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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:

Admission requirements—Dean of Admissions and Records or Director of Admissions Phone: (615) 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: (615) 755-4111 for department number.

Fees & tuition—Bursar Phone: (615)755-4781

Financial aid—Director of Financial Aid Phone: (615) 755-4677

Graduate admission requirements—Associate Provost for Graduate Studies, Research and Program Evaluation or Director of Graduate Studies Phone: (615) 755-4666

Housing—Student Affairs Phone: (615)755-4304

Registration—Director of Advisement, Records and Registration Phone: (615)755-4573

University operator—(615) 755-4111

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, (615) 755-4124. Charges of violation of the above policy should also be directed to the Office of the Director for Affirmative Action. EO40222-004-93
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 8,100 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 Colleges of the Southern Association of Colleges and Schools to award bachelor's and master's degrees. It is also accredited by the National Council for Accreditation of Teacher Education, the National Association of Schools of Music, the American Chemical Society, the Engineering Accreditation Commission/Accreditation Board for Engineering and Technology, the American Assembly of Collegiate Schools of Business, the National League for Nursing, the National Council on Social Work Education and the International Association of Counseling Services.

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 (615) 755-4662. Completed admissions applications and credentials should be sent to the same office. A $15 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 Advisement and Orientation Office and combine the services and skills of the Admissions 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 Board, 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 and Orientation 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, American studies, chemistry, communication, education, human ecology, 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 and Orientation Office, located in 258 Hooper Hall, or call (615) 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. $15.00 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:

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Units Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Algebra</td>
<td>2</td>
</tr>
<tr>
<td>Geometry</td>
<td>1</td>
</tr>
<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>1</td>
</tr>
<tr>
<td>History</td>
<td>1</td>
</tr>
<tr>
<td>A single foreign language</td>
<td>2</td>
</tr>
<tr>
<td>Visual/Performing Arts</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

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 (620 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 (860 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 (620 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. 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 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.

For admission as transfer students, students must have pursued courses appropriate to the curriculum at The University of Tennessee at Chattanooga, must be eligible to return to their last institution, and must meet The University of Tennessee at

* 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 (860 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 Dean of Admissions and Records, 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 does 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 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 Dean of Admissions and Records 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 $15 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 may be 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 foreign 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 form showing that 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.

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 Continuing Education Office at (615) 755-4346.

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 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 the Student Affairs Office, second floor of the University Center or mailed to that office. 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 may 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 425-500. 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, (615) 755-4735. A fee of $42 will be charged for each semester hour of 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;
3. any course in any education teaching block; or
4. courses in which the student has received a final grade.
A fee of $42 will be charged for each semester hour of credit.

Students seeking credit by special examination shall, on forms provided by the director of records, request approval from the departmental 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 on 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.

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 assess 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. UTC will also accept the ACT or CSS free application for Federal Student Aid.

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. In many cases high school activities are also considered. 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 (1070 SAT) will receive an amount that will cover in-state maintenance fees (approximately $1,600). Applicants with a 4.0 grade point average and 31 ACT (1280 SAT) will receive a minimum of $2,000. 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 25 outstanding entering freshmen are selected to participate in the William E. Brock Scholars Program. These scholars receive four year stipends of $2890 and pay in-state fees regardless of residency classification. Brock Scholars living on campus also receive a housing stipend. Selection is based on scholarship, leadership, and service. Application is made directly to the Brock Scholars program. For further information see the William E. Brock Scholars section of the catalog.

In addition to the Brock Scholars, thirteen prestigious merit scholarships are awarded each year to incoming freshmen: two Andy Holt scholarships (sponsored by the UT National Alumni Association) for $2,500 each and renewable for four years; five Chancellor’s and five Leadership scholarships (sponsored by the UC Foundation) of $1,800 each and renewable for four years; one Horace Traylor Leadership Scholarship (sponsored by the UC Foundation) in the amount of $1,800 per year 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 $1,100 awards are available at all campuses of The University of Tennessee.

To be considered for scholarships, freshmen and transfer students admitted after February 1 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 black students. Awards range from the amount of in-state fees to in-state fees, dorm and books. These scholarships are awarded to entering freshmen who have at least a 3.0 grade point average and at least a 16 on the Enhanced ACT admissions test 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 $2300 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.

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)
These 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 the University, the student pays eight percent simple interest during the first four years of repayment and ten percent simple interest for each year of repayment beyond the fourth year. The maximum amount of a loan to an undergraduate in a 12-month period is $2,625 for freshmen, $3,500 for sophomores, $4,500 for juniors, $5,500 for seniors, and $8,500 per year for graduate study.

Total loans outstanding may not exceed $23,000 for the undergraduate or $65,550 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) and Federal Supplemental Loan to Students (SLS)
A non-need-based source of loan funds is available to the parents of dependent undergraduates as well as independent undergraduates and graduate/professional students. SLS borrowers must file the Free Application for Federal Student Aid. PLUS borrowers must file a needs analysis with the UTC Financial Aid Office.

