS 101 Basic Survival and Military Skills</td>
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<tr>
<td>MS 102 Military Weapons and Fire Power</td>
<td>2</td>
</tr>
<tr>
<td>MS 201 Advanced Survival Techniques</td>
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</tr>
<tr>
<td>MS 202 Military Management and Leadership Skills</td>
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<tr>
<td>MS 300 Camp Challenge</td>
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<tr>
<th>Advanced Military Studies</th>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>MS 301, 302 Advanced Leadership and Management (3,3)</td>
<td>6</td>
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<tr>
<td>MS 400 Army ROTC Advanced Camp</td>
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<tr>
<td>MS 401, 402 Seminar in Leadership and Management (3,3)</td>
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<td>Total credit possible not to exceed</td>
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Students in MS 301, 302, 401 and 402 participate in the equivalent of two hours of leadership laboratory per week. Students in MS 101, 102, 201 and 202 will participate in the equivalent of one hour of leadership laboratory per week.

On the basis of previous honorable active military service in any branch of the armed services, or attendance at the basic summer camp, participation in the junior ROTC program in secondary schools, a student may be exempt from all or portions of the basic course.

With permission of the professor of military science (PMS).

MILITARY SCIENCE COURSES

101 Basic Survival and Military Skills (2)
Organization, missions, and functions of the Army; Army Reserve and National Guard; ROTC orientation; historical development of the Army; practical experience in drill and ceremonies, rappelling, and basic map reading. Fall semester. Prerequisite: academic juniors and seniors require prior approval of department head.

102 Military Weapons and Firepower (2)
An introduction to the study of tactics; practical experience in riflery, drownpooding techniques, and basic first aid. Spring semester. Prerequisite: academic juniors and seniors require prior approval of department head.

201 Advanced Survival Techniques (3)
A comprehensive look at today's Army and the role of the Army officer as developed through a study of the American military institutions, policies, activities, and traditions. Fall semester. Prerequisites: Military Science 101 and 102 or approval of department head. Academic juniors and seniors require prior approval of department head.
202 Military Management and Leadership Skills (3)
Analytical leadership skills and management techniques. Emphasizing problem solving, directional hearing oriented toward the development of proficiency in advanced map reading, and fundamentals of survival. Spring semester. Prerequisites: Military Science 10/ and 102 or approval of department head. Academic juniors and seniors require prior approval of department head.

300 Camp Challenge (4)
Six weeks of training at Ft. Knox, Kentucky. Travel pay and salary stipend provided through the Military Science Department. The student is not obligated to any military service. Camp graduates are eligible to attend advanced military science courses. Fall semester. Credit not allowed with Military Science 101, 102, 201, 202, and with 300. Graded Satisfactory/No credit.

301, 302 Advanced Leadership and Management (3,3)
Roles of the various branches of the army; development of student's ability to prepare and present instruction; study of leadership and management; and study of the leader's role in directing and coordinating efforts of individuals and small units in the execution of offensive and defensive tactical missions. Fall semester 301; spring semester 302. Prerequisite: acceptance into the advanced course.

400 Army ROTC (4)
A six week statutory prerequisite to commissioning; conducted during the summer months following Military Science 302 at an army installation. Presentations made during subsequent semesters. Fall semester.

401, 402 Seminar in Leadership and Management (3,3)
Application of leadership principles stressing responsibilities of the leader through practical exercises in small unit tactics, leadership, and management problems involved in unit administration, materiel readiness, and military justice. Fall semester 401; spring semester 402. Prerequisites: 400 and History 350 or permission of department head.

Physical Therapy

Associate Professor, Randy Walker, Jr., Head

The department offers a curriculum leading to a Bachelor of Science in Physical Therapy (B.S.P.T.) with a major in physical therapy. Students who have been accepted into the program are enrolled in the fall semester of their junior year and must be enrolled on a full-time basis for each of the six semesters of the program. The curriculum combines classroom and laboratory experiences with independent study and clinical experiences in a variety of health care settings.

Pre-physical Therapy
Students must meet the same admission requirements as all other applicants to the University. The prerequisites for the professional program are consistent with the general education requirements of the University, which are outlined elsewhere in this catalog. All students interested in pursuing physical therapy should seek advisement from the physical therapy faculty by calling the departmental office to schedule an appointment.

Admission to the Professional Physical Therapy Program
Admission to the University does not assure acceptance into the physical therapy program. Enrollment is limited and the number of qualified applicants exceeds the number of students that can be admitted. Selection by the admissions committee is based upon a number of factors evaluated from appropriate information: overall grade point average, science grade point average, the ability to handle a full academic load, general knowledge of physical therapy, demonstrated interpersonal abilities, extracurricular and leadership activities, and maturity. The applicants with the best combination of these factors will be selected for the class. Students may apply who have a minimum overall and science grade point average of 3.0 on a 4.0 grading scale. Residents of the state of Tennessee are given preference for admission, followed by non-Tennessee residents from the immediate geographic region.

Application forms will be available October 1 of the year preceding anticipated admission into the program. The completed application packet, including transcripts from all previously attended institutions of higher education and recommendation forms, must be submitted to the departmental office by 5:00 p.m. on February 1. It is the applicant's responsibility to assure that the packet of information is complete. Early submission of the application packet is encouraged. The decision of the admissions committee will be mailed to each applicant.

Prerequisite Courses
Fifty-nine semester hours of coursework must be completed prior to initiating study within the professional program. A minimum of 45 hours of the prerequisites must be completed by the end of the fall semester before the February 1 deadline for receiving applications. The 45 hours of prerequisites must include one course in English composition, one course in Biology, one course in chemistry, one course in physics, one course in mathematics, and one course in psychology.

The courses listed are offered at UTC. Transfer students should enroll in comparable courses. Refer to the specific course descriptions.

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<th>General Education</th>
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<td><strong>Math</strong></td>
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<td><strong>Psychology</strong></td>
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<td>101</td>
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<td><strong>Perspectives</strong></td>
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<td>1</td>
</tr>
</tbody>
</table>

Total 33 Total 26

Expenses and Transportation
Each student is required to purchase professional liability insurance annually. Additional expenses include laboratory/clinical attire and dissection instruments. Classes are required during the summer semester of both the junior and senior years of college. Physical therapy clinical experiences are scheduled throughout the academic year which require students to provide their own transportation to the clinical sites. Full time four-week and 12-week clinical experiences are scheduled during the summer semesters of both the junior and senior years. Students must be financially prepared for travel to and living expenses in other cities throughout the United States.
Continuation and Graduation Standards

In view of the nature of physical therapy and the fact that the quality of human life may be adversely affected by individuals providing physical therapy, the following standards will be applied by the physical therapy faculty.

1. To progress in physical therapy, students are required to:
   a) make a minimum grade of C in all physical therapy required courses (exclusive of electives);
   b) maintain an active liability insurance policy for clinical courses;
   c) maintain current CPR certification.

2. Students who fail any portion of a clinical course series (PHYT 330, 331, 430, 431, and 490) may repeat the failed course(s) one time. However, the total number of repeated courses both at UTC and elsewhere must not exceed five courses. Additional failure (any grade less than C) in any portion of a clinical course series will result in dismissal from the physical therapy program.

3. If in the judgement of the faculty there is reason to question the emotional or physical condition of a student or the safety or quality of physical therapy care provided, the faculty has the right and obligation to exclude the student from the clinical area.

4. Students who fail non-clinical courses may be denied progression in the program. Students may repeat failed non-clinical courses only at the discretion of the retention and progression committee or the head of the department of physical therapy.

Physical Therapy (B.S. P.T.)

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)

Category B: 3 approved courses, one from humanities, one from fine arts, and one from either (3 hours each)

Category C: 2 approved behavioral or social science courses (6 hours; related courses below will apply)

Category D: 1 approved physical or natural science course with laboratory (4 hours; approved related course below will apply)

Category F: 1 approved mathematics course (3 hours; approved related course below will apply)

Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Sciences 021 plus one additional semester exercise science activity

Major and related courses

6 hours behavioral or social sciences including Psychology C241 and Psychology C214

30 hours mathematics, natural or applied science courses including Biology D121, 208, 209; Chemistry D121 or 168; Mathematics F145, F210; Physics D103, 104

Physical Therapy 301, 310, 312, 314, 316, 320, 330, 331, 350, 360, 380, 430, 431, 440, 442, 444, 446, 450, 452, 453, 454, 456, 460, 462, 490, 493, 495 or 497

Minimum grade of C in all physical therapy required courses (exclusive of electives)

Minimum of 30 hours of 300 and 400 level courses

2.0 average overall, 2.0 UTC average, and 2.0 average in physical therapy courses

Total hours: To exceed 128 hours, usually a minimum of 147 hours.

Typical course of study in Physical Therapy (B.S.P.T.)

First Semester                                      Second Semester
FRESHMAN

Elective                                            English Al 22

English A121                                        3

Biology D121                                        3

Chemistry D121                                      4

Math F210                                           3

EHLS 021 or 022                                     1

Total 15                                            Total 15

SOPHOMORE

General Education Category B                        General Education Category B

Physics D103                                        4

Psychology C241                                     3

Math F145                                          4

Total 16                                            Total 13

JUNIOR

Physical Therapy 301                                 Physical Therapy 314

Physical Therapy 310                                 1

Physical Therapy 311                                 6

Physical Therapy 320                                 3

Physical Therapy 330                                 2

Physical Therapy 350                                 1

Physical Therapy 318                                 2

Total 17                                            Total 18

SUMMER SESSION

Physical Therapy 442                                 2

Physical Therapy 452                                 4

Physical Therapy 430                                 4

Physical Therapy 418                                 2

Total 12                                            

SENIOR

Physical Therapy 360                                 Physical Therapy 431

Physical Therapy 380                                 2

Physical Therapy 444                                 3

Physical Therapy 453                                 2

Physical Therapy 454                                 6

Physical Therapy 460                                 1

Total 16                                            Total 15-18

SUMMER SESSION

Physical Therapy 490                                 12

TOTAL HOURS 148

PHYSICAL THERAPY COURSES

Enrollment in courses offered by the Department of Physical Therapy is only allowed by special permission of the faculty and department head.

301 Physical Therapy Skills (1)

To provide the student with basic patient care skills. Topics to be included are critical observation, universal precautions, medical chart review and medical terminology, methods of measuring and recording vital signs, basic wheelchair features, basic crutch gait and transfer techniques, and emergency care, including CPR. Lecture 1 hour, laboratory 2 hours.

310 Gross Anatomy (6)

Details the study of the structure and function of the extremities, the head, neck and trunk. The study of embryology and histology of the organ systems are included. Lecture 3 hours, laboratory 6 hours.

311 Therapeutic Exercise (3)

Provides a basic foundation of the knowledge and skills needed to prescribe and apply therapeutic exercise in the practice of physical therapy. Normal physiology and exercise physiology as it relates to the topics presented will be reviewed. Focus will be on how to perform basic exercises used in physical therapy, as well as the rationale of why and when they are applied. Provide the foundation for therapeutic exercise units within the applied courses (orthopaedics, neurology, acute care) of the curriculum. Lecture 2 hours and lab 2 hours.
314 *Kinesiology* (3)
An introduction to kinesiology by the study of biomechanics, including statics and dynamics, osteo/articular kinematics, and related aspects of muscle mechanics and physiology. Emphasis is on the importance of mechanical principles in relation to analysis of the human body at rest and in motion, both in normal and selected pathological conditions. Lecture 2 hours, laboratory 2 hours.

316 *Anatomy and Physiology of the Nervous System* (5)
Details structure and function of the central nervous system, correlation of the anatomical lesion, and the resultant clinical signs and symptoms. Lecture 3 hours, laboratory 4 hours.

318 *Physical Agents I* (2)
Provide the student with the didactic and clinical applications of selected physical agents used in physical therapy practice. The following physical agents will be covered: superficial heating and cooling agents including whirlpool, deep heating modalities, infrared, and ultraviolet. Lecture 1 hour and lab 2 hours.

320 *Education and Communication* (2)
Major consideration given to planning and implementing the educational aspects of learning. An additional purpose of this course is to help the student learn to establish effective interpersonal relations and communication skills. Emphasis will be placed on assertiveness, learning, and active listening behaviors.

330 *Clinical Education I* (1)
An introductory clinical experience following successful completion of all first semester didactic work of the physical therapy program. The student will work under the direct supervision of a physical therapist to observe the therapist's role in evaluating and treating physical therapy problems. The student will also have the opportunity to apply basic skills and communication and education techniques within die clinical setting. 40 clinical hours. Graded Satisfactory/No credit

331 *Clinical Education II* (2)
This course will follow successful completion of all didactic work of the second semester of the physical therapy program. The student will work under the direct supervision of a physical therapist to apply principles and skills of second semester coursework. In addition, the student will begin to perform integrated findings of evaluation and initiate therapeutic intervention, with emphasis on the extremities, under guidance of a clinical instructor. 80 clinical hours. Graded Satisfactory/No credit.

350 *Musculoskeletal Assessment* (2)
The student will learn the essential steps in the evaluation of function in a patient with musculoskeletal dysfunction. Evaluation skills for the measurement of joint motion, muscle strength, and posture are demonstrated and practiced. Lecture 1 hour, laboratory 2 hours.

360 *Psychosocial Reaction to Disability* (2)
Includes the study of basic concepts and principles essential to the understanding of therapist/patient/family reactions to disabling disorders. Concepts of behavior management, death and dying, life style adaptations, and attitudes toward disability will be presented with respect to their influence on physical, psycho-social, and cultural aspects of an individual's quality of life. The course content will also include discussion of the roles of service professions and agencies and self-help groups in facilitating adjustment to disability.

380 *Scientific Inquiry* (2)
Teaches the importance of the scientific method in physical therapy. (A scientific approach is needed both to understand disease processes and to evaluate the efficacy of different methods of treatment.) The student should be able to examine the evidence for accepted methods of treatment, and to evaluate published research studies, with reference to hypothesis, methodology, conclusions and relevance to physical therapy practice. Prerequisites: Math 210 or PSY 201.

418 *Physical Agents II* (2)
This course will provide the student with the didactic and clinical applications of electrotherapy. Lecture 1 hour and lab 2 hours.

430 *Clinical Education III* (4)
This course follows successful completion of third semester didactic work of the physical therapy program. The student will evaluate signs and symptoms, interpret findings, determine goals and establish and perform appropriate therapeutic interventions. This course will focus on the patient/client with musculoskeletal dysfunction of all age groups. The student will work under the direct supervision of a physical therapist. 160 clinical hours. Prerequisites: 330, 331. Graded Satisfactory/No credit.

431 *Clinical Education IV* (2)
This course will follow successful completion of all didactic work of the fifth semester of the physical therapy program. The student will work under the direct supervision of a physical therapist to evaluate signs and symptoms, interpret findings, determine goals and establish and perform therapeutic interventions of patient/clients of all age groups with neurological dysfunction. 80 clinical hours. Prerequisites: 330, 331, 430. Graded Satisfactory/No credit.

440 *Pathophysiology of the Musculoskeletal System I* (1)
With the aid of case studies, audio-visual support and handouts, this course will survey the clinical correlations of signs and symptoms of dysfunction of the musculoskeletal system, with emphasis on the extremities. The fundamental concepts of histology and disease-producing mechanisms and pathologic processes, emphasizing cellular, tissue, and organ changes in disease will be presented.

442 *Pathophysiology of the Musculoskeletal System II* (2)
With the aid of case studies, audio-visual support and handouts, this course will survey the clinical correlations of signs and symptoms of dysfunction of the musculoskeletal system, with emphasis on the neck and trunk. The fundamental concepts of the histology and physiology of skeletal muscle will be presented. The pathological process of inflammation will be reviewed and wound healing will be introduced.

444 *Evaluation and Treatment of Patients with Neurological Dysfunction I* (3)
This course provides the student with the pathophysiology, didactic and clinical applications of evaluative measures, therapeutic interventions, and treatment rationale for neurological conditions related to spinal cord injury and peripheral neuropathies. Fall semester. Corequisites: 454.

446 *Medical/Surgical Conditions I* (3)
This course provides the student with the didactic and clinical applications of pathology, evaluative measures, therapeutic interventions, and treatment rationale for the following conditions: immune system disorders, rheumatic disease, cancer lymphedema, renal disorders and chronic pain management. ICU treatment is discussed. Corequisites: 456.

450 *Evaluation & Treatment of Patients with Musculoskeletal Dysfunction I* (4)
Provides the student with the didactic and clinical applications of evaluative measures, therapeutic interventions, and treatment rationale for select musculoskeletal dysfunctions, with emphasis on the extremities. Lecture 2 hours and lab 4 hours.

452 *Evaluation & Treatment of Patients with Musculoskeletal Dysfunction II* (4)
Provides the student with the didactic and clinical applications of evaluative measures, therapeutic interventions, and treatment rationale for select musculoskeletal dysfunctions, with emphasis on the neck and trunk. Lecture 2 hours, laboratory 4 hours.

453 *Human Growth and Development* (3)
Investigate the human life cycle from the early embryo to old age. Emphasis will be placed on motor control and learning theory, the study of the principles, processes and phases of physical growth and development, as well as the strengths and limitations imposed on the individual with advancing age. Students will be exposed to preventative “wellness” intervention for both the pediatric and geriatric populations.

454 *Evaluation and Treatment of Patients with Neurological Dysfunction II* (6)
This course provides the student with the pathophysiology, didactic and clinical applications of evaluative measures, therapeutic interventions, and treatment rationale for neurological conditions related to cerebral vascular accident, head injury, cerebellar disorders, demyelinating diseases, neuro-genetic disease, dementia and pediatric conditions. Fall semester. Co: Phyt 444.

456 *Medical/Surgical Conditions II* (5)
This course provides the student with the didactic and clinical applications of pathology, evaluative measures, therapeutic interventions, and treatment rationale for the following conditions: cardiac, vascular, pulmonary, ingotmatory, endocrine, genetic, and metabolic disorders. Corequisites: 446.
Criminal Justice

Dr. Ken Venters, Coordinator

The Criminal Justice program promotes an understanding of the justice systems on the undergraduate and graduate levels to both majors and nonmajors. Emphasis is placed on intellectual, experiential, and problem solving activities. Students acquire conceptual knowledge and learn basic skills, i.e., interpersonal, computer, legal research, for entry level employment in criminal justice systems and social service agencies. At the graduate level, students engage in rigorous study in preparation for managerial and leadership roles throughout the justice system.

Criminal Justice (B.S.)

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written communication in the English language (6 hours)

Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)

Category C: 2 approved behavioral or social science courses (6 hours)

Category D: 1 approved physical or natural science course with laboratory (4 hours)

Category E: 1 approved mathematics course (3 hours)

Category F: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses

33 hours including CJP1010, 1070, through Cleveland State Community College, plus UTC courses 301, 303, 311, 410, 465, 471, 485, and HSRV 405.

One of the following concentrations

1. Corrections:
18 hours including Criminal Justice 312, 314, 330; 6 hour from Sociology, Anthropology, Political Science, Human Services, Social Work, Psychology and 3 hour from Criminal Justice electives.

2. Juvenile justice:
18 hours including Criminal Justice 330, 350, 406; 6 hour from Sociology, Anthropology, Political Science, Human Services, Social Work, Psychology and 3 hour from Criminal Justice electives.

3. Law and the courts:
18 hours including Criminal Justice 325, 405, 408; 6 hour from Sociology, Anthropology, Political Science, Human Services, Social Work, Psychology and 3 hour from Criminal Justice electives.

4. Law and the enforcement:
18 hours including Criminal Justice 300, 310, 400; 6 hour from Sociology, Anthropology, Political Science, Human Services, Social Work, Psychology and 3 hour from Criminal Justice electives.

2.0 average in all Criminal Justice and Criminal Justice Program (CSCC) courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

*CSCC paralegal courses may not be taken during the last 60 hours.

School of Social and Community Services

Dr. Reginald S. Avery, Director

The School of Social and Community Services consists of applied fields of study which share a multidisciplinary perspective towards the development of qualified professionals for careers in social and community service programs. The school provides undergraduate and graduate students with the knowledge and skills necessary to become effective providers and administrators of community service. The school, consisting of the programs of criminal justice, human services and allied health management, legal assistant studies, social work, serves as the focal point for the extension of the university into the non-profit and public sector. Faculty of the school pursue an interactive relationship with surrounding metropolitan and rural agencies while delineating and using this natural laboratory for intellectual, practical, and empirical growth of students and themselves.
Typical course of study in criminal justice (B.S.)

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**SOPHOMORE**

| General Education Category B | General Education Category B |
| General Education Category F | Concentration                |
| **Total**                   | **Total**                   |
| 3                            | 15                          |

**JUNIOR**

| Criminal Justice 301         | Human Services 405 |
| General Education Category B | Electives           |
| General Education Category F |                 |
| **Total**                   | **Total**           |
| 3                            | 15                          |

**SENIOR**

| Criminal Justice 471         | Criminal Justice 485 |
| Electives                   |                 |
| **Total**                   | **Total**         |
| 6                            | 15                          |

**TOTAL HOURS 128**

'CJP Cleveland State criminal justice consortium courses. See UTC Criminal Justice Faculty for advisement.

'Electives may be taken from any academic program.

**CRIMINAL JUSTICE MINOR**

Criminal Justice: Legal Environments
18 hours including Criminal Justice 301, 325,485; 3 hours from Criminal Justice 400, Political Science 322 or 323, Sociology 420; 3 hours from Communication 451, Criminal Justice 405 or 406, Environmental Studies 410, Social Work 305; and 3 elective hours in Criminal Justice at the 300 or 400 level. Criminal Justice majors may not elect this minor.

Minimum 2.0 average in the minor.

**CRIMINAL JUSTICE COURSES**

190r Institute in Criminal or Juvenile Justice (1-4)
Current topics in criminal and juvenile justice. Special programs, workshops, demonstration, and in-service courses. On demand.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.

200 The Criminal and Society (3)
Historical and contemporary perspectives on the interaction between the criminal and society. Focus on the citizen's role as crime preventor, victim, and supporter of criminal activities. Every semester.

201 Violence in America (3)
An historical investigation into violence in America and the evolutionary response of criminal justice agencies. Every semester.

275 Drugs: The Law and the Community (3)

300 Psychology of Law Enforcement (3)
Psychology as applied to processes of communication among police and those individuals and groups with which they come in contact. Spring Semester.

301 Information Systems in Criminal and Juvenile Justice (3)
An introduction to information management tools and processes of accountability as they relate to the two systems of justice. Fall semester.

303 Comparative Criminal and Juvenile Justice Systems (3)
An examination of these two systems of justice as they function in other countries. Every semester.

310 Law Enforcement in Criminal and Juvenile Justice (3)
An examination of specific law enforcement problems as they relate to criminal justice and juvenile justice. Every semester.

311 Criminal Justice Research Methodology (3)
Examination of the contemporary philosophy and techniques of research as applied in the criminal justice field, formerly CRMJ 431/Every semester. Pre or Corequisite: A statistics course

312 Correctional Perspectives in Criminal and Juvenile Justice (3)
The development of priorities, goals, and standards for the correctional field. Fall semester.

313 The Volunteer in Criminal and Juvenile Justice (3)
An examination of the role of the citizen volunteer in the two systems of justice. On demand.

314 Correctional Casework (3)
The application of counseling and interviewing techniques and theory to the correctional client. Spring semester.

315 Prisoner's Rights (3)
Examination of the regulation of individual and collective behavior and the rationale for such restrictions during a period of confinement in a penal or mental institution. On demand.

316 Blacks and Criminal Justice (3)
Discussion of the black offender and the black criminal justice professional from the black perspective. On demand.

317 Minorities and Criminal Justice (3)
This course involves a critical analysis of multicultural, intergroup relations in the United States. It is intended to help students gain increased understanding of how race, ethnicity, gender, social status, age, occupation, etc., are related to the myriad of problems confronting social relations and the workings of the criminal justice system. On demand.

320 Advanced Administration in Criminal and Juvenile Justice (3)
Theory and practice of the administration of criminal justice system components. Every semester. Prerequisite: CJP* 1050 (or 105) or approval of instructor.

325 Law and Justice System (3)
An examination of criminal and civil law to emphasize the full range of the legal system and its application to everyday life. Every semester.

330 Probation and Parole (3)
An examination of the theory and practice of probation and parole with juvenile and adult offenders. Fall semester.

350 Juvenile Institutional Services (3)
An historical perspective of the evolution of juvenile institutions and their present day applicability and use. Spring semester.

360 Correctional Institution (3)
Examination of the history, development and current status of institutional corrections in the juvenile and adult criminal justice systems of the United States, including detention center, training schools, jails and prisons. On demand.

400 Constitutional Law (3)
An examination of the leading constitutional principles pertaining to modern criminal procedure. Fall semester.

402 Organized Crime (3)
The effect of organized crime on the community, the government, legal systems, and the individual; and methods of combating organized crime. On demand.
405 Advanced Criminal Law (3)
Common and statutory law of crimes including national developments and trends, inchoate offenses, and defenses to crime. Fall semester. Prerequisite: CJP* 1070 (or 112) or approval of instructor.

406 Advanced Juvenile Law (3)
Statutory and case analysis of judicial decisions, substantive juvenile law and procedures significant to practices of various agencies in juvenile justice. Spring semester. Prerequisite: CJP* 2210 (or 212) or approval of instructor.

408 Advanced Criminal Procedure (3)
Examination of the major legal and constitutional protections of the accused from initiation of investigation through post-conviction relief. Spring semester. Prerequisite: CJP* II10 (or II13) or approval of instructor.

410 Theories of Criminal and Delinquent Behavior (3)
An analysis of theory and research on epidemiology and etiology of crime. Every semester.

420 Administrative Advocacy (3)
Examination of a case for presentation to an administrative law court; review of record, legal research, preparation of a brief, and presentation of oral argument. On demand. Prerequisite: 301.

425 Gender, Crime and Criminal Justice (3)
This course is intended to provide an overview of women's involvement in the criminal justice system, as offenders, victims and professionals. Considerable attention will be given to women as victims of crime, the social system and the criminal justice process. On demand.

430 Philosophical and Ethical Issues in Criminal Justice (3)
An investigation into the implications for criminal justice theory and practice of selected philosophical positions and perspectives. On demand. Prerequisite: at least one course at the 200 level or above in either philosophy or religion, or approval of instructor.

460 Dispute Resolution (3)
Alternatives to the courts for conflict resolution, including negotiation, mediation and arbitration. Discussion of legal issues, advantages and limitations of the alternatives. Laboratory exercises in applying these methods. On demand. Prerequisite: Completion of Category C.

465 Crisis Intervention (3)
Study of the theoretical bases for accurately assessing crisis situations and a guided practicum in techniques of crisis intervention. Every semester.

470, 471 Internship in Criminal or Juvenile Justice (3,6)
Supervised internship in a criminal justice agency. Admission to 470 or 471 requires written application filed with the internship coordinator no later than three months prior to the semester in which the student plans to enroll. Formerly CRMJ 450. Every semester. Prerequisite: Criminal justice major, junior standing, and approval of instructor. Courses may be taken concurrently or consecutively.

485 Integrative Criminal Justice Systems Seminar (3)
Discussion of selected system-wide problems and topics in criminal justice. Research and oral presentation by the student. Formerly CRMJ 450. Every semester. Prerequisites: senior standing, criminal justice major, methodology course.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.

CONSORTIUM COURSES
UTC has entered into a criminal justice consortium agreement with Cleveland State Community College. Under this agreement, all required criminal justice courses at the freshman and sophomore levels - CJP 101 and 1070 - are taught by Cleveland State, and all courses at the junior and senior levels are taught by UTC. For the convenience of UTC students, Cleveland State Community College offers on the UTC campus these required courses listed below, and they are accepted as transfer credit. Questions concerning advisement and registration for Cleveland State courses should be directed to the School of Social and Community Services.

CJP 1010 Overview in Criminal Justice Systems (3)
Criminal justice administration emphasizing roles of police, courts, corrections and juveniles. 3 hours per week. Formerly CJP 101.

CJP 1070 Criminal Law (3)
Substantive aspects of criminal law, including general principles applicable to criminal conduct; specific analysis of particular crimes and substantive defenses to crimes. 3 hours per week. Formerly CJP 112.

*CJP-Cleveland State criminal justice consortium courses.

Human Services

Dr. Marvin Ernst, Coordinator

The human services programs are intended as basic preparation for entry level supervisory and managerial positions in public and private organizations which provide a broad spectrum of human and community services.

Human Services: Management (B.S.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than human services (6 hours; approved related course below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course other than human services (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses

Psychology C101 and Psychology 221 or 222
9 hours from the following cognate areas: economics, political science, psychology (above courses not applicable), social work, sociology/anthropology (Behavioral science courses used for general education purposes may not satisfy this requirement, but behavioral science courses listed below may count)
3 hours from the following: Management 315 (required)
6 hours from the following: Management 330, 332; Sociology 317; Political Science 223
3 hours of research or statistics from Mathematics F210; Sociology 314; or equivalent approved course
24 hours human services including: 101, 202, 301, 330, 405, 410, 440, 450
9 hours from the following Human Services 470 and 471 or 472, 474, and 471; Political Science 47 lr
2.0 average in all human services courses and Business Management 315

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Typical course of study in human services (B.S.): management

### FRESHMAN

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**TOTAL HOURS 128**

### HUMAN SERVICES COURSES

#### 100 Human Perspectives Study Laboratory (1 hour institutional credit)
A study skills laboratory course designed to improve reading, writing, and thinking skills in the behavioral sciences. Although the general improvement of college level study skills is fostered, particular attention is paid to those skills as they relate to HSRV 101. Credit not applicable toward any degree. Corequisite: HSRV 101.

#### 101 Human Perspectives (3)
A multidisciplinary introduction to behavioral science findings which examines the interaction between the social systems and human development. Assumptions concerning Americans, the systems in which they live, and the resulting impact on social policy decisions are explored. Every semester.

#### 199r Special Projects (1-4)
Individual or group projects. Every semester. Prerequisite: approval of the department head. Maximum credit 4 hours.

#### 202 Human Services Organizations in Urban Society (3)
A study of aspects of the human services system that have evolved as a response to the characteristics of urban society, and the organizations which function as components of the system. (Formerly 102.) Spring semester.

#### 204 Women, Work, and Society (3)
The impact of the women in the workforce upon women, families, and societal institutions. A close study of the cultural factors (historical, economic, social, and psychological) as they pertain to modern attitudes, beliefs, and practices concerning working women. Prerequisite: English 122 or equivalent.

#### 300 Perspectives on Work and Professions (3)
A multidisciplinary examination of the social, ethical, political, and psychological environment of work and the professions. Emphasis on the historical development of the meaning and effect of work on the organization and development of various work structures and processes. Every semester. Prerequisite: English 122.

#### 301 Social Change and Social Policy (3)
A cross-disciplinary examination of basic theories of social change. Analysis of social indicators as determinants of social policy for effecting social reform in the United States. Fall semester.

#### 330 Program Planning and Evaluation (3)
Models of program planning and evaluation; emphasis on knowledge leading to basic competence in design and monitoring of human services programs. Spring semester.

#### 405 Interpersonal Skills Laboratory (3)
A supervised laboratory experience designed to enhance the student's development of communication skills, interpersonal functioning, and the understanding of group processes. Every semester. Prerequisites: 6 hours of behavioral sciences and junior standing.

#### 410 Fund Raising and Fiscal Management in Human Services Settings (3)
Fiscal administration in nonprofit and governmental settings. Financial structures of nonprofit agencies; techniques of fundraising, budgeting, and budget control as tools for accomplishing program objectives. Prerequisites: Business Management 315, junior standing.

#### 440 Human Services Supervision (3)
Concepts and techniques appropriate to supervision in human services and governmental agencies and organizations. Fall semester. Prerequisite: Management 315 plus one of the following: Management 330, 332; Sociology 317; Political Science 223; or approval of instructor.

#### 450 Seminar in Human Services Administration (3)
Administrative procedure, processes, planning, and decision-making in human services and governmental settings. Spring semester. Prerequisite: 440 or approval of instructor.

### Human Services: Allied Health Management (B.S.)

**General Education** (see pages 22-24 for list of approved courses)

- **Category A**: 2 approved courses in written communication in the English language (6 hours)
- **Category B**: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
- **Category C**: 2 approved behavioral or social science courses other than human services (6 hours; approved related course below will apply)
- **Category D**: 1 approved physical or natural science course with laboratory (4 hours)
- **Category F**: 1 approved mathematics course (3 hours; approved related course below will apply)
- **Category G**: 1 approved perspectives course other than human services (3 hours)

### Exercise Science, Health and Leisure Studies 021 plus one additional semester

### Major and related courses

Licensure or registry in an American Medical Association approved allied health specialty required for admission to this concentration

- Philosophy 425 or Sociology 365

12 hours including Business Management 315, Mathematics F210 or Sociology 314, Psychology C101, Psychology 221 or 222 or 223

23 hours including Human Services 101, 301, 330, 405, 410, 440, 450, 471

12 hours in approved allied health clinical courses from a community college

7 additional hours in approved allied health clinical courses in lieu of Human Services 470 for students licensed or certified in the field with a minimum of two years of experience as a practitioner

2.0 average in all human services courses and Business Management 315

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours (the last 60 hours must be completed at four-year institutions with the last 30 hours at UTC)
470 Full-time Field Instruction (7) Supervised internship in a human services setting related to a student's academic and career goals. Admission must be obtained from the director of field placement at least 90 days prior to enrollment in die course. In addition, Human Services: Management majors must present evidence of a minimum 2.0 overall grade point average, fulfillment of writing requirement, and completion of Human Services 440 before enrolling in Human Services 470. Spring semester. Prerequisites: 440, approval of the coordinator of field placement, and senior standing; pass writing requirement. Corequisite: 47r (2 hours). Graded on a satisfactory/unsatisfactory basis. Maximum 7 hours total in field placement. 471r Field Seminar (1-2) Concurrent integrative seminar emphasizing issues common to field experience setting. Spring semester. Two hours maximum. Prerequisite: Pass writing requirement. Corequisite: Human Services 470, 472, or 474. 472, 474 Part-time Field Instruction (4) (3) Spring semester. See Human Services 470 description. Corequisite: Human Services 471r (1 hour). Maximum 7 hours total in field placement. 495r Departmental Honors (1-3 hours per term, 4 hours for the two terms) On demand. See “Departmental Honors,” page 27. 497r Research (1-4) Every semester. 498r Individual Studies (1-4) Every semester. 499r Group Studies (1-4) On demand.

Legal Assistant Studies

Assistant Professor Robert Meyers, Coordinator

The University of Tennessee at Chattanooga’s Bachelor of Science with a major in Legal Assistant Studies is designed for students who wish to enter the legal field and work toward a high-quality bachelor’s degree. The program also welcomes students who hold a two-year degree or who have had some legal and/or college courses. Students in the program must complete the University General Education requirements or transfer the equivalent and 53 hours of Legal Assistant Studies course work and electives to total a minimum of 128 hours. The program has a 29 hour core of required courses and 42 hours from the specialty areas of which 12 hours are selected from the Legal Assistant Studies program, and 12 hours are selected from specified courses in other programs on campus with no more than six of these 12 hours at the 300 or 400 level from any one discipline.

Continuation and Graduation Standards:

In view of the nature of legal assistance and the fact that individual rights may be affected by individuals providing legal assistance, the following standards will be applied by the Legal Assistant Studies faculty:

1. To progress in Legal Assistant Studies, students are required to:
   a) maintain a 2.5 (4.0 = A) grade point average in all legal assistant studies courses, and;
   b) maintain an active liability insurance policy for the legal assistant practicum.

2. If in the judgment of the faculty there is a reason to question the academic, emotional, ethical, or professional fitness of a student, the faculty have the right to make recommendations regarding continuation in the program.

3. Students who fail legal assistant studies courses may not be allowed to progress in the program. Students may only repeat a Legal Assistant Studies course(s) one time.

Transfer Student

Transfer students majoring in Legal Assistant Studies must take a minimum of 15 hours form approved Legal Assistant Studies courses at The University of Tennessee at Chattanooga.

Legal Assistant Studies (B.S.)

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category E: 1 approved mathematics course (3 hours)
Category F: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses

Computer Science 110 or approved equivalent
53 hours including 29 hours from Legal Assistant Studies core courses; 101, 210, 235, 330, 390, 435, 470, 471; and 24 hours including 12 hours from Legal Assistant Studies 220, 225, 230, 240, 245, 300, 450, 497r, 498r, 499 and 12 hours form Political Science 221, 321, 322, 323, 421; Criminal Justice 325, 400, 405, 406, 408, 420, 430, 460; Social Work 305; BAccounting 201, 202, 307, 335, 336; BFinance 372; English 277; Environmental Sciences 410; Philosophy 425. No more than six of these 12 hours at the 300-400 level from anyone discipline.
2.0 average in overall, 2.0 UTC average and 2.5 average in Legal Assistant Studies

Minimum of 15 hours LAS courses at UTC.
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours.

Typical course of study in legal assistant studies (B.S.)

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<th>First Semester</th>
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<tr>
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LEGAL ASSISTANT STUDIES COURSES

101 Law and The Legal Assistant (3)
Introduction to the study of law and the legal system the legal assistant in the legal system; an overview of the skills of the legal assistant including legal interviewing, investigating and professional ethics. Every semester.

210 Legal Research and Writing (4)
Introduction to primary and secondary legal sources including federal and state court reports; legal digests and Shepard's annotated law reports; federal administrative law; legal periodicals with indices; treatises and restatements; and research aids. Fall semester.

220 Real Property Law (3)
Review of substantive law relating to real estate transactions. On demand.

225 Commercial Law (3)
Introduction to the execution, validity and enforcement of contracts, mortgages, pledge assignments and other security devices. Overview of federal and state law regulating consumer credit and collection procedures. On demand.

230 Estate and Trust Law (3)
Introduction of Tennessee substantive law of successions and dominions, including wills and estate administration. On demand.

235 Litigation I (3)
Introduction and analysis of the litigation process in federal and state courts. Lectures are supplemented with drafting practice. Spring semester.

240 Business Organizations (3)
Analysis of sole proprietorship, partnerships and corporations from a legal perspective. On demand.

245 Family Law (3)
Review of substantive law relating to marriage, children and property. On demand.

250 Personal Injury Practice (3)
An examination of tort, workmen's compensation and insurance law as it relates to personal injury. Prerequisite: LAS 210

300 Interviewing and Investigation (3)
An in-depth study of principles, methods and investigative techniques utilized to locate, gather, document and disseminate information. The emphasis will be on developing interviewing and investigating skills intended to prepare the legal assistant to communicate effectively. On demand.

330 Legal Computer Applications (3)
Orientation, examination, and demonstration of computer hardware and software available for use within the law office, and identification of potential applications for computerized solutions to law office needs. Fall semester. Prerequisite: CPSC 110.

340 Law Office Management (3)
A study of the techniques and approaches to the efficient operation of a law office. Prerequisite: LAS 330.

350 Law of Evidence (3)
Introduction to the law of evidence in Federal and State (Tennessee) Courts including the purpose and construction; burden of proof; admissibility and presumptions; relevancy; privileges and hearsay. Prerequisite: LAS 235.

390 Advanced Legal Research and Writing (4)
Utilization of traditional and computerized legal research methods in written assignments. Emphasis is on the analysis of fact situations, methods of effective research and use of legal materials in working practical problems; examination of basic and advanced search techniques using the major legal databases Lexis and Westlaw. Spring semester. Prerequisites: 210, 330.

435 Litigation II (3)
Detailed analysis and practice of pretrial discovery, pretrial motions, evidence, trial preparation, assistance at trial trial motions and post-trial motions. Fall semester. Prerequisite: 235

450 Maritime Law (3)
Review of substantive maritime law and its procedural application to federal and state regulations. Prerequisite 235. On demand.

470 Legal Assistant Practicum (6)
Practicum to give the student experience in a selected area of legal specialization under the supervision of an attorney. Legal Assistant ethics are discussed. Every semester. Prerequisite: senior standing or approved of coordinator.

471 Legal Assistant Seminar (3)
An integrative seminar emphasizing ethical and related issues common to legal assistant theory practice and procedures. Prerequisite: senior standing or approval of coordinator. Spring semester.

497r Independent Research (1-4)
On demand.

498r Independent Studies (1-4)
On demand.

499r Special Topics (1-4)
On demand.

Social Work

Dr. Reginald S. Avery, Acting Coordinator

The social work program prepares professional social workers for beginning practice as social work generalists capable both of functioning in a variety of agency and community settings and of practicing with diverse populations. The curriculum provides theory and skill for working with individuals, families, groups, organizations, and communities. The social work program is accredited by the Council on Social Work Education.

Admission Policies

Enrollment in the social work program is limited. Application alone will not insure admission. Students pursue the Bachelor of Social Work degree. Students wishing to enter the social work program should designate presocial work as their major. Once this declaration has been made the student will be assigned to social work faculty for advisement. Presocial work majors are required to fulfill the following for admission to the social work program:

1. Earn a 2.0 cumulative grade point average in 45 semester hours which include the following prerequisite courses:
   - Biology 121
   - Sociology 151 or Human Services 101
   - Psychology 101
   - Political Science 101
3. Complete personal interview with a social work faculty member.

4. The Social Work Admissions and Continuation Committee (SWACC) reviews applicants and makes recommendations. The decisions of the SWACC are given to applicants in writing.

5. Upon acceptance in the department and completion of Social Work 300 students will file for field placement. All field placement assignments are made by the director of field instruction. In the event that more qualified students submit applications than there are vacancies, the Social Work Admissions and Continuation Committee reserves the right to apply additional screening procedures.

Continuation Standards
The committee will review cases involving the academic, emotional, ethical, and professional fitness of social work students and will make recommendations regarding continuation in the program.

When majors complete the necessary prerequisites and present a grade point average of 2.5 in the major, they should submit written application to the SWACC for admission to the Advanced Social Work Methods course (Social Work 404) and Field Instruction II (Social Work 470). The application for both courses should be filed at least 90 days prior to the beginning of the semester in which these courses will be taken.

The student will be notified in writing of the SWACC’s recommendations. All recommendations of the SWACC are subject to review by the coordinator of the Social Work Program, who may grant exceptions when deemed desirable or necessary. A G.P.A. of 2.5 in the complete major will be required for graduation.

Social Work (B.S.W.)
General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each; approved related course below will apply)
Category C: 2 approved behavioral or social science courses other than social work (6 hours; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours; approved related courses below will apply)
Category F: 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course other than social work (3 hours; approved related course below will apply)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
43 hours social work core including 150, 205, 300, 301, 303, 304, 305, 370, 371, 404, 406, 470, 471

37 hours cognate courses including Psychology C101 and one additional 3 hour course in psychology, Sociology C151 or Human Services C101, Anthropology G208, English 277 or 279 or 300, Biology D121, Sociology 305, Psychology 308, Philosophy B221 or 322 or B425, Political Science C101, and Economics C101, and an approved introductory statistics course (Mathematics F210 recommended)

2.5 average in major and cognate courses combined

Minimum of 30 hours of 300 and 400 level courses
Electives to complete-128 hours.

Typical course of study in social work (B.S.W.)
Any required cognate course that meets general education requirements may be used to fulfill both the major requirements and general education requirements.

First Semester | Second Semester
--- | ---
FRESHMAN | | |
General Education Category A | 3 | General Education Category A | 3
General Education Category B | 3 | Political Science C101 | 3
Social Work 150 | 4 | Psychology C101 | 3
Human Services C101 or Sociology C151 | 3 | Economics C101 | 3
Elective | 3 | General Education Category F | 3
Total | 16 | Total | 16

SOPHOMORE | | |
Statistics | 3 | General Education Category B | 3
Social Work 205 | 3 | Social Work 300 | 3
Anthropology G208 | 3 | Philosophy B221 or 322 or B425 | 3
EHLS Activity | 1 | English 277 or 279 or 300 | 3
Biology D121 | 4 | Electives | 3
Electives | 3 | Total | 17
Total | 16 | Total | 16

JUNIOR | | |
Social Work 305 | 3 | Social Work 303 | 3
Psychology 308 | 3 | Social Work 301 | 3
Psychology Elective | 3 | Sociology 305 | 3
Elective | 9 | Elective | 7
Total | 18 | Total | 16

SENIOR | | |
Social Work 304 | 3 | Social Work 404 | 3
Social Work 370 | 4 | Social Work 406 | 3
Social Work 371 | 2 | Social Work 470 | 6
Electives | 6 | Social Work 471 | 2
Total | 15 | Total | 14

TOTAL HOURS 128

*Apply for admission to Social Work major.

*File for Advanced Field and Methods.

SOCIAL WORK MINOR
19 hours of Social Work courses including 150,205,301 and 9 hours of electives. Elective hours may not include Social Work 300,304,370,371,404,470,471. Minimum 2.0 average in die minor.
Social Work majors may not elect this minor.

SOCIAL WORK CORES
100 Volunteerism and Civic Responsibility (2)

102 Volunteer Community Experience (1-2)

150 Introduction to the Field of Social Welfare (4)
An introduction and orientation to selected social welfare professions. An examination of the history and recent trends in social work and related fields. A minimum of 45 hours of observation and supervised volunteer service in appropriate settings required. Every semester.
160 Sign Language with the Deaf (3)
A beginning analysis of the effect of deafness on communication and introduction of sign language for communication with the deaf. Every semester.

199r Special Topics (1-4)
Individual or group projects. On demand. Prerequisite: approval of department head. Maximum credit 4 hours.