Each year the parents can borrow the cost of attendance minus other financial aid for each undergraduate dependent child. Independent undergraduates may borrow up to $4,000 per year on the SLS.

The interest rate on PLUS and SLS loans is variable, tied to the 52 week T-bill. The rate shall not exceed 10 percent for PLUS or 11 percent for SLS.

There is no federal interest subsidy on PLUS loans. If the borrower is a parent or a less than full-time student, repayment of interest and principal must begin within 60 days of disbursement of the loan. If the borrower is a full-time student, or qualifies for some other deferment (i.e., parents in military), he or she goes into deferment for the principal only. Payment of interest must begin within 60 days of the loan disbursement. The lender may grant forbearance of accrued interest and capitalize it when repayment resumes.

Detailed information and application forms are available directly from lenders or from the Financial Aid Office. It is also possible to obtain information and application forms from state guarantee agencies.

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 High Education Amendment 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. 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 $774 to a minimum of $200. Students should apply before March 1.

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-
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 they make no progress (0.0) or are academically suspended or dismissed. Students who are enrolled full time must earn at least 20 hours an 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, undergraduate students who have attended college for more than six years (equivalent full time) 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 renewal of 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 on or before the following priority deadline dates to receive maximum consideration for all available funds for the Fall semester.
   - February 1: new students
   - March 1: currently enrolled students
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. All undergraduate students applying for assistance based on financial need should apply for the Pell Grant.
4. Students should have begun the process for admission to the University prior to or at the same time as applying for financial aid.
5. Tennessee residents should apply for the Tennessee Student Assistance Award if requesting aid based on financial need.
6. 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.
7. 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.
8. 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.
9. If students expect to have funds available for fee payment, they must complete all procedures, submit necessary documents, and accept their awards by August 1 for fall semester and December 1 for spring semester.

Award Process
The award process occurs 4-6 weeks following receipt of all requested forms.

1. Complete the "Free Application for Federal Student Aid" and mail in the attached envelope. There is no fee required. Allow 4-6 weeks for processing.
2. A student verification form and appropriate federal tax return should be submitted to the UTC Financial Aid Office immediately after filing the FAFSA.
3. 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.
4. Other forms may be required to complete the application process. Return all requested forms as soon as possible.

Financial Aid—13

The Financial Aid Office regularly provides assistance with the financial aid application process and financial budgeting. Also, students or parents may request a review of the determination of the student's need and award.

For applications and further information on financial aid call or write the Financial Aid Office, 253 Hooper Hall, The University of Tennessee at Chattanooga, 615 McCallie Avenue, Chattanooga, Tennessee 37403, (615) 755-4677.
**STUDENT FEES AND EXPENSES**

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**

**Maintenance Fee**

<table>
<thead>
<tr>
<th>Student Type</th>
<th>Fee Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>$72 per semester hour; $799* per semester or fraction thereof; minimum charge $144</td>
</tr>
<tr>
<td>Graduate</td>
<td>$118 per semester hour; $1,043* per semester or fraction thereof; minimum charge $236</td>
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</tbody>
</table>

**Tuition and Maintenance Fee (Out-of-state students only)**

<table>
<thead>
<tr>
<th>Student Type</th>
<th>Fee Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>$204 per semester hour; $2,599* per semester or fraction thereof; minimum charge $408</td>
</tr>
<tr>
<td>Graduate</td>
<td>$295 per semester hour; $2,843* per semester or fraction thereof; minimum charge $590</td>
</tr>
</tbody>
</table>

*Forty-eight dollars of the fee is allotted to the bond obligation of the University Center.

**Activity Fee**

All students registered will be assessed an activity fee of $3 per hour (maximum $36). The activity fee is non-refundable.

**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 (615) 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 (615) 755-4781.

**Art Fee**

In addition to the credit hour rate a studio fee is assessed for the following courses. The fee is due at the regular fee payment dates. The fees are:

- Art Education: $10
- Photography, Graphic Design, Printmaking: $15
- Beginning Sculpture: $35
- Three-Dimensional Design: $35

**Exercise Science, Health and Leisure Studies**

Various fees are charged to students enrolled in special health and exercise classes. Fees are due on the official date of fee payment and paid with regular tuition and maintenance fees.

- Bowling: $25
- Canoeing & Rafting: $10
- Camp & Outdoor Education: $10
- Scuba, Lifesaving & Safety: $30
- Hiking & Backpacking: $10
- Leadership Rope Course: $50
- Water Skiing: $25
- Rock Climbing & Repelling: $10
- Golf: $20
- Snow Skiing: $175

Fees are subject to change after the printing of this publication.

**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 dur-
The graduation fee is payable at the beginning of the 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 (615) 755-4781.

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

Other Expenses

Application Fee .............................................................. $15
A nonrefundable fee payable at the time initial 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.

Graduation Fee

  Bachelor’s Degree .................................................. $20
  Master’s Degree ................................................... $30

The graduation fee is payable at the beginning of the semester in which the candidate is to graduate. Academic robes will be available for purchase from the bookstore.