204 Explorations in Human Relations (3)
A systematic examination and analysis of social and psychological phenomena occurring in human transactions. Development of essential knowledge of affective behaviors, relations with others, and the dynamics of communication processes. Every semester.

205 Social Welfare Policy and Programs (3)
Survey of social welfare programs with emphasis on policy description, formation, and analysis. Attention given to historical development and present structure. Every semester. Prerequisite: 150, Political Science 101, Economics 101

210 Comparative Studies in Minority Family Life (3)
A systematic examination of variations in the family through a comparative analysis of select racial and ethnic minority families. Every semester.

250 Charity in Western Civilization (3)
An historical examination of the structure and philosophy of man's response to the needy in Western civilization. Every semester.

300 Basic Skills for Social Work Practice (4)
Fundamental skills and theory for practice in the field of social work. Emphasis upon communication skills, informational systems, organizational structure, policy, and their impact upon role execution. Every semester. Prerequisite: 205 Not open to pre-social work students.

301 Human Behavior in the Social Environmental (3)
Examination of the various levels of human growth, development, and behavior with a focus on person-environment interaction. Every semester. Prerequisites: 205, Anthropology 208, Psychology 101, Biology 121, Sociology 151 or Human Services 101. Not open to pre-social work students.

303 Introduction to Applied Research (3)
An examination of the role of research, its functions in identifying needs, describing and evaluating programs, analyzing processes, and predicting results. Prerequisites: 205, an approved introductory statistics course (Formerly 400).

304 Introduction to Social Work Methods (3)
An introduction to the methods, procedures, value orientations, and functions common to social work practice. Consideration of the relationship of such methods and procedures to crises in social functioning and human development. Fall semester. Prerequisites: 205, 300, 301. Corequisites: 370, 371.

305 Legal Issues in Social Work (3)
Identification and analysis of common legal issues and problems encountered by the professional social worker. Fall semester. Prerequisite: English 277 or 279 (or former 200) or 300.

311 Interviewing in the Helping Professions (4)
An in-depth examination of the interview process, focusing on information-gathering, appraisal, and therapeutic interviews. Emphasis on developing proficiency in interview procedures essential to effective performance, to select specialty interviewing situation, to special populations, and to special aspects of interviewing. Fall semester, alternate years. Lecture 3 hours, laboratory 2 hours.

315 Child Welfare Services and Policies (3)
An examination of contemporary issues and questions in the field of child welfare will emphasize upon child abuse and neglect (both institutional and parental), child care, health, adoptions, and services to the unwed parent and the out-of-wedlock child. On demand.

320 Introduction to Social Group Work Practice (3)
An introduction to theoretical frameworks for using social groups as mediums to bring about individual and group social treatment; identification and examination of group development and processes will specific reference to principles for social group work practice. On demand.
Focus on the many losses associated with everyday living for the elderly, including such events as nursing home placement, death, separation, and aging with emphasis on intervention skills for the service provider. On demand.

An examination of the objectives and methods of social work supervision. On demand.

This course is designed to acquaint students with problems and issues facing communities in the United States and identify and analyze theories and methods related to community organizing, social action, and community development. In addition, the role of Social Work in responding to the problems and needs of communities will be discussed.

Advanced field instruction in a supervised social work setting. A minimum of 20 hours per week required in such setting. Students must demonstrate necessary knowledge and skills required for beginning practice. Concurrent 2-hour integrative seminar emphasizing issues common to field experience. Spring semester. Prerequisites: 303, 304, 370, 371; Corequisites: 404, 471. Not open to pre-social work major.

An advanced integrative seminar emphasizing issues common to social work theory, methods, and field experience. Spring semester. Prerequisites: 303, 304, 370, 371; Corequisites: 404, 470. Not open to pre-social work major.

On demand. See “Departmental Honors,” page 27

On demand. Prerequisite: approval of department head.

On demand. Prerequisite: approval of department head.

On demand. Prerequisite: approval of department head.

The School of Nursing is approved by the Tennessee Board of Nursing and is accredited by the National League for Nursing.

Students must meet the same admission requirements as all other applicants to the University. Academic advising for all students declaring prenursing or nursing majors must be done by a member of the nursing faculty.

Enrollment in the nursing major is limited. Admission to the University does not ensure acceptance into the nursing major.

The School of Nursing has identified the skills and professional behaviors that are essential to pursue a course of study to be eligible to write the National Council Licensure Examination-R.N. and practice as a professional nurse. In order to progress in the nursing curriculum, a student must possess a functional level of capability to perform the duties required of a professional nurse. The essential eligibility requirements for participation in the nursing program are identified as Core Performance Standards.

These standards are adopted from the Southern Council on Collegiate Education for Nursing and are congruent with the skills presented in the document entitled Essentials of College and University Education for Professional Nursing, a publication of the American Association of Colleges of Nursing. If these standards cannot be achieved by the student, either unassisted or with the dependable use of assistive devices, the faculty reserves the right to exclude the student from clinical areas. Potential students are provided copies of the Core Performance Standards upon request. A copy of the Essentials of College and University Education for Professional Nursing is available for review in the school’s Office of the Director.

Admission to the Nursing Major (for non- RNs)

Students desiring admission or readmission to the nursing major must submit a completed written application on forms available from the School of Nursing. Candidates for Nursing 205 must make formal application prior to the published deadline. Readmission or transfer students should submit written application three months prior to the desired enrollment date. Enrollment is limited and the number of qualified applicants exceeds the number of students who can be admitted. Selection by the academic affairs committee is based upon an evaluation of the following factors:

1. Completion of credit hours required for sophomore classification including the following prerequisite courses with no grade lower than a C and a minimum grade point average of 2.5 on a 4-0 point scale at UTC.

2. Students who have credit for chemistry, microbiology, or physiology which was received 10 years prior to admission to the nursing major must either repeat or test out of these courses.

3. Physical and emotional characteristics appropriate for nursing practice.

4. Science competency. The nursing major includes a strong biophysical science component; therefore, individuals who have repeated any science course may be considered on a selected basis only.

5. Preference will be given to applicants who have completed their prerequisite courses at UTC.

Candidates will receive written notification of their admission status. Individuals who are not accepted for a given class, and who desire to be considered for the next class, must reapply.

The faculty in the School of Nursing reserve the right to make exceptions to the admission requirements. Written requests for exceptions to admission requirements, supported by evidence of extenuating circumstances, will be considered by the academic affairs committee after an official application for admission to the School of Nursing has been filed.

Acceptance of transfer and substitute credits in nursing to meet requirements of the curriculum will be determined by the school faculty. A student who transfers into the nursing program at UTC will be required to repeat any nursing or other required courses which are not considered comparable to the UTC curriculum or in which the grade earned is lower than a C. Transfer students must meet the same standards as other students in the program.
Expenses and Transportation
In addition to regular education costs, nursing students must meet the following expenses: uniforms, standardized test fees, and yearly liability and health insurance. Some nursing courses require lab fees. Since clinical experiences in nursing are obtained in a variety of health care settings in local and remote areas, students are individually responsible for transportation to these sites. Students enrolled in Nursing 430 should anticipate a 40 hour per week clinical experience for five weeks.

Insurance and Health 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 students must have health insurance and must participate in the school's liability insurance program or provide evidence of professional liability insurance. Specific information concerning these requirements will be provided to the students at appropriate times by the nursing faculty.

Licensure
Upon successful completion of the baccalaureate program in nursing, including attaining a score of 75 percent or higher on standardized nursing achievement test, and upon certification by the faculty and director that the student possesses the necessary attributes for entering the nursing profession, graduates will be eligible to write the National Council of State Boards of Nursing Licensure Examination. Persons previously convicted of a felony may not be permitted to write the NCLEX exam.

Continuation Standards (for non-RNs)
In view of the nature of nursing and the fact that maintenance and quality of human life may be adversely affected by individuals providing nursing care, the following standards have been adopted and are applied by the nursing faculty.

1. To progress in nursing, students are required to: a) make a minimum grade of C in all nursing and required courses (exclusive of electives); b) maintain a cumulative grade point average of 2.0; c) maintain an active liability insurance policy for clinical courses; and d) maintain current CPR certification, and School of Nursing health requirements.

2. Students who fail any portion of a clinical course series* may repeat the failed course(s) one time. Additional failure in any portion of a clinical course series will result in dismissal from the nursing program.

3. Students who fail non-clinical courses may be denied progression in the program.

4. Students who do not complete a course, or who make a grade below "C", and who are eligible to repeat a course, are permitted to register for that course on a space-available basis.

5. If in the judgement of the professor there is reason to question the emotional or physical condition of a student or the safety or quality of nursing care provided, the professor has the right and obligation to exclude the student from the clinical area. The incident or reason underlying such an action shall be brought to the attention of the course faculty on or before the next clinical day. The student will receive written notification of the recommendation of the course faculty. Should the decision be unacceptable to the student, he/she may appeal to the director, and thereafter in accordance with University policy.

6. Exceptions to the above policies may be made at the discretion of the academic affairs committee or the director of the School of Nursing.

*Clinical courses series includes Nursing (205, 206), (314,315), (318,319,320), (414,415,416), (418,419,420), (430).

Gateway Program for Registered Nurses
The Gateway Program is a flexible curriculum which enables registered nurses to obtain baccalaureate degrees in nursing while maintaining their roles in careers and families. Planned with the mid-career RN in mind, the Gateway Program is individualized and allows maximum college credit for previous educational experiences. The prospective RN student is encouraged to seek advisement from the RN Coordinator and transcript evaluation from the Records Office prior to embarking upon this program of study.

Admission to the Nursing Major (for RNs)
1. Provide proof of current registered nurse licensure.
2. Complete an application for admission to UTC. General university requirements for admission to UTC must be met. Transcripts from high school and all postsecondary education must be submitted at the time of application.
3. Show eligibility to return to the last educational institution attended and meet UTC’s continuation standards (see UTC undergraduate catalog).
4. Successfully complete the following prerequisites:
   a. English 121
   b. English 122
   c. Math 106 or equivalent
   d. ACT-PEPs or the equivalent clinical courses in the upper division of a four-year college or university.
5. Show a C average on all postsecondary courses.

Continuation Standards (for Gateway Program)
1. Students must be admitted to the nursing major before taking
   a. Nursing Research(321)
   b. Community Health clinical sequence (414, 415,416)
   c. Issues in Nursing (417)
   d. Leadership in Nursing (421)
2. To progress in nursing, students are required to:
   a. Make a minimum grade of C in all nursing and required courses (exclusive of electives)
   b. Maintain a cumulative grade point average of 2.0
   c. Maintain current immunizations and CPR certification
3. Provide proof of a physical examination within the year, updated immunizations according to the infection control policy and obtain liability insurance from UTC prior to taking clinical courses.
4. A student who transfers into the nursing program at UTC will be required to repeat any nursing or other required courses which are not considered comparable to the UTC curriculum or in which the grade earned is lower than a C.
5. Students who fail any portion of a clinical course series* may repeat the failed course(s) one time. Additional failure in any portion of a clinical course series will result in dismissal from the nursing program.

6. If in the judgement of the professor there is reason to question the emotional or physical condition of a student or the safety or quality of nursing care provided, the professor has the right and obligation to exclude the student from the clinical area. The incident or reason underlying such an action shall be brought to the attention of the course faculty on or before the next clinical day. The student will receive written notification of the recommendation of the course faculty. Should the decision be unacceptable to the students, he/she may appeal to the director and thereafter in accordance with university policy.

7. Students who fail non-clinical courses may be denied progression in the program.

8. Exceptions to the above policies may be made at the discretion of the academic affairs committee or the director of the School of Nursing.

*Clinical course series include Nursing (205, 206), (314, 315), (318,319,320), (414,415,416), (418,419,420), (430).

Nursing (B.S.N.)

General Education (see pages 22-24 for list of approved courses)

Category A: 2 approved courses in written-communication in the English language (6 hours)
Category B: 3 approved courses, one from humanities, one from fine arts, and one from either (9 hours approved related courses below will apply)
Category C: 2 approved behavioral or social science courses (6 hours; related course below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours; approved course below will apply)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses

2.5 average required for admission to the nursing major with no grade lower than C in any required prerequisite course
6 hours behavioral sciences including: Psychology C101, 221
9 hours of humanities including Philosophy 201 or 221 or 425, a history and a literature course
26 hours mathematics, natural, or applied science courses including: Biology 191, 208, 209, 210; Chemistry D121; Chemistry 122 or 168 or Biology 121; Mathematics F210; Human Ecology 135

Nursing 100,205,206,314,315,316,317,318,319,320,321,414,415,416,417,418,419,420,421, and 430

Minimum grade of C in all nursing and required courses (exclusive of electives)

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

Typical course of study in nursing (B.S.N.)

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<th>First Semester</th>
<th>Second Semester</th>
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<td>FRESHMAN</td>
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<td>Nursing 100</td>
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<td>Chemistry 121</td>
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<td>English 121</td>
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<tr>
<td>Psychology 101</td>
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TOTAL HOUR 128

*Nursing 430: contact hours = approximately 40 hours/week x 5 weeks.
Curriculum revision is in process: Some changes in course sequence, hours, and GPA may occur.

NURSING COURSES

100 Introduction to Nursing (3)

Theoretical introduction to concepts used in nursing practice. Required for pre-minising students. Open to non-majors. Every semester.

199r Special Projects (1-4)

Individual or group projects. On demand. Maximum credit 4 hours.

205 Basic Nursing Concepts (3)

Basic nursing concepts necessary to provide a basis for baccalaureate nursing practice. Spring semester. Prerequisite: admission to nursing major. Mat 106 with minimum grade of C or Level 20 on math placement exam. Corequisite: Nursing 206.

206 Basic Nursing Care (2)

Clinical application of basic nursing concepts and skills which provide a basis for baccalaureate nursing practice. Spring semester. Prerequisite: admission to nursing major. Mat 106 with minimum grade of Cor Level 20 on math placement exam. Corequisite: Nursing 205. Graded satisfactory/no credit.

222 Women's Health Issues (3)

A review of current literature and discussion of issues affecting contemporary women's health. The course will introduce the biological, psychological, social, economic, and cultural factors which affect the health of women in Western society. Students will be challenged to examine their attitudes on controversial issues such as birth control, childbirth alternatives, abortion, women's self image, and aspects of aging. On demand. Prerequisite: English 122 or its equivalent. Open to non-majors.

300 Pharmacology (3)

An overview of pharmacology including drug classifications, action, use, and nursing implications and drug interactions. Legislation pertinent to drug control included. On demand. Open to non-majors.

314 Psychosocial Nursing Concepts (3)

Interpersonal, behavioral, and communication theories related to clients experiencing psychosocial difficulties. Every semester. Prerequisite: 205, 206. Corequisite: 315.
315 Psychosocial Nursing Care (3)
Application of interpersonal, behavioral, and communication theories and concepts to clients experiencing psychosocial difficulties. Every semester. 
_Laboratory: 12 clock hours._ Prerequisite: 205, 206. Corequisite: 314.

316 Pathophysiology (3)
Study of the causes of disease and the structural and functional alterations that occur in die ill process. Every semester. _Prerequisite: 205, 206 or permission of director._

317 Physical Assessment (3)
Physical examination and health history presented in the context of nursing practice. Every semester. Prerequisite: 205, 206 or permission of director.

318 Adult Nursing Concepts I (3)
Concepts necessary to provide acute secondary care interventions for individual adult clients with problems relating to fluids, food, elimination, and safety and security. Every semester. _Prerequisite: 205, 206 or permission of director._

319 Adult Nursing Concepts II (3)
Concepts necessary to provide acute secondary care interventions for individual adults with problems related to basic needs for oxygen, sensory-motor, and reproductive functions. Every semester. _Prerequisite: 205, 206. Corequisites: 319, 320, Pre- or Corequisites: 316, 317._

320 Adult Nursing Care (4)
Application of concepts of acute secondary care for individual adult clients with problems relating to food, fluid elimination, safety and security, oxygen, sensory motor, and reproductive functions. Every semester. _Laboratory: 12 clock hours. Prerequisite: 205, 206. Corequisites 318, 319._

321 Nursing Research (3)
Beginning knowledge and techniques in nursing research. Every semester. 
_Prerequisites: 205, 206 or permission of director; Mathematics 210._

322 The Physical Process of Aging (3)
A study of normal and pathological physical changes that are linked with the aging process. This course will include the implications of the physiological changes as well as strategies designed to ameliorate or limit health problems that may develop as individuals age. On demand. Open to non-majors.

323 Registered Nurse Seminar (2)
Concepts of professionalism and baccalaureate nursing education are explored to facilitate the successful transition to the university setting for the registered nurse. _Prerequisite: Licensure as a registered Nurse._

414 Concepts of Primary Care Nursing (2)
Study of the nursing process relating to care of family systems and groups in the home or ambulatory care setting. _Prerequisites: completion of 300-level nursing courses or permission of director._ Corequisites: 415, 416. Every semester.

415 Community Health Nursing Concepts (3)
Assessment of the community and the methods to plan, implement and evaluate nursing interventions. Every semester. Prerequisites: completion of 300-level nursing courses or permission of director. Corequisites: 414, 416.

416r Nursing Care in the Community (1-4)
Application of principles of primary care nursing and community nursing. Every semester. _Laboratory: 3-12 clock hours. Prerequisites: completion of 300-level nursing courses or permission of director._ Pre or Corequisites: 414, 415.

417 Issues in Nursing (2)
A review of current literature and discussion of issues affecting contemporary nursing practice. Every semester. Prerequisites: completion of 500-level nursing courses or permission of director.

418 Family Nursing Concepts I (3)
Study of the assessment and care of families during the childbearing cycle. Every semester. _Prerequisites: completion of 300-level nursing courses._ 
_Corequisites: 419, 420.

419 Family Nursing Concepts II (3)
Study of health problems that affect children and their families. Every semester. _Prerequisites: completion of 300-level nursing courses. Corequisites: 418, 420._

420 Family Nursing Care (4)
Application of concepts of family nursing. Every semester. _Laboratory: 12 clock hours. Prerequisites: completion of 300-level nursing courses. Corequisites: 418, 419._

421 Leadership in Nursing (3)
Concepts related to administration and supervision in the delivery of health care services. A minimum of 15 hours of clinical observation under the direct supervision of a nurse manager is required. Every semester. Prerequisites: completion of 300-level nursing courses.

430 Clinical Nursing Preceptorship (3)
Intensive full-time clinical experience in a practice area selected by each student with faculty advice and consent. Emphasizes development of decision-making and time management skills. Facilitates integration of theoretical concepts and clinical practice. All activities are coordinated by nursing faculty and supervised by selected clinical preceptors in actual practice settings. _Prerequisite: Successful completion of Nursing 314, 315, 316, 317, 318, 319, and 320. Summer term._

434 Perioperative Nursing (4)
Concepts and skills necessary for the nurse to practice in a primary role in specialized Perioperative settings. On demand. Lecture 2 hours, clinical lab 6 clock hours. Prerequisites: Completion of 300-level nursing courses or licensure as a registered nurse or permission of professor.

435 Rehabilitation Nursing (4)
Concepts and principles of rehabilitation nursing including client and family care in rehabilitation and community settings. On demand. _Lecture 2 hours, clinical 6 clock hours. Prerequisites: Completion of all required 300-level courses, licensure as a registered nurse or approval of professor._

440 Preparation for NCLEX-RN (3)
A review of the nursing process with integration of key concepts in the care of the adult client, care of the childbearing family, care of the child, and care of the client with psychosocial disorders. Open only to seniors in their final semester or permission of instructor.

455r Advanced Childbirth/Women's Health Education (1-3)
The course enhances and expands the practice of nurses who work or will work with childbearing families and non-pregnant women. Advanced knowledge and skills are presented which enable students to assess and diagnose common gynecological and pregnancy-related problems. On demand. Prerequisites: Nursing 418, 419, 420 or RN license and physical assessment.

470 Oncology Nursing (3)
In-depth study of the status of cancer as a major health problem. Treatment modalities used for intervention and interruption of the neoplastic process are studied, emphasis on utilizing the nursing process in treating oncology patients. On demand.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r Group Studies (1-4)
On demand.
School of Business Administration

Professor Linda Pickthorne Fletcher, Dean

The mission of the School of Business Administration of the University of Tennessee at Chattanooga is to serve the educational, research, professional development, and service needs of UTC's constituencies. Excellence in teaching is basic to the School's objectives, and a strong commitment to research is essential for maintaining excellence. Service consistent with the University's mission is also part of the overall objectives of the School of Business Administration.

The principal objective of the School of Business Administration is to foster an appreciation and understanding of the function of the organization in today's global environment, to develop effectively the student's analytical abilities, and to prepare the student to obtain employment in the private, public, and not-for-profit sectors. The school emphasizes breadth in management education necessary for lifelong professional career development. The curricula also provide essential skills for employment opportunities in related career fields. Career preparation is offered in the following areas:

Accounting
Finance
General Management
Industrial Management
Human Resource Management
Marketing
Administrative Systems

The school is organized into three departments, Accounting and Finance, Management, and Marketing.

It offers three degree programs: Bachelor of Science with a major in business administration and concentrations in accounting, finance, general management, industrial management, human resource management, marketing, and administrative systems; Master of Business Administration (includes Executive MBA Program); and Master of Accountancy.

These degree programs are accredited by the American Assembly of Collegiate Schools of Business (AACSB).

The letter B used before a course name is an abbreviation for "Business." Example: B(usiness) Accounting.

Accounting and Finance
Professor Fulmer, Head

The Department of Accounting and Finance offers concentrations designed to prepare students for professional positions in the profit and nonprofit sectors. The Bachelor of Science degree in business administration may be obtained with concentrations in accounting or finance.

Business Administration (B.S.)? Accounting concentration

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (9 hours)
Category C: 2 approved behavioral or social science courses other than economics (6 hours; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisurue Studies 021 plus one additional semester exercise science activity.

Major and related courses
6 hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135*, F136
Computer Science 110
One course from English 277, 300, 410, or B Management 310 (minimum of 8 hours in written communication including required courses in Category A)
37 hours common body of knowledge from the School of Business Administration including: Accounting 201, 202, 335; Economics 101, 102; Finance 302; Management 211, 212, 311, 315, 440, 441; Marketing 313
Accounting concentration:
21 hours from the School of Business Administration including: Accounting 300, 301, 302, 305, 307, 405, 408
12 hours: 6-9 hours chosen from Accounting 306, 401, 406, 407, 411, 412, 424, 452, 481; 3-6 hours chosen from Finance 321, 322, 403; Accounting 336; Economics 301, 429; Management 356
2.0 average in all accounting courses
A minimum of 54 hours of the 128 total must be taken at the 300-400 level
Electives to complete 128 hours
Maximum of 73 hours total accepted in School of Business Administration courses; i.e., at least 55 hours other than School of Business Administration courses must be completed
At least 50% of the business credit hours applied towards the B.S. degree in Business Administration must be earned at UTC.

Typical course of study in business administration (B.S.)'s accounting concentration

The program for the first two years in business administration is the same for all concentrations and is designed to do two things: (1) Give the student background in the basic disciplines and areas required to fulfill the general education requirements of the University and (2) prepare a foundation for the advanced courses in business administration to be taken during the junior and senior years.

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**TOTAL HOURS 128**

**Accounting Electives (6-9 Hours):**
- B Accounting 306
- B Account 401
- B Accounting 406
- B Accounting 407
- B Accounting 411
- B Accounting 412
- B Accounting 424
- B Accounting 452
- B Accounting 481

**Electives (3-6 Hours):**
- B Finance, B Management, B Accounting, Economics
- Electives from Political Science C101, Psychology C101, or Sociology C151

**Business Administration (B.S.): Finance concentration**

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (9 hours)
Category C: 2 approved behavioral or social science courses other than economics (6 hours; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

**Major and related courses**

6 hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135*, F136
Computer Science 110

One course from English 277, 300, 410, or B Management 310 (minimum of 8 hours in written communication including required courses in Category A)
40 hours common body of knowledge from the School of Business Administration including: Accounting 201, 202, 335; Economics 101, 102; Finance 302, Management 211, 212, 311, 315, 360, 440, 441; Marketing 313

**Finance concentration:**
18 hours including Finance 318, 320, 321, 418, 421, 423
Accounting 312
3 hours chosen from any 300 or 400 level Accounting or Finance course
6 hours chosen from any 300 or 400 level course in Accounting, Economics, Finance, Management or Marketing
2.0 average in all finance courses

A minimum of 54 hours of the 128 total must be taken at the 300-400 level
Electives to complete 128 hours
Maximum of 73 hours accepted in the School of Business Administration courses; i.e., at least 55 hours other than School of Business Administration courses must be completed
At least 50% of the business credit hours applied toward the B.S. degree in Business Administration must be earned at UTC.
*If exempted, student may take Mathematics F136.
Typical course of study in business administration
(B.S.) finance concentration

The program for the first two years in business administration is the same for all concentrations and is designed to do two things: (1) Give the student background in the basic disciplines and areas required to fulfill the general education requirements of the University and (2) prepare a foundation for the advanced courses in business administration to be taken during the junior and senior years.

First Semester
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TOTAL HOURS 128

If exempted, student may take Mathematics F136.
Six hours must be selected from Political Science C101, Psychology C101, or Sociology C151.
A minimum of 54 hours of the total 128 must be taken at the 300-400 level.

ACCOUNTING COURSES

201, 202 Principles of Accounting (3, 3)
Basic financial and managerial accounting principles as applied to manufacturing, service and retail enterprises. Includes the study of generally accepted accounting. Prerequisite: 201 with a grade of C or higher is prerequisite to 202.

300 Intermediate Accounting I (3)
The theoretical foundations and structure of accounting as they relate to the presentation of financial statements. Emphasis will be on the framework underlying financial accounting and analysis of current assets. Every semester. Formerly BACC 303. Prerequisite: 202, junior standing.

301 Intermediate Accounting II (3)
The theoretical foundations and structure of accounting as they relate to the presentation of financial statements. Emphasis will be placed on analysis of fixed assets, liabilities and equity. Every semester. Formerly BACC 304. Prerequisites: 300.

302 Intermediate Accounting III (3)
The theoretical foundations and structure of accounting as they relate to the presentation of financial statements. Emphasis will be placed on analysis of the statement of cash flows, deferred taxes, leases, pensions, earnings per share, and other financial reporting considerations. Every semester. Prerequisites: 301.

305 Managerial Cost Accounting (3)
Introduction to the managerial-cost accounting models available for planning, controlling, and evaluating operations. Including: the development and utilization of unit standard costs, job order and process costing, variance analysis, direct and absorption costing models, and their data requirements. Every semester. Prerequisite: 202, junior standing.

306 Budgeting (3)
Cost accounting by standard costs. Cost analysis and cost distribution reports emphasized. Methods and procedures in the preparation and execution of master and special budgets for industrial and commercial enterprises. On demand. Prerequisite: 202, junior standing.

307 Federal Tax Accounting (3)
Fundamentals of federal income tax with major emphasis upon tax law and regulations applicable to individuals. Every semester. Prerequisite: 202, junior standing.

312 Issues in Financial Accounting and Reporting (3)
An application of accounting principles and an examination of how those principles influence the financial reporting process. Credit not allowed for Accounting degree. Spring and summer. Prerequisite: Finance 302.

335 Legal Environment of Business (3)
American legal institutions and sources of law, ethical considerations of business; an introduction to social and political influences as reflected in government regulation. Every semester.

336 Business Law (3)
Fundamental principles concerning contracts, personal property, and bailments, sales, commercial paper, secured transactions, agency and employment, partnerships and corporations, real property. Every semester. Prerequisite: 335.

401 Advanced Accounting (3)
Theory of business combinations and preparation of consolidated financial statements; accounting for foreign currency translations, and partnerships. Spring semester. Prerequisite: 301; Management 212.

405 Auditing (3)
Kinds of audits, systems of accounts, and methods of conducting audits. Preparation of working papers and reports. Every semester. Prerequisites: 301, Management 212.

406 Advanced Managerial Accounting (3)
An investigation of alternative managerial accounting models available for planning, controlling, and evaluating operating and capital expenditures. Including investigations of the assumptions, behavioral implications, quantitative methodologies, and controversial issues in current and proposed managerial accounting models. Fall semester. Prerequisites: 305; Finance 302.

407 Governmental Accounting (3)
Accounting systems of institutions and various governmental units. Fund transactions, revenues and expenditures, appropriations, and form and content reports. Every semester. Prerequisite: 300.

408 Accounting Information Systems (3)
Review of the strategies, goals, and methodologies available for designing, installing, and evaluating accounting information systems. Also included in how the accounting information system functions as a subsystem of the overall management information system. Every semester. Prerequisites: 300, 305.

411 Taxation of Corporations and Partnerships (3)
Fundamentals of federal income tax laws covering the formation, liquidation and reorganization of corporations and partnerships. Emphasis is placed on the federal income tax laws as they relate to both the entity and the owner. Every semester. Formerly BACC 309. Prerequisite: 307.
412 Taxation of Estates, Gifts and Trusts (3)
A study of the federal taxation of wealth transfers, including federal estate and gift taxes, and the income taxation of estates and trusts. On demand. Prerequisites: 307.

420 Accounting Ethics (3)
This course is designed to provide students with an opportunity to identify and discuss a number of ethical issues faced by practicing accountants in a broad range of work environment. The course investigates approaches for resolving ethical dilemmas and models for analyzing ethical issues. Prerequisites: 12 hours of accounting courses above BACC 202.

424 Applied Financial and Operational Auditing (3)
This course expands upon the auditing material covered in the introductory auditing course. The professional pronouncements (standards) are studied and there is an investigation of the auditing function form the viewpoint of a practicing professional accountant/auditor. In addition, substantial use is made of auditing software and a number of important technical topics are introduced as well as selected research topics. Fall semester and summer. Prerequisite: 405.

431 Speculative Markets (3)
Theory and practical applications of futures, options, and other derivative securities. Concepts, model derivations, thought process, tools used and numerical examples are included. Summer. Prerequisite: Any one of the following: BFIN 318, 321, 518, 546 or Approval of instructor.

452 The Business of Health Care (3)
This course provides a basic understanding of the U.S. health care industry. Emphasis is on health care delivery issues, health care organization issues, and current topics of concern related to health care management and business issues. Summer. Prerequisite: BFIN 302, BMKT 31, BMGT 311, BMGT 315

452 The Business of Health Care (3)
This course provides a basic understanding of the U.S. health care industry. Emphasis is on health care delivery issues, health care organization issues, and current topics of concern related to health care management and business issues. Summer. Prerequisite: BFIN 302, BMKT 31, BMGT 311, BMGT 315

481 Study Abroad: International Accounting (3)
The purpose of this course is to explore a broad range of topics dealing with international accounting. An examination of international accounting concepts will be supplemented by an intensive travel abroad experience. Through a combination of textbook concepts, outside readings, plant tours, guest speakers, written assignments and classroom discussions students will be able to compare the financial regulation and reporting process in different countries. Additionally, the students will be exposed to the problems of harmonization of international standards and multinational enterprise control. Prerequisite: 202 and senior standing or permission of instructor.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See "Departmental Honors," page 27.

497r Research (1-3)
Every semester.

498r Individual Studies (1-3)
Every semester.

499r Group Studies (1-3)
Every semester.

FINANCE COURSES

301 Personal Finance (3)
Designed to help the individual and family make intelligent, informed decisions on personal financial management. On demand.

302 Essentials of Managerial Finance (3)
Management of funds in business, including procurement, utilization, and disposition of money. Financial aids such as budgeting and break even analysis, financial statement analysis, and capital management. Every semester. Prerequisites: Accounting 202; Economics 101, 102; Management 211; Math 136; junior standing.

318 Financial Institutions (3)
Capital markets and institutions; sources and uses of capital funds; impact of changes in flow of funds on the economy. Fall semester. Prerequisite: BFIN 302, BACC 202, ECON 101, 102, junior standing. (Formerly 422).

320 Intermediate Financial Management (3)
A course designed to provide students with a detailed development of key finance concepts introduced in earlier coursework. Topics covered include risk analysis, security valuation, capital budgeting, cost of capital, capital structure, the dividend decision, leasing and mergers. Every semester. Prerequisite: BFIN 302, BACC 202, ECON 101, 102, Junior standing, BMGT 212.

321 Investments (3)
Theory of investment; classification of media; security analysis; investment market mechanisms; securities legislation; institutional aids to die investor, investment timing; formulation of investment programs. Fall semester and summer. Prerequisites: 302; Accounting 202; Economics 101, 102; junior standing.

337 Principles of Insurance (3)
Types of insurance, insurance coverage, policy protection, and company organization and regulation. On demand. Prerequisites: Economics 101, 102.

371 Real Estate Fundamentals (3)
A survey course on real estate principles. Topic include property rights, property ownership, economic and social issues, and brokerage. On demand. (Formerly 281).

372 Real Estate Law (3)
A survey course on real estate law. Topics include property rights, liens and mortgages, transfer of title, deeds and recording, leases and ethical considerations. On demand. (Formerly 282).

403 Financial Statement Analysis (3)
Techniques of financial statement analysis with special attention paid to the balance sheet and the income statement. Emphasis on current position, profitability, and financial structure of the firm. On demand. Prerequisites: 302, Accounting 202, senior standing, and permission of instructor.

418 Commerical Banking (3)
An in-depth study of commercial banks and their role in the economy. The course provides a comprehensive examination of the issues facing today's commercial bank managers and regulators. Topics covered include: banking history and regulation, credit analysis, asset and liability management, risk management, loan policy, and money management services. Trends such as consolidation, internationalization, and product diversification, are also addressed. Spring semester. Prerequisite: 302, (Formerly 322).

421 Security Analysis and Portfolio Management (3)
A course designed to introduce the undergraduate to advanced investment analysis and theory. Included in the course will be computer applications and analysis of investment vehicles and strategies. Spring semester. Prerequisites: 321 or BFIN 546; Computer Science 110.

423 Financial Management (3)
A case course which affords the undergraduate an opportunity to apply financial principles to actual situations. The course is a continuation of the topics in 320 using the case discussion approach. Fall semester and summer. Prerequisite: 320.

424 Theory of Finance (3)
A lecture/discussion course teaching the theory behind financial decisions. Topics covered include investments and securities, capital budgeting, risk analysis, and application of operations research to finance. On demand. Prerequisites: 302, 321.

431 Speculative Markets (3)
Theory and practical applications of futures, options, and other derivative securities. Concepts, model derivations, thought processes, tools used and numerical examples are included. Summer. Prerequisites: Any of the following: BFIN 318,321,518,546, or approval of instructor.

471 Real Estate Appraisal (3)
Theory and practical applications of real estate appraisal. Qualitative and quantitative analyses are incorporated into the various approaches of real estate valuation. Topics include cash flow estimation, lease valuation, site valuation and market analyses. On demand. Prerequisite: BFIN 302 and BFIN 371 or approval of instructor, (Formerly 283).
Theory and application of real estate financing. Financial mathematics, interest rates, leverage and other financial concepts used in the real estate industry are covered. Topics include the rent versus buy decision, tax effects, alternative mortgage investments, and analysis of financing real estate. On demand. Prerequisite: BFIN 302 or approval of instructor. (Formerly 284).

482 Study Abroad: International Financial Management (3)
A growing number of companies engage in various types of international financial transactions. Firms that are engaged in international financial transactions face unique problems and risks not encountered by firms that operate in only one country. The increased amount of international trade and the internationalization of money and capital markets make it essential for financial managers to understand the elements of international finance. These elements of international finance are obtained in this course through textbook concepts, outside readings, guest lecturers, field trips and case studies in foreign locations. Prerequisite: 302.

488 Seminar in Portfolio Management
A seminar in security analysis and portfolio management. Students will experience the actual investment decision process by analyzing and investing designated funds into a variety of securities. Spring semester. Prerequisite: 321 or 546 or permission of instructor.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Every semester. See "Departmental Honors," page 27.

497r Research (1-3)
Every semester.

498r Individual Studies (1-3)
Every semester.

499r Group Studies (1-3)
Every semester.

General Business Administration
Professor Linda Pickthorne Fletcher, Coordinator

General Business Administration consists of courses and programs which are offered to all students regardless of major or department. These courses are intended to enhance students' opportunities to understand business and its environment and provide opportunities to participate in a business practicum. General Business Administration is not a degree program. Courses in this category are designated as BUSA for "Business Administration."

GENERAL BUSINESS ADMINISTRATION COURSES

O0 lr Cooperative Work Experience (0)
Cooperative work terms as a part of the cooperative education program in business. Student participation in off-campus work terms in business as a parallellwork/learn semester or alternating semester (as either first semester, second semester, or a three-month summer term).

459r Small Business Practicum (3)
Opportunity to integrate and apply specialized disciplinary skills to practical business problems of company-wide scope. Students are assigned as consultants to assist businesses under supervision of a faculty member. Every semester. Prerequisites: Finance 302; Management 311 or permission of the SBl Director; Management 315; Marketing 315. Maximum credit: 6 hours.

Management
Professor Ettkin, Head

The management curriculum is designed to prepare students for careers in both the public and private sectors as well as graduate studies. Students may choose to concentrate in administrative systems, general management, human resource management, or industrial management.

Business Administration (B.S.): Administrative Systems concentration

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)
Category C: 2 approved behavioral or social science courses other than economics (6 hours; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category E: 1 approved mathematics course (3 hours; approved related course below will apply)
Category F: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
6 hours selected from Political Science C101, Psychology C101, or Sociology C151 Mathematics 135', F136 Computer Science 110
40 hours common body of knowledge from the School of Business Administration including Economics 101, 102; Accounting 201, 202, 335; Finance 302; Management 211, 212, 311,315,360,440,441; Marketing 313
21-24 hours including Management 121, 309,310,350r, 400,420,445,450 Students who have had previous training in typewriting may be exempted from Management 121.
2.0 average in all Management courses

Minimum of 54 hours of 300 and 400 level courses
Maximum of 73 hours accepted in School of Business Administration courses; i.e., at least 55 hours other than School of Business Administration courses must be completed
Electives to complete 128 hours

At least 50% of the business credit hours applied toward the B.S. Degree in Business Administration must be earned at UTC.

Typical course of study in business administration (B.S.): administrative systems concentration

The program for the first two years in business administration is the same for all concentrations and is designed to do two things: (1) Give the student background in the basic disciplines and areas required to fulfill the general education requirements of the University and (2) prepare a foundation for the advanced courses in business administration to be taken during the junior and senior years.

First Semester Second Semester
First Year

FRESHMAN

General Education Category A 3 General Education Category A 3
Economics 101 3 Mathematics 135', 3
B Management 121 3 Economics 102 3
EHLS021 3 Computer Science 110 3
General Education Categories 3 EHLS Activity 1
Elective 3 General Education 3

Total 16 Total 16

Management —167
**Typical course of study in business administration (B.S.): general management concentration**

The program for the first two years in business administration is the same for all concentrations and is designed to do two things: (1) Give the student background in the basic disciplines and areas required to fulfill the general education requirements of the University and (2) prepare a foundation for the advanced courses in business administration to be taken during the junior and senior years.

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<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td><strong>ECONOMICS</strong></td>
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<td>101</td>
<td>102</td>
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<td>135'</td>
<td>F136</td>
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<td><strong>EHLS ACTIVITY</strong></td>
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<td>General Education and Electives</td>
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<td><strong>GENERAL EDUCATION AND ELECTIVES</strong></td>
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<td>General Education and Electives</td>
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<td>General Education and Electives</td>
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<td><strong>GENERAL EDUCATION AND ELECTIVES</strong></td>
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<td>General Education and Electives</td>
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<td>3</td>
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<tr>
<td><strong>GENERAL EDUCATION CATEGORY F</strong></td>
<td><strong>GENERAL EDUCATION AND ELECTIVES</strong></td>
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<td>General Education Category F</td>
<td>General Education and Electives</td>
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<td><strong>TOTAL HOURS</strong></td>
<td><strong>TOTAL HOURS</strong></td>
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<tr>
<td>13-19</td>
<td>15-18</td>
</tr>
</tbody>
</table>

**SOPHOMORE**

| General Education Category B | **B MANAGEMENT** |
| 3 | 211 |
| **B ACCOUNTING** | 201 |
| 3 | 202 |
| **B MARKETING** | 313 |
| 3 | 420 |
| **B MANAGEMENT 310** | 311 |
| 3 | 310 |
| **ELECTIVES** | 302 |
| 3 | 301 |
| **TOTAL** | 15 |

| **JUNIOR** | **B MANAGEMENT** |
| 3 | 350 |
| **B MANAGEMENT** | 309 |
| 3 | 311 |
| **B MANAGEMENT 310** | 311 |
| 3 | 310 |
| **ELECTIVES** | 302 |
| 3 | 301 |
| **TOTAL** | 15 |

| **SENIOR** | **B MANAGEMENT** |
| 3 | 400 |
| **B MANAGEMENT** | 350 |
| 3 | 441 |
| **B MANAGEMENT 400** | 310 |
| 3 | 420 |
| **ELECTIVES** | 302 |
| 3 | 301 |
| **TOTAL** | 18 |

**TOTAL HOURS 128**

A minimum of 54 hours of the total 128 must be taken at the 300-400 level

1. If exempted, student may take Mathematics F136.

2. Six hours must be selected from Political Science C101, Psychology C101, or Sociology C151.

**Business Administration (B.S.): General Management concentration**

General Education (see pages 22-24 for list of approved courses)

- **Category A**: 2 approved courses in written communication in the English language (6 hours)
- **Category B**: 3 approved courses: one from humanities, one from fine arts, and one from either (9 hours)
- **Category C**: 2 approved behavioral or social science courses other than economics (6 hours; approved related courses below will apply)
- **Category D**: 1 approved physical or natural science course with laboratory (4 hours)
- **Category F**: 1 approved mathematics course (3 hours; approved related course below will apply)
- **Category G**: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

**Major and related courses**

- 6 hours selected from Political Science C101, Psychology C101, or Sociology C151
- Mathematics 135', F136
- Computer Science 110

One course from English 277, 300, 410, or B Management 310 (minimum of 8 hours in written communication including required courses in Category A)

- 40 hours common body of knowledge from the School of Business Administration including: Accounting 201, 202, 203, 335; Economics 101, 102; Finance 302; Management 211, 212, 311, 315, 360, 440, 441; Marketing 313

General management concentration:

- 12 hours including Management 330, 331, 332, 438, 439
- 9 hours from Management 356, 410, 411, 434, 435, 439, 451, 452, 456, 459r

**TOTAL HOURS 128**

A minimum of 54 hours of the total 128 must be taken at the 300-400 level

1. If exempted, student may take Mathematics F136.

2. Six hours must be selected from Political Science C101, Psychology C101, or Sociology C151.

A minimum of 54 hours of the 128 total must be taken at the 300-400 level

Electives to complete 128 hours

At least 50% of the business credit hours applied toward the B.S. degree in Business Administration must be earned at UTC.
Business Administration (B.S.): Human Resource Management concentration

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (9 hours)
Category C: 2 approved behavioral or social science courses other than economics (6 hours, one must be Psychology C101; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
6 hours, one course being Psychology C101 and the other either Political Science C101 or Sociology C151
Mathematics 135', F136
Computer Science 110
One course from English 277, 300, 410, or Management 310 (minimum of 8 hours in written communication including required courses in Category A)
40 hours common body of knowledge from the School of Business Administration including: Accounting 201, 202, 335; Economics 101, 102; Finance 302; Management 211, 212, 311, 315, 360, 440, 441; Marketing 313

Human Resource management concentration:
15 hours consisting of Management 330, 332, 411, 434, 435,
12 hours chosen from Business Management 331, 410, 438 439, 495r and 498r (maximum 6 hour); Economics 317 and 425; Business Finance 337; Sociology 318; Human Services 300 and 405; Psychology 241, 242, 331, 406, and 451.
2.0 average in all management courses
A minimum of 54 hours of the 128 total must be taken at the 300-400 level
Electives to complete 128 hours
Maximum of 73 hours total accepted in School of Business Administration courses; i.e., at least 55 hours other than School of Business Administration courses must be completed
At least 50% of the business credit hours applied toward the B.S. degree in Business Administration must be earned at UTC

If exempted, student may take Mathematics F136.

Typical course of study in business administration (B.S.) human resource management concentration

The program for the first two years in business administration is the same for all concentrations and is designed to do two things: (1) Give the student background in the basic discipline areas required to fulfill the general education requirements of the University and (2) prepare a foundation for the advanced courses in business administration to be taken during the junior and senior years.

First Semester | Second Semester
--- | ---
**FRESHMAN**
English 121 Category A | 3 | English 122 Category A | 3
Economics 101 | 3 | Economics 102 | 3
Mathematics 135' | 3 | Mathematics F136 | 3
Elective | 3 | Category B elective | 3
Computer Science 110 | 3 | Category G elective | 3
EHLS Activity | 1 | EHLS 021 | 1
Total | 16 | Total | 16

**SOPHOMORE**
B Management 211 | 3 | B Management 212 | 3
B Accounting 201 | 3 | B Accounting 202 | 3
Category B elective | 3 | Category B elective | 3
Psychology C101 | 3 | Elective | 6
General Education Category D | 4 | Category C elective | 3
Total | 16 | Total | 18

JUNIOR
B Management 311 | 3 | B Management 330 | 3
B Management 315 | 3 | B Management 332 | 3
B Marketing 313 | 3 | B Accounting 335 | 3
Elective | 3 | Management 360 | 3
B Management 310 or equivalent | 3 | B Finance 302 | 3
Total | 15 | Total | 15

SENIOR
B Management 411 | 3 | B Management 435 | 3
B Management 434 | 3 | B Management 440 | 3
H R Management elective | 6 | H R Management electives | 6
Electives | 6 | B Management 441 | 1
Total | 18 | Total | 17

TOTAL HOURS 128

A minimum of 54 hours of the total 128 must be taken at the 300-400 level.

Business Administration Electives (any 12 hours):
B Management 331 | Economics 317
B Management 410 | Economics 425
B Management 438 | B Finance 337
B Management 439 | Sociology 318
B Management 459r* | Human Service 300
B Management 498r* | Human Service 405
(*6 hours maximum for these)

If exempted, student may take Mathematics F136.
'Six hours, one course being Psychology C101 and the other Political Science C101 or Sociology C151.

Business Administration (B.S.): Industrial Management concentration

General Education (see pages 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (9 hours)
Category C: 2 approved behavioral or social science courses other than economics (6 hours; approved related courses below will apply)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
Six hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135', F136
Computer Science 110
One course from English 277, 300, 410, or Management 310 (minimum of 8 hours in written communication including required courses in Category A)
40 hours common body of knowledge from the School of Business Administration including: Accounting 201, 202, 335; Economics 101, 102; Finance 302; Management 211, 212, 311, 315, 360, 440, 441; Marketing 313

Industrial management concentration:
18 hours including Accounting 305; Management 356,451,452,456, Engineering 457
2.0 average in all management courses

A minimum of 54 hours of the 128 total must be taken at the 300-400 level

Electives to complete 128 hours

Maximum of 73 hours total accepted in School of Business Administration courses; i.e., at least 55 hours other than School of Business Administration courses must be completed

At least 50% of the business credit hours applied toward the B.S. degree in Business Administration must be earned at UTC.

If exempted, student may take Mathematics F136.

Typical course of study in business administration
(B.S.): industrial management concentration

The program for the first two years in business administration is the same for all concentrations and is designed to do two things: (1) Give the student background in the basic disciplines and areas required to fulfill the general education requirements of the University and (2) prepare a foundation for the advanced courses in business administration to be taken during the junior and senior years.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>170 — Management</td>
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<tr>
<td>9 hours selected from Engineering 354,458; Management 330,331,332,410,411, 435,438,439; Marketing 319,355; Economics 429</td>
<td>108</td>
</tr>
<tr>
<td>2.0 average in all management courses</td>
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<tr>
<td>A minimum of 54 hours of the 128 total must be taken at the 300-400 level</td>
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<tr>
<td>Electives to complete 128 hours</td>
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<tr>
<td>Maximum of 73 hours total accepted in School of Business Administration courses; i.e., at least 55 hours other than School of Business Administration courses must be completed</td>
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<td>At least 50% of the business credit hours applied toward the B.S. degree in Business Administration must be earned at UTC.</td>
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<th>Junior</th>
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<tr>
<td>B Accounting 201</td>
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<td>B Management 211</td>
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<td>General Education Category D</td>
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<td>JUNIOR</td>
<td>SOBAROMORE</td>
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<td>B Finance 302</td>
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<td>B Management 311</td>
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<td>B Management 315</td>
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<td>Management 310</td>
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<td>or equivalent</td>
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<td>Electives</td>
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<tr>
<th>TOTAL HOURS</th>
<th>128</th>
</tr>
</thead>
</table>

Industrial Management Electives (any 9 hours):

- B Management 330
- B Management 331
- B Management 332
- B Management 438

A minimum of 54 hours of the total 128 must be taken at the 300-400 level

If exempted, student may take Mathematics F136.

3 hours must be selected from Political Science C101, Psychology C101, or Sociology C151.

**MANAGEMENT COURSES**

103 Introduction to Business (3)

General characteristics of business enterprise and business terminology. Fall semester. Junior and senior majors in business administration will not receive credit for the course.

121 Keyboarding (3)

Emphasizes touch typing on the microcomputer. Includes use of the 10-key numeric pad. Introductory keyboarding and formatting. Document preparation (letters, memoranda, reports, tables), including principles and techniques of editing. Acquaintance with information processing software packages is included. On demand. Class 3 hours, laboratory 2 hours. Terminal speed required is 30 wpm/three minute timing with three errors.

199 Special Projects (1-4)

Individual or group projects. Every semester. Maximum credit 4 hours.

211 Statistical Methods for Business I (3)

Basic concepts of descriptive and inferential statistics including frequency, probability, sampling distributions, estimation theory, and introduction to hypothesis testing. Emphasis on business applications. Every semester. Prerequisite: Mathematics 125 or 145 or 150, with grade of “C” or better, Computer Science 10 or 102 or permission of the instructor.

212 Statistical Methods for Business II (3)

Probability and statistical inference with emphasis on decision-making in business. Computer application of statistical analysis. Every semester. Prerequisites: 211 with a grade of C or better.

220 Microcomputing Applications in Administration (3)

Designed to familiarize students with office equipment to include word processing equipment and transcribing machines. On demand. Class 3 hours, laboratory 2 hours. Prerequisite: 121 or one year of high school typewriting.

229 Office Procedures (3)

The role of the office employee in facilitating managerial operations. Considerations include improving human relations, information retrieval systems, handling correspondence, arranging schedules and itineraries, using communication media effectively, and simplification of office tasks. Spring semester alternate years. Prerequisites: 121, 220.

309 Administrative and Information Management (3)

Management decisions involved with planning, organizing, directing and controlling the records of an organization. Analysis of criteria by which data and records are created, stored, retrieved, and disposed. Procedures for operation of manual and automated storage systems.

310 Business Communication (3)

An introduction and overview of verbal and nonverbal communication. Principles of writing, grammar, diction, and rhetoric as applied to business communication. Mechanics and psychology of business letters and short reports. Every semester. Prerequisites: English 121, 122.

311 Operations Management (3)

An introduction to the design, operation, and control of a product or service oriented environment. Major emphasis is placed on the following decision tools and models: forecasting, linear programming, simulation, quality control, inventory control, network analysis, job design, and standards. Every semester. Prerequisites: 212; Mathematics 136; Economics 101 and 102; junior standing.

315 Management Concepts, Theory, and Practice (3)

Inter- and intra-group relations in administration with special emphasis on superior-subordinate relations in a business environment. Comparison of classical concepts of leadership, structure, and development with contemporary research. Every semester. Prerequisite: junior standing.
330 Concepts in Organizational Behavior (3)  
An advanced survey of theory and research concerning the behavior of people in organizations. Topics include personality, communication, perception, group dynamics, stress and change. Every semester. Prerequisite: BMGT 315

331 Organizational Motivation and Leadership (3)  
A comprehensive examination of leading theories of organizational motivation and leadership. An understanding of the processes affecting the behavior of employees is stressed. Emphasis will be placed on directed exercises demonstrating the implementation of concepts learned from the class material. Prerequisite: 315.

332 Human Resource Management (3)  
Principles and practices involved in the effective administration of personnel. Every semester. Prerequisite: 315 or Junior standing with permission of instructor.

350r Administrative Systems Internship (1-4)  
A supervised work experience program designed to strengthen the student's technical competencies and fundamental knowledge in Administrative Systems. Maximum 4 hours. Every semester. Prerequisite: permission of department head.

356 Management Science (3)  
Quantitative decision-making techniques under deterministic and stochastic conditions; topics to include decision model building, linear programming, goal programming, assignment problem, transportation problem, network models, queuing, dynamic programming and simulation. Every semester. Prerequisite: 212; Mathematics 136.

357 Nonparametric Methods for Business (3)  
An introduction to nonparametric techniques with applications in such areas as marketing research, management science, production, and finance. Computer applications. On demand. Prerequisite: 212.

360 Management Information Systems (3)  
Systems and information concepts; structure of systems in organizations; systems tools; decision making, data base concepts; information systems analysis and design; implementation decision support systems; integrative business project that includes problem identification, definition, requirements analysis, system design, and implementation; societal issues. Every semester. Formerly 460. Prerequisites: B Management 315; CPSC 110.

400 Administrative Systems Management (3)  
Analysis, design, administration, and control of interrelated administrative support systems including word processing, data processing, telecommunication, ergonomics, facilities, procedures and manuals, work standards and measurement. Fall semester alternate years.

410 Industrial Relations (3)  
Union-management relations including the legal framework, the techniques and practices used, and a bargaining simulation. Every semester. Prerequisites: 332, senior standing.

411 Government Regulation of HRM (3)  
An examination of the laws and government guidelines regulating the employer-employee relationship. Covers those which regulate employer policies and practices involving hiring, compensation, discharge, and conditions of employment. Topics include employment discrimination, employee privacy rights, labor-management relations, and employee safety and health. Every semester. Prerequisites: BMGT 332, or permission of instructor.

420 Managerial Reporting (3)  
A study of business reporting, both written and oral-includes proposal writing, feasibility studies, progress reports, formal analytical reports with graphic presentations. Special emphasis is placed on interpersonal, intercultural, intrapersonal, and computer communication. Management concepts of business ethics and problem analysis are integrated with communication process and theory. (Formerly Office Administration 410). Spring semester alternate years.

434 HRM Staffing (3)  
This course will examine the procedures used by employers to hire and train employees. Students will learn how organizations seek to improve their effectiveness by attracting, selecting, promoting, and developing their employees to ensure that each job is staffed by a fully capable individual. Every semester. Prerequisite: BMGT 332.

435 Compensation Management (3)  
Job evaluation using both quantitative and nonquantitative methods. Control of wages and salaries. Wage incentive principles and systems. Pay and benefits administration. Legal and regulatory issues. Prerequisites: 332, senior standing or permission of instructor.

438 International Management (3)  
A case course exploring the differences in managerial techniques involved in operations in foreign cultures. Particular attention given to the constraints imposed as a result of different cultural, educational, legal, and economic systems. Every semester. Prerequisite: 315.

439 Japanese Management Systems (3)  
A comprehensive overview of Japanese management and organizational practices, with an attendant focus on the relationships between Japanese cultural and societal institutions and Japanese managerial practices. The problems of U.S.-Japanese joint-ventures, American and Japanese expatriates, and trade disputes will also be covered. Prerequisites: 315 or permission of instructor.

440 Business Policy (3)  
An integrating course using cases for management decision-making and management simulation. A culminating educational experience for the senior. Every semester. Prerequisites: 311, 315; Finance 302; Marketing 313; senior standing. May not be used for graduate credit.

441 Senior Seminar (1)  
The practices, policies, and administration of business examined by top level executives of a variety of businesses. The course considers a wide variety of topics from the top management viewpoint with a view towards broadening the interest and horizon of the student. Every semester. Course graded on a pass-fail basis. Prerequisite: senior standing.

445 Problems in Administrative Systems (3)  
Selected topics from the following: systems analysis, form design, records, mechanization, correspondence, supervision, work simplification, training, work measurement. Spring semester alternate years. Prerequisite: 400 or permission of instructor; (Formerly Office Administration 460)

450 Advanced Administrative Information Systems (3)  
Study of the relationships of the various types of office systems and the application of classroom learning to the problems of analyzing and determining appropriate office systems for various kinds of business. Fall semester alternate years. Prerequisite: 309 or permission of instructor.

451 Production Planning and Control (3)  
A study of the problems and practices of production planning and control; master production scheduling; material requirements planning; production activity and control; capacity planning and control. Fall semester. Prerequisite: 332; senior standing. Prerequisite: 311 or permission of instructor.

452 Modern Materials Management (3)  
A study of the problems and practices of operations and materials management. Topics will include: materials acquisition; classical inventory systems; demand management; aggregate planning; material logistics systems; and current topics in materials management including just-in-time, zero inventories, and group technology. Spring semester. Prerequisite: 311 or permission of instructor.

454 Comparative Industrial Systems (3)  
Observes, discusses, and describes the problems, techniques, and economics of a variety of different types of production organizations. Combines class work with field trips through factories in the area. On demand. Prerequisite: 311 or permission of instructor.

456 Business Forecasting (3)  
A basic analysis of the forecasting process and an exposure to the fundamental techniques. A series of business cases to illustrate the application or forecasting in such areas as marketing, production, finance, and general management. Emphasis on forecasting at the firm and industry level. Computer applications for the individual forecasting techniques. Spring semester. Prerequisites: 311, Finance 302, Marketing 313, or permission of instructor.
The purpose of the course is to explore the differences in managerial concepts and techniques in selected cultures through an intensive study and international travel experience. An examination of successful operations techniques and management strategies used by international organizations will supplement the practical and theoretical understanding of international business and global competition. Through a combination of textbook concepts, outside readings, plant tours, guest lectures, class discussions, and case studies students will be able to compare various operation processes and management procedures and be able to develop and evaluate plans for adapting organizational processes within the context of an international business environment. Prerequisite: 311, 315 and senior standing or permission of instructor.

495r Department Honors (1-3 hours per terms, 4 hours for the two terms)  
Every semester. See “Departmental Honors,” page 27.

497 Research (1-3)  
Every semester.

498r Individual Studies (1-3)  
Every semester.

499r Group Studies (1-3)  
Every semester.

Marketng

Professor Ettkin, Head

The marketing curriculum is designed to prepare students for careers in both the public and private sectors as well as for graduate studies.

Business Administration (B.S.): Marketing concentration

General Education (see pages 22-24 for list of approved courses)  
Category A: 2 approved courses in written communication in the English language (6 hours)  
Category B: 3 approved courses: one from humanities, one from fine arts, and one from either (9 hours)  
Category C: 2 approved behavioral or social science courses other than economics (6 hours; approved related courses below will apply)  
Category D: 1 approved physical or natural science course with laboratory (4 hours)  
Category F: 1 approved mathematics course (3 hours; approved related course below will apply)  
Category G: 1 approved perspectives course (3 hours)  
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses  
6 hours selected from Political Science C101, Psychology C101, or Sociology C151  
Mathematics 135, F136  
Computer Science 110

One course from English 277, 300, 410, or B Management 310 (minimum of 8 hours in written communication including required courses in Category A)  
40 hours common body of knowledge from the School of Business Administration including: Accounting 201, 202, 335; Economics 101, 102; Finance 302; Management 211, 212, 311,315, 360, 440,441; Marketing 313

Marketing concentration:  
12 hours including Marketing 365, either 361 or 362, 450, 461  
12 hours chosen from Marketing 318,319,355,361, 362,363,364,366,415,417, 430, 442; Economics 425, 429; Management 356  
2.0 average in all marketing courses  
A minimum of 54 hours of the 128 total must be taken at the 300-400 level  
Electives to complete 128 hours

Maximum of 73 hours total accepted in School of Business Administration courses; i.e., at least 55 hours other than School of Business Administration courses must be completed  
At least 50% of the business credit hours applied toward the B.S. degree in Business Administration must be earned at UTC.  
If exempted, student may take Mathematics F136.

Typical course of study in business administration (B.S.): marketing concentration

The program for the first two years in business administration is the same for all concentrations and is designed to do two things: (1) Give the student background in the basic disciplines and areas required to fulfill the general education requirements of the University and (2) prepare a foundation for the advanced courses in business administration to be taken during the junior and senior years.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>Category A:</td>
<td></td>
</tr>
<tr>
<td>Economics 101</td>
<td>Economics 102</td>
</tr>
<tr>
<td>Mathematics 135'</td>
<td>Mathematics F136</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>General Education Category A</td>
</tr>
<tr>
<td>EHLS 021</td>
<td>Computer Science 110</td>
</tr>
<tr>
<td>General Education Categories</td>
<td>General Education and Electives</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Total 16</td>
<td>Total 16-19</td>
</tr>
</tbody>
</table>

| Category B:     |                 |
| B Accounting 201 | B Accounting 202 |
| B Management 211 | B Management 212 |
| General Education Category D | B Management 310 |
| Gen. Education Categories 3-9 | or Equivalent 3-6 |
| Elective        | Elective        |
| Total 13-19     | Total 15-18     |

| Category C:     |                 |
| B Finance 302   | B Management 315 |
| B Management 311 | B Marketing 361 or 362 |
| B Accounting 335 | B Marketing 365   |
| B Marketing 313  | B Management 360  |
| Elective 3-6    | Elective 3       |
| Total 15-18     | Total 15         |

| Category D:     |                 |
| B Marketing Elective 3 | B Management 440 |
| B Marketing 450     | B Management 441 |
| Marketing Electives 3-6 | B Marketing 461 |
| Electives 3-6       | Electives 3-6     |
| Total 12-18        | Total 13-19      |

TOTAL HOURS 128

Marketing Electives (any 12 hours):  
B Marketing 318
B Marketing 319
B Marketing 355
B Marketing 361
B Marketing 362
B Marketing 363
B Marketing 364
B Marketing 366

A minimum of 54 hours of the total 128 must be taken at the 300-400 level.  
If exempted, student may take Mathematics F136.

6 Six hours must be selected from Political Science C101, Psychology C101, or Sociology C151.
Either Marketing 361 or 362 is required. The course not chosen to meet this requirement may be taken as elective.

**MARKETING COURSES**

313 **Basic Marketing (3)**
Principles and methods involved in the movement of goods and services from producers to consumers; strategies the firm may use to take advantage of market opportunities; how the social, political, and economic environment alters these opportunities. Every semester. Prerequisites: Economics 101, 102; junior standing.

318 **International Marketing (3)**
Management of the international marketing activities of the firm. Planning, organizing, and implementing international marketing programs for industrial and consumer goods. Emphasis on the influence of environmental differences on marketing decisions in various countries. Spring semester alternate years. Prerequisite: 313.

319 **The Logistics of Physical Distribution (3)**
The interaction and interdependence of transportation, warehousing, order processing, inventory control, packaging, and plant location in the effective and efficient movement of products and services from producer to consumer. Spring semester alternate years. Prerequisite: 313.

355 **Fundamentals of Purchasing (3)**
The role of purchasing and materials management in modern business organizations; planning, policies, procedures, and control of purchasing operations; inventories and their control; buying for institutions and government purchasing. Fall semester. Prerequisites: junior standing or permission of instructor.

361 **Principles of Selling (3)**
Basic principles of selling and their practical application to sales situations. The economic and psychological motivations underlying customer purchases and product performance as they affect sales of industrial and consumer goods and services. Spring semester. Prerequisite: 313.

362 **Advertising (3)**
The nature of advertising, its role in society and in demand-stimulation. A conceptual foundation is made upon which specialized knowledge can be built. Research, copy, layout, production, budgeting, advertising organization, and the history and economics of advertising are covered. Every semester. Prerequisite: 313.

363 **Sales Management (3)**
Sales department organization and its relation to other departments; the sales manager, sales planning and forecasting; territories; selection and training of salespeople; sales policies; analysis and control of distribution costs; the organizing, controlling, motivation, and evaluation of field sales force to accomplish market objectives. Fall semester. Prerequisite: 313.

364 **Retailing (3)**
Organizing, financing, staffing, and operating retail institutions. Fall semester alternate years. Prerequisites: 313, junior standing.

365 **Consumer Behavior (3)**
An analysis of consumer motives, attitudes, expectations, buying behavior, market adjustment, and product innovation, including a survey of related explanatory theories. The decision-making process by consumers is evaluated with reference to economic and socio-psychological factors. Every semester. Prerequisites: 313, junior standing.

366 **Principles of Selling Real Estate (3)**
The study of the principles of selling real estate. Presentation of communication and persuasion research and its application to the selling of residential and nonresidential real estate. Prerequisite: 313 or permission of instructor.

415 **Industrial Marketing (3)**
Determination of market opportunity; planning of marketing effort; industrial product pricing; financing; managing the industrial sales force; legal aspects. Spring semester. Prerequisite: BMKT 313.

417 **Distribution Channels (3)**
Distribution channels, formal and informal business organizations which effect the transfer of possession and title of goods and services from producers to users. The development of channels, functional and behavioral dimensions, environmental forces, power, conflict and communication within the channel. Current and future trends in the development and management of channels. Fall semester alternate years. Prerequisite: 313.

430 **Entrepreneurship and Enterprise (3)**
An in-depth study of the lifestyle of the entrepreneur. Actual business opportunities identified and evaluated with group feasibility projects. The relationship of the entrepreneur to the formation and growth of the enterprise. Spring semester alternate years. Prerequisites: 313 and Finance 302, or permission of instructor.

442 **Services Marketing (3)**
An examination of the unique aspects of marketing in the service sector. The nature and characteristics of services, differences between goods and services and consumer evaluation processes of services will be investigated including relevant implications for services marketers. An emphasis will be placed upon identifying commonalities among services so that insight may be generalized across industries within the service sector. Spring semester. Prerequisites: 313 and six additional hours in Marketing or permission of instructor.

450 **Marketing Research (3)**
Study of the role of research in marketing decision-making; the research process; scientific method; analysis and interpretation of research findings. Every semester. Prerequisites: 313, Management 212, and at least 9 hours of marketing courses or permission of instructor.

461 **Marketing Problems (3)**
The major marketing problems of representative firms, including manufacturers, wholesalers, and retailers. A case course dealing with actual business problems in all phases of marketing activity. Every semester. Prerequisite: 313, plus 6 additional hours in Marketing or permission of instructor.

484 **Study Abroad: Marketing Concepts (3)**
The field of international marketing has significantly changed in the 1980s, spurred by such factors as Europe 1992. The purpose of this course is to explore the impact of increased globalization along with the differences inherent in cross-cultural marketing through an intensive study and international travel experience. An examination of marketing activities and strategies used by both domestic and international organizations will afford the student the opportunity to see first-hand the various levels of involvement in international business. A key component of this course is the student's practical familiarization with cultural differences since ethnocentric attitudes endanger effective marketing efforts. Through a combination of textbook concepts, outside readings, organizational tours, guest lectures, class discussions, and case studies in all the study abroad locations, students will not only be able to evaluate but also be capable of developing marketing procedures and strategies adapted to the context of an international business environment. Prerequisites: 313 and senior standing or permission of instructor.

495r **Departmental Honors (1-3 hours per term, 4 hours for the two terms)**
On demand. See "Departmental Honors," page 27.

497 **Research (1-3)**
On demand.

498r **Individual Studies (1-3)**
On demand.

499r **Group Studies (1-3)**
On demand.
Other Educational and Public Service Units

Adult Services Center
Margaret Daniel, Coordinator
The Adult Services Center, located on the first floor of the University Center, is open from 11 a.m. - 7 p.m., Monday through Thursday; 11 a.m. - 5 p.m., Friday; and 10 a.m. - noon, Saturday; for the convenience of students who work full time. The center provides individualized advisement, registration, fee collection, and other University services for adult part-time students. All admissions and transcript evaluations for second baccalaureate degree-seeking students are processed in the Center. Workshops and seminars related to educational opportunities and transitions are conducted regularly for individuals currently enrolled or individuals who are interested in either entering or returning to college.

Students who have received one bachelor’s degree and desire to pursue a second bachelor's degree should apply for admission as postbaccalaureate students through the Adult Services Center. Questions regarding the pursuit of a second bachelor's degree should be directed to the Coordinator of the Adult Services Center. Tutoring is available in the Adult Services Center in the evenings during the fall and spring terms.

Senior Citizens and Disabled Persons
Free Audit Program
Persons who are over 60 years of age or totally disabled may audit courses at The University of Tennessee at Chattanooga without charge in any class where there is space available beyond that needed for students who pay fees. Some courses which have special prerequisites or conditions are not available under this option. In addition, persons who are over 65 or totally disabled may, if admitted, enroll in credit courses for a fee of $7.50 per semester hour to a maximum of $75 per semester. The Adult Services Center assists the senior citizen or disabled individual by providing orientation to the campus* completing admission forms, and registering the individual for die course(s) selected. Persons interested in participating should contact the Adult Services Center rather than applying for admission at the UTC Admissions Office.

College Access Program
Patricia Kopetz, Director
The College Access Program (CAP) provides support services for college-level, learning disabled students at UTC, which includes academic advisement, tutoring, career testing and advisement, individual and group counseling, computerized remediation assistance, computer lab facilities, word processing skills, untimed tests, college survival skills, psychological/academic testing, and university orientation.

The student must have certified documentation of the learning disability and should apply for admission to the College Access Program as a first step for enrollment to UTC. Students must also meet all criteria and be approved for admission to UTC. Such approval must be received before final admission to the CAP program. Undergraduate applications for admission may be obtained from the CAP Office or by writing the Office of Admissions at UTC. CAP does not, as a matter of policy, seek on its students’ behalf a waiver of any course work or degree requirement nor does it guarantee that students will successfully complete these requirements. All CAP information is confidential, and students participate in regular university coursework with the guidance, assistance and encouragement of CAP staff. For more information, please come by the CAP office, located at 110 Frist Hall, or call (423) 755-4006.
Cooperative Education

Hugh Prevost, Director

The Cooperative Education Program is an innovative education program that allows students from all university curricula to combine classroom studies with paid, career-related preprofessional work experience. UTC students are placed in alternating semester jobs which require them to work full-time one semester and attend school full-time the next semester, or in parallel work assignments which require students to work 15-25 hours per week and attend school full-time or part-time each semester. The Co-op office also places students in paid major-related internships.

Students may enroll in the program anytime after they have been accepted into the University. Students may begin work, however, only after they have completed their freshman course requirements. When placed in a co-op position, students must register with their major department for course 001 at the beginning of each semester they are employed.

Students interested in exploring the opportunities offered by the Cooperative Education Program should come by 233 University Center or call (423) 755-4735 to make an appointment to see one of the Co-op coordinators.

Individualized Education Program

The Individualized Education Program (IEP) was begun to assist adult students who have not completed the requirements for a baccalaureate degree and who wish to enter or return to the University after working for several years. The program assists students in making the transition back into college and acts as the coordinating agent for awarding elective credit for the student's work experience, non-collegiate, in-service training experiences, or professional certification. Since being accepted as an official unit of the University in 1972, the program has awarded more than 1,000 students IEP credit from the University's participating departments.

Students interested in pursuing IEP elective credit are encouraged to contact the Office of Cooperative Education, (423) 755-4735, or come by 233 University Center to discuss their college plans with the IEP director. During this initial visit, students will be given an IEP application and a detailed explanation of the procedures to follow to complete the IEP process. After completion, each application is reviewed by the faculty of the petitioned department and credit awarded on the individual merit of the application. Students should be aware that not all University's colleges, schools, or departments award IEP credit and that the submission of an IEP application does not guarantee the award of elective credit.

Students pay a portfolio/registration fee of $50.00 and a fee based on the current University charges for each hour of IEP credit awarded.

Continuing Education and Public Service

Marilyn Willis, Dean

The Division of Continuing Education and Public Service provides high quality lifelong learning opportunities to individuals seeking personal growth or professional development programs, workshops or certificates; and college degrees to students who are located off-campus.

Off-campus and Distance Learning Credit Courses

Beth Crawford, Director

Tonya Pace, Learning Manager

To meet the needs of individuals who wish to complete degree programs at off-campus locations, a balanced schedule of credit offerings are presented at numerous locations including: Cleveland, Knoxville and downtown Chattanooga. Instruction includes both on-site and distance learning via real-time, two-way interactive telecourses. Persons interested in receiving of-campus instruction should contact the Division for further information.

Professional Development

Heather Smith, Director

To meet the needs of individuals and groups seeking professional development learning experiences, Pathways to Excellence, a continuous learning process, is skill-based and offered in both public and customized formats. Pathways to Excellence includes over 100 modules designed to enhance professional growth in areas of Leadership, Performance Management, Quality and Workplace Teams and also offers thirteen certificate programs.

Pathways to Excellence includes professional certification preparation programs for Professional Engineers, Professionals in Human Resource Management and Certified Public Accountants.

Our professional development programs award Continuing Education Units (CEU's) and the division maintains individual transcripts and issues certificates.

Community Outreach

Ginny Reese, Manager

To extend university resources to the community, the Division offers personal development programs for all ages including Youth University, the Chattanooga Ballet, Elderscholars and courses in art, literature, foreign languages, recreation and others.

The Division coordinates the admission and advisement of local high school students participating in the Tennessee Joint Enrollment program and UTC's College Challenge Program. We welcome suggestions for new programs.
Other Services
Additional services provided by the division include: 1) provide assistance to business, industry, government, social service agencies and professional organizations for developing and coordinating conferences and institutes; 2) arranging meetings on the university campus; 3) coordinating UT statewide efforts (correspondence courses, UT Institute of Public Service programs.)

Student Support Services
Shirl S. Gholston, Director
The Division of Student Support Services, located in 213 Race Hall, provides free academic support services to all eligible UTC students. Specific services include:

Writing Skills — Small group and individual tutoring sessions in grammar, composition, and word processing are offered, with particular emphasis on teaching students the skills of revising and editing their own papers.

Tutoring—Graduate and undergraduate students with at least a 3.0 GPA provide individual tutoring in academic subjects on the freshman and sophomore levels.

Special Workshops — A schedule of study skills workshops for students on academic probation is offered each semester. In addition, reading and writing workshops are offered to students who wish to prepare for graduate school enrollment.

Accommodation - Academic support services (note takers, readers, alternative testing, etc.) are available to students with disabilities. Students are matched with appropriate services on an individual basis.

Upward Bound
Booker T. Scruggs, II, Director
Upward Bound is a college preparatory program which provides eligible high school students with academic and cultural activities that improve their chances of entering and successfully completing postsecondary education. Students are recommended by their high school guidance counselors and are then selected by the Upward Bound staff. Upward Bound offices are located in 212 Race Hall.

Library
The Lupton Library is the center of many of the teaching, learning and research activities of the students, faculty, and staff of UTC, as well as members of the metropolitan Chattanooga community. The library maintains a collection of over 433,000 books, 2,700 current periodical subscriptions, 23,000 reels of microfilm, and 11,000 audiovisual items. Total holdings add up to over 1.5 million physical pieces of material.

The Lupton Library’s on-line catalog enables users to locate items in the library’s collections. In addition electronic access to databases which index and abstract magazine and journal articles in business, medicine and health, education, psychology, sociology, environmental studies, and many other areas is available on the library’s LAN (Local Area Network). The catalog and the LAN may be accessed in the library, or through microcomputers on campus which are connected to the UTC Computer network, or from microcomputers off-campus which have a modem and appropriate communications software. Individuals connected to the Internet may telnet to the library’s catalog or connect to the library’s WorldWide Web page.

To borrow circulating materials from the Lupton Library, individuals must present a valid, barcoded identification card. The standard loan period for undergraduate students is 21 days. Along with collections of UTC’s Lupton Library, UTC students, faculty and staff with valid identification cards are granted reciprocal borrowing privileges at all libraries of the University of Tennessee system.

Reference librarians staff the Reference Desk on the first floor of the Lupton Library during almost all hours of operation. They are available for individual instruction on the use of the many resources owned and accessed by the library. They are also the best resource for service details and policy clarifications.

UTC students may borrow from other libraries materials not owned by Lupton Library. This Interlibrary Loan service sometimes has charges associated with it. Charges are paid by the student making the request.

Library materials which are lost or returned late are subject to fines. If fines are not paid as required, responsible individuals will be blocked from use of the library. These individuals will also not be permitted by the business office and the registrar either to register or to receive course credits and transcripts until the outstanding obligations are fully cleared.

WUTC
Dr. John McCormack, Station Manager
WUTC is the public radio station licensed to The University of Tennessee at Chattanooga. Operating at 88.1 FM, it provides a 24 hour-a-day broadcasting service. WUTC is the Jazz, Blues, Reggae, and informational programming source for this area.

WUTC is the National Public Radio Station for the tri-state region.
Administration and faculty

ADMINISTRATION
The University of Tennessee
Board of Trustees 1996-97

Legal Title: The University of Tennessee
The Governor of Tennessee, Ex-Officio
The Commissioner of Agriculture, Ex-Officio
The President of the University, Ex-Officio
The Executive Director, Tennessee Higher Education Commission, Ex-Officio

From Congressional Districts
First—Thomas E. Kerney, Kingsport
Second—William B. Sansom, Knoxville
Third—Roger W. Dickson, Chattanooga
Fourth—Charles E. Coffey, Shelbyville
Fifth—Roy C. Flowers, Nashville
Sixth—E. Carl Johnson, Brentwood
Seventh—Amon Carter Evans, Columbia
Eighth—Jerry L. Jackson, Dyersburg
Ninth—Johnny D. Amos, Memphis

From Anderson, Beford, Coffee, Franklin, Lincoln, Moore, and Warren Counties
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R. Clayton McWhorter

From Hamilton County
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From Knox County
Susan Richardson Williams
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Vojin Janjic, M.S., Vanderbilt University.
Ehsan S. Marandi, M.S., The University of Tennessee at Chattanooga.
Richard Meadows, M.S., The University of Tennessee at Chattanooga.
James W. Rogers, Ph.D., B.S., University of Chattanooga, P.E.
Frank W. Smith, B.E.E., Georgia Institute of Technology, P.E.
Todd K. Smith, B.S.E., The University of Tennessee at Chattanooga.

Computer Science
Terrance M. Carney, Professor, Ph.D., Rice University, P.E.
B.C. Day, Assistant Professor, M.P.A., American University.
Joseph Dumas, Assistant Professor, Ph.D., University of Central Florida.
Charles Fowler, Instructor.
Joseph Kizza, Assistant Professor, Ph.D., University of Nebraska.
Clinton Wills Smullen III, Professor, Ph.D., Dartmouth College.
Stephanie A. Smullen, Professor, Ph.D., University of Arkansas.
Jack Thompson, Professor, Ph.D., Texas A&M University.

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Laura Murphy, B.S., Tusculum College.
Janet Pickard, M.S., The University of Tennessee at Chattanooga.
Frank W. Smith, B.B.E., Georgia Institute of Technology, P.E.

College of Health and Human Services
Military Science
Steven G. Thomas, Assistant Professor, Captain, U.S. Army.
B.A., North Georgia College.
Charleston F. Stallworth, Instructor, Master Sergeant, U.S. Army.
Barry N. Totten, Professor, Head, Lieutenant Colonel, U.S. Army.

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David Levine, Assistant Professor, Ph.D., University of Tennessee, Knoxville.
Cathie R. Smith, Assistant Professor, M.Ed., The University of Tennessee at Chattanooga.
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Nancy L. Trippe, Assistant Professor, M.H.S., Washington University, St. Louis.
J. Randy Walker Jr., UC Foundation Associate Professor, Ph.D., Georgia State University.
Michael W. Whittle, Clinic Chair of Excellence in Rehabilitation Technology and Professor, Ph.D., University of Surrey, England.

School of Social and Community Services
Reginald A. Avery, UC Foundation Professor, Director.

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William H. Hall, Assistant Professor, J.D., Northern Illinois University College of Law.
Roger D. Thompson, Associate Professor, Ed.D., University of Tennessee, Knoxville.
Lenny Kryziak, Assistant Professor.
Sheila Van Ness, Assistant Professor, Ph.D., Kent State University.
Kenneth Venters, Professor, Ph.D., Florida State University.

Human Services: Management
Ralph Anderson, Associate Professor, Ph.D., University of Wisconsin, Milwaukee.
Deborah Elwell Arlten, Associate Professor, Ed.D., University of Tennessee, Knoxville.
Marvin L. Ernst, Professor, Ph.D., Oklahoma State University.

Legal Assistant Studies
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Dorothy Williams, Associate Professor, M.S.W., State University of New York.

School of Nursing
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Martha Butterfield, Associate Professor, M.S.N., Ohio State University.
Gwendolyn Charles, Associate Professor, M.S.N., Emory University.
Anne Chriens, Clinical Associate, M.S.N., University of Tennessee, Memphis.
Susan Davidson, Assistant Professor, Ed.D., University of Tennessee, Knoxville.
Cherry A. Guinn, Associate Professor, Ed.D., University of Georgia.
Patricia Haas, Professor, Ph.D., Purdue University.
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Virginia Keatley, Assistant Professor, M.S.N., Loyola University.
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Malcolm Smith, UC Foundation Assistant Professor, D.S.N., University of Alabama at Birmingham.
Pam Taylor, Clinical Assistant Professor and Assistant Director, Ph.D., Columbia Pacific University.
Margaret L. Trimpey, Associate Professor, M.S.N., Vanderbilt University.

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J. Howard Finch, UC Foundation Associate Professor, Ph.D., University of Alabama.
Gary M. Fleischman, Assistant Professor, Ph.D., Texas Tech University.
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Thomas A. Gavin, Professor, D.B.A., University of Tennessee, Knoxville.
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Karen B. Lane, Assistant Professor, Ph.D., University of South Florida.
C. Michele Matterly, Assistant Professor, Ph.D., University of Alabama.
Thomas H. Payne, Assistant Professor, Ph.D., University of Arkansas.
Laurie Prather, Assistant Professor, Ph.D., University of Houston.
Marsba A. Scheldt, Associate Professor, Ph.D., Mississippi State University.
Gregory M. Thibadoux, Professor, Ph.D., University of Houston.
Richard A. Turpin, Assistant Professor, Ph.D., University of Alabama.
Karen J. Weckly, Assistant Professor, J.D., University of Washington School of Law.
Marlyn Willis, Associate Professor, Ed.D., University of Kentucky.
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E.L. Kittrell Smith, Jr., University of North Carolina.
Joan E. Sompayrac, J.D., University of Cincinnati.
Mohammad Ahmadi, Hart Professor, Ph.D., North Texas State University.
Mary Elizabeth Brabston, Assistant Professor, Ph.D., Florida State University.
Pathasarati Dileepan, UC Foundation Professor, Ph.D., University of Houston.
Lawrence P. Etzkin, White Professor, Department Head, Ph.D., University of Nebraska.
Marilyn M. Helms, UC Foundation Associate Professor, D.B.A., Memphis State University.
L. Kenney Jih, Professor, Ph.D., North Texas State University.
Lawrence S. Kleinan, Professor, Ph.D., University of Tennessee, Knoxville.
James Howard Maconeh, Associate Professor, D.B.A., Kent State University.
Gerry M. McNumara, Assistant Professor, M.B.A., University of San Diego.
Mark E. Mendenhall, Frierson Chair of Excellence in Business Leadership, Professor, Ph.D., Brigham Young University.
Judy C. Nixon, Professor, Ph.D., Georgia State University.
Farhad M. Raiszadeh, Professor, Ph.D., Louisiana State University.
Judy F. West, Professor, Ph.D., Georgia State University.
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Laura T. Baker, Assistant Professor, M.L.S., Clark Atlanta University.
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Robert Neal Coulter, Assistant Professor, M.L.S., Indiana University.
Shella A. Delacroix, Professor, M.L.S., University of Alabama.
Elizabeth C. Henry, Assistant Professor, M.A.L.S., University of South Florida.
Sara R. Murgia, Associate Professor, Ed.D., University of Tennessee, Knoxville.
William W. Prince, Associate Professor, M.L.S., University of Illinois, Champaign-Urbana.
Marva E. Rankin, Associate Professor, M.A.(L.S.), University of South Florida.
Randolph L. Whitson, Associate Professor, M.L.S., George Peabody College for Teachers.
Sheridan E. Young, Assistant Professor, M.L.S., Louisiana State University.

Marketing
Richard C. Becherer, Harris Chair of Excellence in Business and Entrepreneurship, Professor, D.B.A., University of Kentucky.
A. Richard Casavant Jr., Lorberbaum Professor, Ph.D., Georgia State University.
Diane Halstead, Assistant Professor, Ph.D., Michigan State University.
Pamela J. Haynes, UC Foundation Associate Professor, D.B.A., Mississippi State University.
James A. Henley, Jr., Associate Professor, D.B.A., Mississippi State University.
Carolyns McMahin, Instructor, M.B.A., The University of Tennessee at Chattanooga.
C. David Shepherd, Associate Professor, Ph.D., University of Tennessee, Knoxville.
Ashley Williams, Instructor, M.B.A., The University of Tennessee at Chattanooga.

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Thomas G. Widmer, M.B.A., The University of Tennessee at Chattanooga.
Through the years many people have made generous gifts to establish endowed funds for various purposes. The University recognizes and thanks them by publishing their names here.

**Scholarships**

*Julius Ochs Adler Scholarship:* Established in July 1956 by an anonymous donor in memory of the distinguished citizen who was associated with Adolph S. Ochs in the management of The Chattanooga Times.

*Alumni Centennial Scholarships:* Established during the Centennial Campaign, four area scholarship endowments were funded by friends and alumni of UTC living in the Riverview and Lookout Mountain residential sections of Chattanooga and in both Nashville and Cleveland. The Cleveland scholarship was named in memory of Dickie Norton, UTC alumnus, who served as chair of the effort before his death in 1988. Preference for each scholarship will be given to students residing in the particular area.

*UTC Alumni Council Scholarship:* Established in 1995 by members of the UTC Alumni Council, other alumni, and friends of the University. The scholarship is awarded to a junior or senior who holds a 3.0 GPA and has demonstrated commitment to community or University service. Preference may be given to the dependent child of a UTC graduate.

*Marvin L. Anthony Scholarship:* Established in 1965 by Chicago banker, Marvin L. Anthony, a 1926 chemistry graduate and member of Phi Delta Sigma, for students of business or chemistry.

*Arendale Scholarship:* Established in 1990 through the estate of Miss Arendale, a 1952 history graduate, and former economics professor at Chattanooga State Technical Community College.

*Clayton Arnold Teacher Training Scholarships:* Established in 1965 by Clayton Arnold, who served as postmaster at Thompson Station, Tenn., for many years and had a strong interest in the education of teachers. Arnold, who died in 1987, gave the University gifts in excess of $1 million and felt that his gifts would do the most good if made for the training of teachers in public education. UTC receives a portion of the proceeds from the Arnold Endowment for students in the College of Education and Applied Professional Studies.

*Authors and Artists Club Scholarship:* Established in 1988 by the Authors and Artists Club to be awarded on a rotating basis for students with a demonstrated interest in creative writing, art, music, and theatre. The fund was enhanced in 1994 to provide yearly awards in each discipline.

*Steve Baras Memorial Scholarship:* Established in 1982 by the family of Steve Baras, a graduate of UTC and a past member of the varsity tennis team, for students who are members of the tennis team or majoring in business.

*James William (Bill) Barker Scholarship:* Established in 1960 by friends and fraternity brothers of the Pi Kappa Alpha who died four years after his graduation in 1949.

*Thomas G. Bartlett, Jr. Scholarship:* Established in 1995 to honor Tommy Bartlett, UTC men's and women's tennis coach for many years, for student-athletes in the women's tennis program.

*Creed F. Bates Scholarship:* Established in 1976 by more than 300 individual gifts from friends, former students, and citizens of the Chattanooga community in honor of Creed Fletcher Bates, student, teacher, principal, University trustee, and community leader, to be awarded annually to a qualified and deserving student from the local area.

*Alvin G. and Sally M. Beaman Scholarships:* Established in 1990 by the Beamans, Nashvillians representing the Beaman Companies, at three UT campuses: Chattanooga, Knoxville, and Martin. Preference is given to the children or grandchildren of Beaman Bottling Company or Shelbyville Bottling employees or former employees. Awards are based on academic achievement and financial need.


*M.W. Brabham Scholarship:* Established in 1963 by the Brabham-Martin Bible Class of the Centenary Methodist Church in memory of its esteemed member, the longtime executive secretary of the Chattanooga Community Chest.

*David M. Brammer Memorial Scholarship:* Established in 1976 by friends and family of Dr. Jeffrey L. Brown who at the time of his death was associate professor of sociology and anthropology and director of the University's Institute of Archaeology. The scholarship is based on merit and is given to a student who will further advance the academic ideals of conservation and preservation of man's past.

*Margaret Whiteside Buhman Scholarship:* Established in 1978 by friends in honor and recognition of her 46 years of distinguished service to the students, faculty, and staff of the University, for deserving students wishing to attend UTC with preference for students majoring in English.

*Cyril C. and Imogen H. Burgner Scholarship:* Established in 1991 through the estate of Mrs. Brooks Burgner in honor of her late husband for the benefit of worthy and deserving graduates of Tyner High School where Mr. Burgner served for many years as principal.

*Dr. Wilbur K. Butts Memorial Scholarships:* Established in 1993 through a bequest from the estate of Alfred M. Butts in honor of his late brother, who was a faculty member for many years in the department of biology. The awards go to entering freshmen with demonstrated academic performance who wish to major in biological science.
Campbell and Associates Scholarships: Established in 1987 as a centennial gift by John F. Germ, president and chief executive officer of Campbell and Associates, Engineering Consultants. Germ, a UTK graduate, has served on UTC's Chancellor's Roundtable and was involved in the design and construction of UTC's Arena and the Fine Arts Center.

Gillie Queener Carter Memorial Scholarship: Established in 1979 by Professor Emeritus Roland D. Carter and his children, Roland D. Carter Jr. and Yvonne Carter Gardenhire, in memory of Gillie Queener Carter who taught in the Chattanooga public school system for many years, to be awarded to a student majoring in special education.

Edith White Cassell Memorial Scholarship: Established in 1996 by Florence White Taylor in memory of her sister, Class of 1935 alumna Edith Cassell, who attended the University of Chattanooga and attained financial assistance through the help of President Alexander Guerry. Edith Cassell majored in German and worked for many years for the Tennessee Valley Authority.

Morton Neal Center Athletic Scholarship: Established in 1978 by Center, a business and civic leader, to be awarded to a qualified and deserving student athlete.

Chattanooga Area Personnel Association Scholarship: Established in 1996 by the members of the Chattanooga Area Personnel Association, one half of the award goes to a graduate or undergraduate student majoring in human resource management in the School of Business and one half to a graduate student in industrial organizational psychology in the College of Arts and Sciences.

Chattanooga Coke and Chemical Scholarship: Established in 1979 during the Tennessee Tomorrow Campaign in celebration of the company's 60th year of operation. The award goes to a qualified undergraduate student.

Walter W. Colby Memorial Scholarships: Established in 1982 by Benjamin W. Colby, a UC alumnus, in memory of his father, an early resident of Walden's Ridge (1878). Needy and worthy students from the Hamilton and Sequatchie County areas of Walden's Ridge are given preference.

St. Augustine "Augie" Cranford, Jr. Memorial Scholarship: Established in 1994 as a memorial to Augie Cranford, director of the UTC Arena security at the time of his death, for minority students from the Chattanooga area majoring in criminal justice or education.

Louise G. Currey Environmental Studies Scholarship: Established in 1990 by her children, Bradley Currey Jr., Louise Nicholls, Frederick Currey, Hal Currey, and Robert Currey, and other friends and family. Mrs. Currey was one of the founders and a life trustee of the Nature Conservancy.

John B. and Becky R. Dethero Scholarship: Established in 1989 by Dethero, class of 1962, and his wife, residents of Cleveland, Tenn., in their desire to provide educational opportunities to needy students. Preference is given to students who have participated in Career Beginnings at UTC.

Harry B. Deuberry Physics Scholarship: Established in 1985 by Deuberry, president of the class of 1930, to encourage physics majors in assisting faculty with projects.

Thomas O. Duff Scholarship: Established in 1956 by Thomas Duff, business and civic leader, patron and trustee of the University, to be augmented at his death by gifts from family and friends. Preference is to be given to children of pharmacists who want to pursue careers in pharmacy.

Executive Women International (ASIST)/Jean Bradford Memorial Scholarship: Established in 1996 by the Chattanooga Chapter of Executive Women International (ASIST) in memory of former member Jean (Mrs. James) Bradford, who at the time of her death in December 1995 was the administrative aide of Chancellor Frederick W. Obear, this award assists women, particularly displaced homemakers and single mothers, returning to school in order to enhance their career opportunities.

John W. Evans Scholarship: Established in 1966 by the will of John W. Evans, retired Chattanooga realtor, who bequeathed his entire estate to the University for the benefit of "needy and deserving students."

Fallc, Trailer, & Davis (FTD) Minority Scholarship: Established in 1993 by Grover Davis, a former board member and alumnus of Chattanooga City College, in honor of Dr. Horace Tray lor, president of Chattanooga City/Zion College at the time of the merger with UT and UC and the first minority graduate of UTC, and the late Mary Weidner Falk, one of the founders of Zion College in 1949, where she served as registrar and business manager. Preference for the award goes to minority students who accept a moral obligation to repay the award to the endowment.

Lillian B. Feinstein Art Scholarship: Established in 1980 in honor of Lillian B. Feinstein, sculptor, patron of the arts, and longtime supporter of the Hunter Museum and the University Art Department. The scholarship is awarded annually to a student majoring in art.

Fincannon Scholarship: Established in 1984 by Al Fincannon. The scholarship is awarded upon the recommendation of the UTC Scholarship Committee with preference given to widowed or previously married women.

W. Max and Margaret Finley Scholarship: UC alumnus W. Max Finley and his wife Margaret established this fund in 1986 for the benefit of adult students entering or re-entering college as full- or part-time students working toward either undergraduate or graduate degrees. Preference is given to single parents, female students, students with declared majors in business, and students from Hamilton County and the greater Chattanooga area, including Georgia and northeast Alabama.

Asa Van Frazier Memorial Scholarship: Established in 1993 by Pauline W. Frazier and William Frazier in memory of their husband and father, who spent 37 years in the teaching profession in Hamilton Country, retiring in 1975 as principal of Lakeside Elementary. Preference for the award goes to students who are interested in teaching and who attend St. James A.M.E. Church.


Thomas Geraghty Scholarship: Established in 1990 by friends and colleagues of Geraghty, who joined the faculty in 1960 as assistant professor of economics, later serving as director of the computer center, and holding the Clark Chair of Economics when he retired. Preference for this scholarship goes to students majoring in business.
Carl Gibson Scholarship: Established in 1994 by the estate of Carl Gibson, University of Chattanooga, Class of 1934, and former owner of Ruby Falls. The scholarship is based on academic performance and financial need.

John E. and Claudia F. Gilbreath Scholarship in Memory of Katherine Frazier: Established in 1971 by Mrs. Gilbreath for deserving male students in memory of her husband and her sister, two of the founders of the Chattanooga Federal Savings and Loan Association, both prominent business and civic leaders who died in 1969. Mr. and Mrs. Gilbreath graduated from the University of Tennessee, Knoxville.

Sharon Gilley Grant Memorial Scholarship: Established in 1984 by Claude and Mildred Gilley in memory of their daughter, an honor graduate of UTC. This scholarship is awarded on a competitive basis in either opera or voice.

Douglas Chamberlain Griffith Memorial Scholarship: Established in 1984 by Mrs. Robert H. Griffith in memory of her son (1941-1984). A graduate of the University of Chattanooga, he was a captain in the U.S. Air Force and a professional photographer. The scholarship award is based on student need.

Friends of Doug Griffith Scholarship: Established in 1985 by Wendell Burns and other friends and colleagues. The award is based on need with preference given to design majors.

Nita T. and Irvine W. Grote Scholarships: Established in 1976 by the Chemistry Department in memory of Dr. arid Mrs. Irvine W. Grote. Grote served as a distinguished member of the chemistry faculty from 1931-1969. Endowment income annually provides scholarships for 12 outstanding chemistry majors.


Wayne Hannah/Chattanooga Advertising Federation Scholarship in Graphic Design: Established in 1985 in memory of Wayne Hannah, a noted radio and television broadcaster in Chattanooga. The scholarship is awarded by the Art Department with the Chattanooga Advertising Federation to a student entering the sophomore year as a major in graphic design.

UTC History Department Scholarship: Established by Dr. Ronald Moore, Dr. James Ward, Dr. Larry Ingle, Dr. Russell Linnemann, Dr. Tyler Deierhoi, Dr. Richard Rice, Dr. James Russell, Dr. William Wright, and Elke Lawson, 1985-86 faculty members of the history department, to perpetuate the century of high standards of their discipline at this institution, for history majors.

Eleanor M. Hodges Scholarship: Established in 1988 by the president and secretary of Lawson Electric, Walter P. Hodges, in honor of his wife, Eleanor. The Hodgeses are parents of a 1978 UTC graduate. All other qualifications and considerations, academic and financial, being equal, first consideration for this award is given to graduates of East Ridge High School.

Ida Mae "Dutch" Holland Scholarship: Scholarship originally begun by John H. "Hank" May and Josten's of Takoma Park, Md., in 1980 was endowed in 1993 by members and friends of the Lambda Chi Alpha Fraternity Alumni Chapter in honor of the Zeta Phi Zeta Chapter housemother for 35 years. The award goes to active members of the UTC chapter based on scholarship and need.

Andrew D. Holt Scholarships: Established in 1971 by the UT National Alumni Association in honor of Dr. Andrew P. Holt, president of UT from 1959 to 1970. These awards are available on every UT campus. Four Chattanooga undergraduate students are allocated four-year Holt Scholarships annually based on academic merit.

Dr. Karel Hujer Scholarship: Established in 1990 through a bequest from the estate of Harriet Hunt Hujer in memory of her husband Dr. Karel Hujer, an internationally known astronomer on the faculty of UTC, for students majoring in astronomy, physics, or mathematics.

John L. Hutcheson Jr. Memorial Scholarship: Established in 1983 by the Rossville Memorial Center and W. Frank Hutcheson in memory of John L. Hutcheson Jr., longtime member of the board of the University of Chattanooga and a prominent citizen of North Georgia. The scholarship is awarded to students who demonstrate successful academic performance. Preference is given to students from specific North Georgia counties and Tiftonia.

Edgar M. Jolley Athletic Grant-In-Aid Scholarship: Established in 1994 by Charles B. Lebovitz and family and CBL & Associates in honor of Mr. Jolley, a Moccasin athletic fan and alumnus on the occasion of his retirement. The award goes to a student athlete.

Clarence T. Jones Prize in Astronomy: This scholarship was funded in 1989 through the estate of Arthur H. and Mary Louise Jones in honor of his father. The prize goes to an outstanding physics student who is a rising senior and has excelled in astronomy.

Kelley-Mayse Scholarship: Established in 1996 by Jack E. Kelley, preference for this award goes to a student athlete in the men's basketball program or to children of Mayse Construction Company employees.

John Earlont Kerr Scholarship: Established in 1959 with a bequest from Lillian Webb Kerr, longtime East Lake Grammar School teacher, in memory of her son, a student at Vanderbilt University at the time of his death in 1915.

David McKenzie Key Scholarship: Established by Sarah Key Patton in memory of her father, Postmaster General of the United States, U.S. Senator, Federal Judge, and one of the founders of the University.

Mr. & Mrs. Paul J. Kinser Scholarship: Established in 1986 by Paul J. Kinser, University of Tennessee trustee, for juniors or seniors enrolled in the industrial engineering program with a 3.0 G.P.A. or better and financial need.

Gene E. Kistler Scholarship: Established in 1994 through a bequest from the estate of Dr. Kistler, a long-time Chattanooga physician and general surgeon, as an expression of his appreciation for his community and admiration for the University. Kistler had been chief of surgery for Erlanger and T. C. Thompson Children's hospitals. This award goes to students with declared pre-medical majors.

David Ardell Knauff Memorial Scholarship: Established in 1990 by Major Charles H. Knauff, U.S.A. Ret., in honor of his son, a cum laude graduate of UTC in 1977, who died in Atlanta where he worked for CBS Television Productions. First consideration given to students from Ooltewah High School.

Paul Koblentz Memorial Scholarship: Established in 1990 through a bequest from Abe J. Koblentz as a memorial to his deceased son, in order to provide scholarships for deserving students.
Norbert Koch Scholarships: Two funds established in 1979 by gifts from former students, colleagues, and citizens of the Chattanooga community in honor of Dr. Norbert Koch, professor of engineering, on the occasion of his retirement after 32 years of dedicated service to the University to be awarded annually to a qualified and deserving engineering student.

Leba and Moses Lebovitz Scholarships: Established in 1989 by Moses Lebovitz, UC Class of ’28, charter member of the UC Foundation, and chairman of the board of CBL, Inc., one of the largest developers of shopping centers in the United States, with preference given to Jewish students. Enhanced in 1994 to include extra provision for exchange of students between UTC and the University of Haifa, Israel.

Joyce Litchford Scholarships: Established in 1976 by Dr. R. Gary Litchford, a member of the the biology faculty, in memory of his wife, for scholarships to a senior pre-medical student and to a junior or senior member of the wrestling team.

Christine B. Little Nursing Scholarship: Established in 1997 by Mrs. Little, Class of 1982, who returned to school as an adult and received her nursing degree at age 57, this award gives preference to adult junior and senior undergraduate women returning to school to complete degree requirements in nursing.

Mr. and Mrs. Charles W. Loftin Scholarships: Established in 1983 by Amy Loftin in memory of her parents, Mr. and Mrs. Charles W. Loftin. The scholarships are awarded to outstanding students from the Department of Theatre and Speech.

Lookout Post 1289 Veterans of Foreign Wars Scholarship: Endowed in 1986 by the Lookout Post 1289, Veterans of Foreign Wars, this scholarship is intended primarily for veterans returning to school, students in the ROTC program, or students whose patriotism is strong.

Lovemans Marketing Scholarship: Established in 1988 as a Centennial gift to the University by the donor company under the leadership of its late president James L. Moore Jr. The Moore family and Lovemans Department Store have been economic and cultural leaders in Chattanooga with a long history of involvement with the University.

Dr. Littleton H. Mason Memorial Scholarship: Established in 1989 by his widow, Ruth, and other friends in memory of Mason, assistant dean of students. Preference given to minority students from low income families from Memphis.

Winston L. Massey Scholarship: Established in 1973 by the University of Chattanooga Foundation in honor of Massey, Guerry professor of mathematics, on the occasion of his retirement after 40 years of service to his alma mater, for an outstanding upperclassman majoring in mathematics.

Dr. William H. Masterson Memorial Scholarship: Established by the family of the eleventh president of the University of Chattanooga and first chancellor of UTC, this scholarship honors Dr. William H. Masterson who died March 3, 1983.

T.R. McAfee Memorial Scholarship: Established in 1979 and enhanced starting in 1980 by friends who hosted an annual T.R. McAfee Golf Tournament to raise funds for an endowed golf scholarship in memory of T.R. McAfee Jr., former UTC student and member of the varsity golf team.


Amy Mildram Scholarship: Established in 1991 in honor of the widow of former UTC professor of philosophy and religion, by friends and colleagues of Amy Mildram, a physical therapist with T.C. Thompson Children’s Hospital and advocate of bringing a physical therapy program to UTC, for seniors in physical therapy.

Burkett Miller Scholarships: Established in 1954 by a generous gift from Miller, a leading Chattanooga attorney and philanthropist, to aid needy and worthy students.

Miller/Schwartz Scholarship: Established in June 1991 by Eleanor Miller Schwartz, member of the Chancellor’s Roundtable, and her husband, Dr. Harold Schwartz, in honor of their parents, for students majoring in special education.

A.C. “Scrappy” Moore Athletic Scholarship: Established in 1986, Centennial year of the University, by Mrs. Helen F. Moore, widow of Moore, this scholarship is available to intercollegiate athletes in memory of the long-time University of Chattanooga football coach and popular local sports figure.

Scrappy Moore Memorial Scholarship: Established in 1971 by memorial gifts from family and friends of long-time, distinguished head football coach and athletic director A.C. “Scrappy” Moore Sr., who served the University from 1926-1971. Scholarship preference is given to a varsity football player who exemplifies the ideals of leadership, scholarship, and service.

Charles A. Noone Scholarship: Established in 1961, and enhanced at her death in 1980, by Mrs. Noone in memory of her husband, a prominent lawyer who practiced in Chattanooga for many years and was the father of an alumnus.

School of Nursing Honors Scholarship: Established in 1996 in recognition of the 25th anniversary of the UTC School of Nursing and as a 21st Century Campaign gift to the University by the nursing faculty, staff and other friends of the School of Nursing, the award gives preference to a minor student or a student who demonstrates financial need and has maintained a 3.5 GPA and above average clinical evaluations at the junior and senior level.

Dorothea Woods Obear Scholarship: Established in 1990 by Chancellor Frederick Obear in memory of his mother who had a strong interest in the University and, in particular, its honors programs. The scholarship goes to a student in the University Honors Program.

Overmyer Athletic Scholarships: Established in 1969 by longtime trustee Donald H. Overmyer, class of 1930, and his wife, Ruth E. Overmyer, class of 1932, to provide a minimum of four scholarships to be divided among candidates for the varsity football and the varsity swimming teams as recommended by the head coaches. If there is no swimming team, members of the baseball team shall receive them, or if neither, they shall go to football.

Paramedical Careers Scholarship of the Women’s Auxiliary to the Chattanooga and Hamilton County Medical Society, Inc.: Endowed in 1987 after many years of annual funding, this scholarship provides financial assistance for students pursuing health-related careers.
Jenks Fain Parker Memorial Scholarship: Established in 1984 by the family of Jenks Fain Parker. The scholarship is awarded to deserving students in the School of Engineering as recommended by UTC Scholarship Committee.

U.G. and William E. Paschal Scholarships: Established by William Ernest Paschal, class of 1914, retired Akron rubber executive, in memory of his father, the Rev. U.G. Paschal, class of 1896. The first scholarship was given in 1965 for physical education majors, the second in 1967 for students participating in varsity football.

Elizabeth Bryan Patten Scholarships: Established in 1972 by businessman Z. Cartter Patten in honor of his wife, active civic, welfare, and religious leader of her community.

Sarah Key Patten Scholarship: Established in 1955 by Z. Cartter Patten in honor of his mother, one of Chattanooga's most beloved matrons, daughter, and mother of University trustees.

Ruth Clark Perry Scholarship: Established in 1969 by Mrs. Leonora Miller Seids of Perry, Okla., in memory of her friend, UC dean of women from 1924 to 1943 and professor of mathematics from 1922 until her death in 1955, to be awarded to an upperclasswoman majoring in mathematics.

Billy C. Perry, Jr. Memorial Scholarship: Established in 1990 by Billy Perry's fellow UTC cheerleading squad members and advisor Betty Tucker, this memorial scholarship is for entering freshmen who have been high school cheerleaders or team managers.

William and Susan Pettway Gift to Athletics: Established with a gift from the estate of William D. Pettway Jr., who died in 1993. Pettway was a fan of intercollegiate athletic competition, an athlete, and trustee of the UC Foundation, and his family has a long history of involvement with the University. Preference for the award goes to varsity football players.

Physical Therapy Alumni Scholarship: Established in 1994 by the faculty, friends, and alumni of the physical therapy program for students in the physical therapy program.

Katharine E. Pryor Scholarships: Established through a bequest from the estate of Miss Pryor, a 1936 alumnus and longtime teacher at Chattanooga High School, who died in 1992. Scholarship recipients shall be graduates of the Chattanooga or Hamilton County Public School Systems.

ROTC Scholarships: Established on 1992 by the faculty and staff of the UTC Military Science Department, veteran groups, and other interested friends in order to attract to this campus more national level Army ROTC scholarship tuition winners. This fund will provide incentives in the form of room and board or annual grants to help defray the cost of higher education.

Alex Radin American Public Power Association Scholarship Fund: Friends and colleagues of alumnus Alex Radin established in 1986 an endowed scholarship honoring Radin, the distinguished executive director of the American Public Power Association, a national organization headquartered in Washington, D.C., which represents more than 1,750 municipal and other local publicly owned electric utilities in 49 states and several foreign countries.

Murray Raney Chemistry Scholarship: Established in 1989 by W.R. Grace and Company in memory of Murray Raney, who died in 1966 and was a distinguished Chattanooga physician, physicist, and long-time supporter of the University, and augmented at his death by a memorial fund from his family. The scholarship is to be awarded annually to an outstanding nursing student.

Dr. E.E. Reisman, Jr. Memorial Nursing Scholarship: Established in 1981 under the terms of the will of Dr. Reisman, a distinguished Chattanooga physician and long-time supporter of the University, and augmented at his death by a memorial gift from his family. The scholarship is to be awarded annually to an outstanding nursing student.

Arthur Rivituso Scholarship in Piano: Established in 1991 as a memorial to Arthur W. Rivituso who retired and later died in 1991 after 22 years as a professor of piano and artist-in-residence, by his niece Carol Smith and other friends, colleagues and relatives, for advanced piano students.

Edmonia J. Simmons Endowed Scholarship in Music: Established in 1991 by friends and colleagues of Mrs. Simmons, a distinguished musician and community leader for music or music education majors with preference given to minority students.

Carol Smith Sanders Memorial Scholarship: Established in 1991 by friends, colleagues and family of Carol Smith Sanders, daughter of Judge Dixie Smith, '42, who received her master's degree from UTC and at the time of her death was a behavior management specialist in the Hamilton County Schools, for students enrolled in the master's program in special education.

Calvin U. Smith Jr./G. H. Miller Smith Scholarships: Established in 1965 by Mr. and Mrs. George Blackwell Smith in honor of their nephew, Calvin U. Smith Jr. (1940-1963), and of their son, G.H. Miller Smith (1921-1944), both gallant young Chattanoogans who died in the service of the armed forces of their country.

Stanley Speal Memorial Scholarship: Established in 1994 by members of The Chattanooga Area Psychological Association (CPA) in memory of their colleague, the late Stanley Speal, Ph.D., for his professional, academic, and civic contributions to Chattanooga. Speal served on the psychology faculty at UTC from 1975-77 and was the first president of CPA. The award goes to a psychology major with the class rank of junior or above who has intentions of pursuing a graduate degree.

DeForest Spencer Scholarship: A 1915 graduate of the University of Chattanooga, DeForest Spencer established this scholarship endowment in 1986 to assist a needy student pursuing an undergraduate B.A. degree.

Sports Barn, Inc. / Alex Guerry Memorial Scholarships: Established in 1991 by the stockholders and directors of the Sports Barn, Inc. to honor the founder and president of the Sports Barn, Inc. with preference going to students who are employees of the Sports Barn.

Mary Stanfill Home Economics 4-H Scholarship: Established in 1996 with a bequest from Ms. Stanfill, extension home economics agent in Centerville, TN, this award is available to home economics or human ecology majors at any of the UT campuses on the basis of academic achievement, leadership, and participation in 4-H Club activities and 4-H home economics projects.
Dr. Roy Stinnett Memorial Scholarship: Established in 1994 by the Stinnett family as a memorial to Dr. Stinnett who was an assistant football coach and later dean of the College of Education and Applied Professional Studies at UTC. The scholarship is for students who are in the education program.

Iphigene Ochs Sulzberger Scholarship in American History: This scholarship, funded in 1986 by Ruth Sulzberger Holmberg in honor of her mother, Iphigene Ochs Sulzberger, daughter of Adolph Ochs, former publisher of the Chattanooga Times and founder of the New York Times, provides scholarships for deserving full or part-time students working toward a degree in American History or a related area.

Dr. Charles Robert Thomas Scholarship: Established under terms of the will of Dr. Thomas, well-loved Chattanooga physician who died in 1968, to assist needy students in pre-medicine.

Thomasson Premedical Scholarship: Established in 1979 by Mr. and Mrs. Eugene M. Thomasson to be awarded to a qualified and deserving undergraduate student who is pursuing premedical studies.

LaVeme Thompson Memorial Scholarship: Established in 1987 by Dr. Jack Thompson, professor and head of computer science, and his children in memory of his wife, a former UTC faculty member. Preference is given to female students majoring in computer science.

Vanzant B. Warrenfels Scholarship: Established in 1976 by Mr. and Mrs. W.O. Cullen of Oxford, Ohio, in honor of Mrs. Cullen's father, Dr. Warrenfels, to be awarded to a student participating in the University Scholars program.

Vasconez & Donovan Scholarship: Established in 1994 by James M. Donovan, a UTC Brock Scholar graduate of the Class of 1977. The scholarship, in memory of his friend Jorge Vasconez, is for students in the Honors Program.

George R. West Scholarship: Established in 1993 by the Westend Foundation as its final gift to UTC in honor of West for the purpose of endowing the two top positions on the golf team in the names of two nationally known Chattanooga golf champions, Lewis West Oehmig and Gibby Gilbert.

Fred Westcott Scholarship: Established in 1985 as a result of a bequest from Mr. Fred Westcott, a pioneer in the Dalton, Georgia, carpet industry, for general scholarships.

Jill Wheeler Memorial Scholarship: Established as a memorial to Jill Wheeler, class of 1979, UTC School of Nursing, who was killed in an automobile accident in 1980. This endowment is funded by Jill's parents, Mr. and Mrs. Jack M. Wheeler, and other friends and colleagues. The award goes to a senior nursing student.

Wheland Foundry Environment Scholarship: Established in 1995 by Wheland Foundry for graduates of Chattanooga's Howard High School of Academics & Technology who major in environmental studies.

Woodrow Wolford, Sr., Scholarship: Established in 1996 by James L. "Bucky" Wolford, alumnus and former football standout, in honor of his father, this award goes to a student athlete who is a member of the varsity football team with preference given to those who are running backs or defensive backs.

Chairs

Walter M. Cline Jr. Chair of Excellence in Rehabilitation Technology: In cooperation with UTC's College of Health and Human Services and the College of Engineering and Computer Science, the Cline Chair of Excellence is designed to make major contributions to the field of rehabilitation technology and to the education of students interested in pursuing careers related to this discipline. The charge to the holder of the chair, established in 1986-87 with a gift from Mr. Cline's widow and children and matching funds from the UC Foundation, is development of programs, curricula, and research in rehabilitation engineering, physical therapy, occupational therapy and rehabilitation nursing.

J. Burton Frierson Chair of Excellence in Business Leadership: Designed to give business majors at UTC exposure to exceptional educational opportunities in business leadership, this chair of excellence was funded by the Dixie Yarns Company and matched by state funds in the 1986-87 academic year in honor of J. Burton Frierson. The holder of the chair, a person of national stature in business, government, or technology, helps the University advance its stated goals of becoming a regional leader in business education.

Clarence E. Harris Chair of Excellence in Business Administration and Distinguished Lecture Series in Entrepreneurs/Up: The first chair of excellence to be funded by an alumnus, this chair provides the students and faculty of the school, as well as the broader community, a better understanding of the world of business. Distinguished lecturers will be brought to the campus each year in order to engage students, faculty and others in discussions related to trends in innovation, entrepreneurship, corporate strategies, and the global economy. Harris, class of 1964, was the president and chairman of the board of Carriage Industries Inc., Calhoun, Ga., when the chair was established in 1987.

Chair of Excellence in Judaic Studies: Offering a focus for special examination of the impact of Judaic influence on Western civilization and history, this chair was established in 1986 by a special Committee for the Judaic Chair of Excellence and from private community support. Enriching the curriculum of the Department of Philosophy and Religion, the chair is also a major asset to the cultural life of the community and the holder of the chair serves as a key resource for the integration of Judaic studies in appropriate contexts throughout the University and in the community at large.

Lyndhurst Foundation Chair of Excellence in Arts Education: Funded in 1988 as a complement to the Southeast Center for Arts Education established on the UTC campus with grants from the Getty Foundation, the Gherkin Foundation, and Lyndhurst, this chair is designed to bring to the University and the southeast region of Tennessee a nationally recognized expert in discipline-based arts education (DBAE). The chair holder will teach art education courses to undergraduate and graduate students, conduct research, serve as an advocate for improved arts education, and oversee the center's programs, including three constituent institutes for teachers in the visual arts, theatre, and music.
Memorial Hospital Chair of Nursing Excellence: Established in 1996 by Memorial Hospital to advance undergraduate and graduate teaching, scholarly research and public service in the area of nursing.

Burkett Miller Chair of Excellence in Management and Technology: A cross-disciplinary chair of excellence that bridges the resources between the School of Business Administration and the College of Engineering and Computer Science. Funded in 1977 by the Tonya Memorial Foundation of Chattanooga, the holder of this chair assists the University and the Chattanooga community in understanding the importance of technology; identifying and nurturing the development of technology; and assisting with the transfer of that technology to the marketplace in ways which foster economic development.

Scott L. Probasco, Jr. Chair of Free Enterprise: Established in 1976 by Burkett Miller, a leading Chattanooga attorney and philanthropist, in honor of a longtime friend, well-respected Chattanooga citizen, and trustee of the University of Tennessee and the UC Foundation, for a distinguished professorship relating to the free enterprise system.

Provident Life and Accident Insurance Company Chair of Excellence in Applied Mathematics: This chair of excellence, funded in 1986 by joint gifts from Provident and the University of Chattanooga Foundation, brings to the University and the community a heightened sense of the significance, utility, and relevance of mathematics and its applications. The holder of this chair functions not only as a scholar, teacher, and researcher, but also as a valuable resource and vigorous advocate for mathematics in the schools and community.

Suntrust Bank Chair of Excellence in the Humanities: Established by its predecessor, American National Bank and Trust Company, this chair, administered through the College of Arts and Sciences, has as its purpose presenting the best that has been and is now being thought in the humanities. This revolving appointment brings to the community visiting professors of national and international stature. The humanities chair established by American National Bank and Trust Company in 1986 helps meet UTC’s commitment as a cultural center for the region.

George R. West Jr. Chair of Excellence in Communication and Public Affairs: Funded by the Westend Foundation in 1986 in honor of its founder, George R. West Jr., this chair of excellence is designed to assist UTC in educating students for responsible and effective communications in the realm of public affairs. Students pursuing careers in business, education, communications, political science, and other disciplines benefit from this chair which emphasizes critical analysis and presenting, particularly by the written word, the issues of public affairs in a truthful, effective and responsible fashion.

Professorships

Alumni Distinguished Service Professorships: Awarded to outstanding faculty members of each of the four campuses of The University of Tennessee by the University of Tennessee National Alumni Association.

C. C. Bond Minority Professorship in Education: Established in 1987 by friends and colleagues of Dr. Claude C. Bond, distinguished educator in the Chattanooga public schools. The professorship is intended to attract an outstanding minority leader to the College of Education and Applied Professional Studies at UTC.

Chattanooga Manufacturer’s Association Professorship in Engineering: Established in 1980 to provide support for the College of Engineering and Computer Science and enables the University to reward a member of the engineering faculty for excellence in teaching, public service, and research.

Kay Kittrell Chitty Professorship in Nursing: Established in 1996 by Memorial Hospital in honor of Dr. Chitty, former director of UTC’s School of Nursing and former chair of Memorial’s board of directors, the appointee holds a joint appointment with the University and the hospital in the area of family nurse practitioner.


George C. Connor Professorship in American Literature: Named for Guerry Professor of English emeritus George C. Connor, this professorship was established in 1985 by colleagues, former students, and friends in honor of his 26 years of service.

Joseph F. Decosimo Centennial Professorship in Accounting: Established in 1977 by Mr. and Mrs. Joseph F. Decosimo, civic and business leaders, to support the program in accounting and upgraded during the Centennial campaign of 1986.

W. Max Finley Centennial Professorship in Business Administration: Established by friends and family of alumnus W. Max Finley, class of 1931, this fund promotes faculty research which involves students.

First Tennessee Bank Distinguished Professorships in Business: Established in 1996 as part of a 21st Century Campaign gift to the University of Tennessee by First Tennessee National Corporation of which First Tennessee Bank is a subsidiary, this professorship for the Chattanooga campus is awarded to a member of the faculty with expertise in the various areas of banking and finance.

Nita T. and Irvine W. Grote Professorships in Chemistry: Established in 1986 to honor outstanding teaching through a generous gift from the estate of Dr. and Mrs. Grote. An inventor of note, Grote taught at UC for 38 years.

Alexander and Charlotte Patten Guerry Professorships: Established by anonymous gifts in 1959 and 1961 in memory of the University’s esteemed seventh president and in honor of his dedicated wife, to recognize a select group of outstanding professors.

Henry Hart Professorship in Business Administration: Established in 1978 by R. Henry Hart, a civic and business leader, to provide faculty support for the University’s School of Busi-
ness Administration.

Brice L. Holland Centennial Professorship in Taxation: Established in 1989 by Brice L. Holland, distinguished alumnus, benefactor and community leader, desiring to enhance the teaching and level of expertise offered in the field of taxation in the School of Business Administration.

Ruth Kiser Hyder Endowed Professorship of Educational Leadership: Established in 1985 by Dr. Charles Hyder, Guerry Professor Emeritus of Education, in honor of his wife, a distinguished teacher in the elementary schools of Chattanooga. This professorship recognizes leadership in the preparation of teachers in the public school system grades K-12.

Mary B. Jackson Professorship of Nursing: Established in 1989 to support and maintain a high caliber nursing faculty by friends and colleagues of Mrs. Jackson, who came to UTC in 1973 and was charged with organizing the nursing program.

H. Clay Evans Johnson Professor of Nursing: Established in 1989 to emphasize the training of talent and upholding the ethical standards of nursing by Johnson, former chair of the Board of the UC Foundation. He served as president of the Hamilton County Memorial Hospital Association.

Summerfield Key Johnston Centennial Scholars Endowment for Junior Faculty Development: Established in 1987 as a Centennial gift by local Coca-Cola executive Summerfield Johnston Jr., this endowment provides support for new faculty members in the School of Business Administration who have demonstrated potential for making substantial contributions to teaching and research.

Kennedy Distinguished Teaching Professorship in English Literature: Established in 1995 by The Kennedy Foundation for an outstanding professor who teaches English literature and is involved in scholarly research and public service.

Alan S. Lorberbaum Professorship in Marketing: Established in 1978 by Alan S. Lorberbaum, a business leader and carpet executive in Dalton, Ga., to provide faculty support for the marketing program in the School of Business Administration.

Robert L. Macellam Centennial Professorship in Insurance: Robert L. Macellam, Provident Life and Accident Insurance Company insurance executive and UC Foundation trustee, was a major benefactor of the University. This professorship was established in 1986 by his widow to provide expertise and support for the Chattanooga insurance industry by teaching the principles and practices of insurance.

LeRoy A. Martin Distinguished Professorship of Religious Studies: Supported by the UC Foundation in memory of the last ordained Methodist minister to serve as president of UC, 1959-66, and John H. Race Professor of Classics until his death in 1971. This professorship was established to ensure ties with the University's Methodist heritage.

Luther Masingill Professorship in Communication: Established in 1990 by friends and associates of the local celebrity in honor of his 50 years in broadcasting. The professorship is designed to emphasize the training of talent and to uphold the high standards of communication set by Masingill.

George Lester Nation Centennial Professorship of Entrepreneurs/up: Established in 1986 by his son Ray Nation, this professorship honors the late founder of Nation Hosiery Mills. Both in the classroom and the community, the holder of the professorship is charged with emphasizing entrepreneurship and economic development.

Patricia Draper Obear Distinguished Teaching Professorship: Established in 1993 through a bequest from the educator for whom it is named to recognize professors who represent the qualities and high standards of good teaching both at the University and in the community. Recommendations for the award are made by the Provost and approved by the Chancellor.

John Stagmaier Chair of Economics and Business Administration: Established in 1956 by the Tennessee Paper Mills in memory of its founder, respected and admired citizen of Chattanooga and University trustee from 1932 until his death in 1943.

UC Foundation Professorships: Established in 1976 to recognize outstanding younger faculty and to provide an incentive for their remaining at UTC.

Sharon Vanderbilt Professorship in Physical Therapy: Established in 1995 by Douglas L. Vanderbilt, M.D. in honor of his wife Sharon Vanderbilt, a pediatric physical therapist who was an advocate for the development of the UTC Physical Therapy Program, for an outstanding professor who teaches physical therapy and is involved in scholarly research and public service.

Arthur G. Vieth Professorship in Business Finance: Established in 1983 by former students and friends in memory of the former holder of the John Stagmaier Chair of Economics and Business Administration, a greatly admired teacher and public-minded citizen.

Marvin Edward White Professorship in Business Administration: Established in 1978 by Selox Inc. to provide faculty support for the University’s program in business administration and to honor the company’s founder.

Robert Lake Wilson Professorship: Established in 1987 by a former student in honor of geology professor Dr. Robert Lake Wilson for demonstrating a personal interest in the welfare of his students. It is intended to recognize and reward faculty who go out of their way to provide encouragement and support.
Student Loan Funds

William E. and Mary F. Ansbach Memorial Student Loan Fund: Established in 1968 by Raymond J. Ansbach, Chattanooga merchant, in memory of his parents.

Dr. H. Eugene Homes Student Loan Fund: Established in 1969 with a gift from the Hartsell, Ala., physician who took his premedicine work at UC from 1954-1956 and his M.D. from UT in 1960.

Lewis B. Headrick Memorial Student Loan Fund: Established in 1966 by family, friends, and colleagues of Headrick, class of 1926, research physicist with the Radio Corporation of American for 34 years.

Ethel Chopin Morgan Student Loan Fund: Established by a bequest from the UC alumna, B.S. degree in 1925, at the time of her death in 1973 for students in chemistry or history.

Frank L. Underwood Memorial Student Loan Fund: Established in 1967 with a bequest from Mrs. Underwood in memory of her husband, vice-president of Chattanooga’s Hamilton National Bank and UC trustee until his death in 1942.

Additional Funds

Dr. North Callahan Honors Essay Prize: Established in 1984 by Professor Emeritus of History, New York University, author, and UTC Distinguished Alumnus. Prize awarded to a UTC student for the best honors essay, as determined by an honors committee, based on UTC library research.

Morrow Chamberlain Memorial Library Fund: Established in 1971 by a bequest from Mrs. Chamberlain in memory of her husband, Chattanooga business and civic leader, chairman of the UC Board of Trustees from 1932 to 1958, member from 1919 until his death in 1959.

Bess Cofer Endowed Professional Health Care Student Advocacy Fund: Established in 1985 by Dr. Robert H. and Mary A. Cofer, this fund is used to promote the highest level of guidance and preparation to students pursuing careers in nursing, dentistry, medicine, cytotechnology, dental hygiene, medical technology, pharmacy, physical therapy, or veterinary medicine.

George Ayers Cress Gallery of Art Endowment Fund: Established in 1992 by friends, former students, and colleagues in honor of George Cress, artist-in-residence and Guerry Professor who taught at UTC for 40 years, on the occasion of the naming of the University gallery in the Fine Arts Center for Cress. The funds are to help defray the cost of operating and staffing the gallery and in support of its exhibitions.

Paul W. Curtis Jr. Awards: Endowed in 1948 by Mr. and Mrs. Paul W. Curtis in memory of their son, class of 1933, who died in WW II, for outstanding students in engineering.

Irvine W. Grote Fund for the Department of Chemistry: Established in 1976 by a bequest from the estate of Dr. Irvine W. Grote, Guerry professor of chemistry, to be used for the benefit of the chemistry department.

Hartung Fund for Nursing Education: Established in 1969 by Dr. and Mrs. Carl A. Hartung, UC graduates of 1929 and 1931 respectively, to support the nursing program.

John B. Haskins Jr. Memorial Laboratory: Science laboratory equipped and its upkeep endowed in 1948 by gifts from Dr. John B. Haskins in memory of his son, a UC student who died in 1944 after a long illness.

Hinds Memorial Book Fund: Established in 1921 by Mrs. Kate Hinds Steele and Mrs. Bashie Martin in memory of their father, J.I.D. Hinds, for the purchase of chemistry books.

Martha Chase and Andrew David Holt Library Endowment Fund: Established in 1970 by the Hamilton County chapter of the UTNA and other friends in honor of the retiring UT president and his wife, for the purchase of library books.

Mary B. Jackson Award Endowment: Established in 1977, with endowment funded in 1984, to honor outstanding senior nursing student selected by peers.

Dr. Joseph A. Jackson Endowment for Library Faculty Development: Established in 1988, by Mary B. and Joseph A. Jackson in the name of Dr. Jackson, professor and dean of libraries, to encourage, promote, and recognize achievement in library faculty of the T. Carter and Margaret Rawlings Lupton Library.

John W. Jayne Memorial Mathematics Award: Established in 1994 by family and colleagues in memory of Dr. John W. Jayne, member of the Department of Mathematics for 22 years who died in 1993. The award is given each year to an outstanding mathematics student.

H. Cla Evans Johnson Nursing Endowment Fund: Established in 1992 by H. Clay Evans Johnson, past chair of the University of Chattanooga Foundation and also past chair and member of the UT Development Council. A retired insurance executive and community leader, Johnson also established, in 1990, the H. Clay Evans Johnson Professorship in Nursing. The income from the endowment provides funds for student awards for academic achievement, clinical excellence and/or community service. It also helps fund the clinical renewal program for nursing faculty.

Keese Lecture Series: Established in 1962, endowed in 1964 by Will S. Keese Jr., in memory of his mother, Lucy Beall Keese, who died in 1959, and in honor of his father, the late William S. Keese, longtime director of the Bonny Oaks School, to bring an outstanding speaker to the campus each year.

Gene H. Kistler Golf Endowment: Established in 1994 through an estate gift by the late Dr. Kistler, a Chattanooga physician and general surgeon and a golf enthusiast who competed avidly for more than 70 years after learning the game when he was 16. The fund is intended to support the men’s intercollegiate golf program.

Lukens/Hatch Awards Endowment: Established in 1994 by Dr. Terrance Carney, UTC professor of engineering, and his wife Marian, alumni of the Class of 1977, in honor of their respective parents, Dr. Frances D.W. Lukens, Mrs. Carney’s father, and Harriet Hatch Carney, Carney’s mother. The Lukens Award is given to the rising junior in the College of Engineering and Computer Science with the highest grade point average. The Hatch Award goes to the adult part-time student in the School of Business Administration with at least 60 hours who has the highest grade point average.

O.D. McKee Center for Dyslexic Studies Endowment: Established in 1994 by Ellsworth McKee, president of McKee Foods Inc., in honor of his father, to provide educational opportunities
to dyslexic students enrolled in the College Access Program.

Ellis K. Meacham Annual Writers Workshop and Creative Writing Professorship: Established in 1985 by Jean Austin Meacham, former UTC professor and dean in honor of her husband, Judge Ellis K. Meacham, a distinguished jurist, author and UC alumnus. The income from the endowment provides a stipend each year for the faculty member responsible for that year's Meacham Writers Workshop.

T. Carter and Margaret Rawlings Lupton Library Endowment Fund: Established with an anonymous gift, this fund provides for the continued acquisition of materials to enhance the holdings of the library.

Captain Daphne Marjorie Painter Memorial Art Education Endowment Fund: Endowed in 1984 by Mrs. Marjorie Stanford Painter in memory of her daughter to send teachers from under-served Southeast school districts to the Southeast Institute for Education in the Visual Arts at UTC.

Cranston B. Pearce Center for Applied Engineering and Technology: Complementing UTC's Center of Excellence for Computer Applications, the Pearce Center in the College of Engineering and Computer Science was funded by the Tonya Foundation in 1984 in memory of its president. The purpose of the center is to move the University to the forefront of instruction, research, and service in the area of computer and information sciences. The center also plays a role in the economic development of Chattanooga and the Southeastern region.

Seth C. Smith Management Award: Established in 1975 by the Society for the Advancement of Management in memory of its distinguished business leader, awarded annually to an outstanding student majoring in management.

Carl A. Swafford Jr. Endowment Fund: Endowed in 1984 by Carl A. Swafford Sr. in honor of his son for the purchase of equipment and supplies for biology and chemistry.

Terrell Louise Tatum Memorial Fund: Established in 1968 by the University in memory of the Guerry professor of Spanish who served her alma mater for 43 years, for the purchase of books and teaching materials for the modern languages.

Terrell Louise Tatum Spanish Award: Endowed in 1964 by an anonymous donor to honor the Guerry professor of Spanish, to the outstanding senior Spanish major.

Edgar B. Tolson Memorial Book Fund: Established in 1942 from Tolson's estate, authorized by Wilfred O. Stout Sr., executor, for the purchase of history and philosophy books.

UTC Children's Center Scholarship: Established in 1988 by a group of donors including the late Patricia Obear to provide tuition assistance for the UTC Children's Center to parents who demonstrate financial need.

James G. Ware Mathematics Education Award: Established in 1994 by Dr. James G. Ware, faculty member of the Department of Mathematics for 30 years, 22 of which were as head of the department, upon the occasion of his retirement. The award goes to the outstanding student planning to teach mathematics at the high school level.

William H. Wheeler Center for Odor Research: The center is a cross-disciplinary laboratory established by a gift from the Wheeler estate. The center supports the study of the objective relationships between various substances and their effect upon olfaction.

Earl W. Winger Broadcast Center: Established in 1987 by the children of Earl W. Winger, a distinguished businessman, civic leader, lifetime trustee of the UC Foundation, and broadcast pioneer, for the renovation and acquisition of broadcast production equipment for WUTC. The children include Robert Allan Winger, Charles E. Winger, Betty V. Hunt, and Virginia A. McAllester.
Glossary of J Academic Terms

Adviser—a faculty member who advises the student about his or her academic program.

Audit—to take a course without credit.

Behavioral and social science courses—certain courses in anthropology, economics, geography, human services, political science, psychology, and sociology.

Classification—level of progress toward the bachelor’s degree. An undergraduate student is classified as a freshman, sophomore, junior, or senior depending on the number of semester hours completed.

College—an organizational unit of the University, embracing several departments, divisions, or schools. UTC has four colleges, the College of Arts and Sciences, the College of Education and Applied Professional Studies, the College of Engineering and Computer Science, and the College of Health and Human Services.

Concentration—a particular emphasis within a major area.

Corequisite—a course which must be taken at the same time as another course.

Course—a specific subject of study.

Credit—the numerical value awarded upon completion of specified studies, usually based on class meeting length and frequency. At UTC credit is stated in semester hours.

Curriculum—the whole body of courses offered by the University or by one of its colleges, schools, divisions, or departments.

Department—an organizational unit representing a discipline or related disciplines, such as the Department of Foreign Languages.

Discipline—an area of study representing a branch of knowledge, such as mathematics.

Division—an organizational unit which may include one or more programs, as in Continuing Education or Student Support Services.

Elective—a course not specifically required.

Fine arts courses—certain courses in art, theatre, and music.

General education courses—courses designed to help the students discover the relatedness of knowledge and acquire a core of information, attitudes, and capabilities basic to their formal college education and their continuing education throughout life.

Graduate student—a student who has received a bachelor’s degree and has met all criteria for admission to the Graduate Division.

Humanities courses—certain courses in classics, English, history, modern languages, and philosophy and religion.

Interdisciplinary courses—courses which deal with two or more academic subjects.

Major—the subject or subjects on which a student places principal academic emphasis.

Non-Western course—a course which deals with some aspect of a civilization outside of Western civilization, such as Asian, Latin American, etc.

Orientation—activities and programs designed to help the new student become acquainted with the University.

Academic record—the academic history of the student which lists all of a student’s courses, semester hours credit, grades, quality points, status, and certain personal information.

Post-baccalaureate student—a student who has received a bachelor’s degree and is taking additional undergraduate courses.

Prerequisite—a requirement which must be met before a particular course can be taken.

Registration load—the total semester hours for which a student is registered in any semester or term.

Schedule of classes—a listing of all courses offered by the University during one semester or summer session, showing fees, instructors, and time and place of meeting.

School—an organizational unit composed of related disciplines. At UTC there are five schools: the School of Applied Professional Studies, the School of Business Administration, the School of Educational Leadership, the School of Nursing, and the School of Social and Community Services.

Semester—half an academic year or 15-16 weeks. Some schools operate on a quarter system, which divides the academic year into thirds. UTC uses the semester system.

Semester hour—the unit of credit used by schools on the semester plan.