Housing
Room rents vary from $660 to $920 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 ...................... $48 per semester
  Reserved parking decal (summer) ................. $24
  General parking decal .......................... $30 per year
  Perimeter parking decal ....................... $5 per year

Special Examination Fees
Payable for each proficiency or validation examination.

  Undergraduate ....................... $42 per credit hour
  Graduate .............................. $57 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 University 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 date. 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. After the second official class day, students will be canceled for nonpayment of fees.

**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.

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**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.

Approximately 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>Prior to first day of class</th>
<th>Drop*</th>
<th>Withdrawal**</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7 calendar days***</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8-14 calendar days</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>15-21 calendar days</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>22-28 calendar days</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>29 or more calendar days</td>
<td>100%</td>
<td>100%</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 aM 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>90%</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 their first entry, 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 certification or endorsement must satisfy the current UTC approved program requirements on file with the Tennessee Department of Education at the time of application for certification.

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 any 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 in order to register for a total of 17 to 20 hours in the summer. Any 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 Restricted to fully qualified graduate students.

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 (EDCI 105), 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 only on recommendation of the appropriate course instructor to the director of the developmental studies program. Appeal of decisions may be made to the Petitions Committee.

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 C 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. Students presenting ACT/SAT scores are exempt from the placement test. 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>Grade Point Average 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 appear on the student’s academic record.

Academic forgiveness policies apply to courses taken at UTC, either before or after admission, and to courses taken at any recognized institution of higher education by students who were admitted to UTC. Only undergraduate students are eligible for academic forgiveness. Graduates are not eligible for forgivness. 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 Incomplete 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.
Quality Points
Quality points are computed for undergraduates for each credit hour as follows:

- A — 4
- B — 3
- C — 2
- D — 1
- F — 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 Whave 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.

Students sometimes find it necessary because of illness, job responsibilities, or personal problems to discontinue their enrollment. If they must stop attending, they should be certain to withdraw officially. Failure to withdraw officially from any course will result in a grade of V.

Withdrawal deadlines for each semester or term are noted in the schedule of classes. Appropriate forms are available in the Registration Office.

During the first two weeks of a semester a student may officially withdraw without prejudice from any class and no grade will be recorded. After that period and up to the last six weeks of class a student who officially withdraws will be graded W. Except in unusual circumstances, no withdrawals are permitted in the last six weeks of classes. Comparable periods apply to summer terms and specific dates are printed in the class schedules. Any request for an exception to the withdrawal deadline must be made to the director or the assistant director of registration.
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, including study in related areas, are outlined in the appropriate colleges and divisions):

American Studies (B.A.)
  Concentrations: American History, American Literature, Philosophy and Religion, Political Science, Sociology-Anthropology

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.)
  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, Topical

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: Electrical (Instrumentation and Control, Power), Environmental, Industrial, Mechanical, Chemical, Civil (Structural), Manufacturing (Systems and Management)
  Engineering 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 Adult Fitness), Health Promotion K-12, Sports Administration, Leisure Studies

French (B.A.)
  Geology (B.S.)
  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.)
  Mathematics (B.A.)
  Medical Technology (B.S.)

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.)

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 Studies, Legal Studies, and Public Administration

Psychology (B.A. and B.S.)
  Secondary Education (B.S.) (old program)
    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: General (B.A. only), Anthropology, Sociology, Urban Studies

Spanish (B.A.)
  Theatre and Speech (B.A.)

Minors are currently available in the following areas:

anthropology
  health physics
  art: painting or sculpture
  or printmaking or graphic design or history of art
  history: American history
  or world history
  American studies
  chemistry
  biology
  design or history of art
  physical education: American government
  or international studies or legal studies or political psychology and behavior
  communication
  criminal justice: legal environments
  economics
  English: literature or writing
  recreation
  environments
  French
  social studies
  geography
  sociology
  geology
  Spanish
  theatre
  Greek
  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 that course can also be used to satisfy the general education requirements of the category indicated. Example: Mathematics F136.

Category E does not apply to the revised general education requirements (effective for new students entering fall 1982) and has been intentionally left out.
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 to 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; History 101, 102, 203, 204, 210, 310; Philosophy 106, 201, 221, 425; Political Science 316; Religion 103, 213, 221, 222, 236; University Honors 101, 102, 114;
- 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 115, 116.

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 Studies 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.

- Mathematics 115, 120, 136, 145, 150, 155, 210; Philosophy 212.

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, 333; Chemistry 311; Classics 110; Engineering 211; English 233, 257, 336, 397; Geography 103; History 114, 208, 221, 371; Human Ecology 325; Human Services 300; Modern Languages 201; Music 397; Political Science 102, 244, 314, 346; Religion 211, 232; University Honors 117, 118, 120.

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. The Freshman Seminar

Beginning Fall 1990, the Freshman Seminar is required of all students who enter UTC with fewer than 15 semester hours. University Studies 101, Engineering 112, 113, 114, or University Honors 101 will satisfy this requirement.

V. Foreign Language

For B.A. and B.M. degrees: completion of 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.

VI. Major

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

VII. 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."
VIII. 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 135-144 semester hours and co-op Engineering graduates will need 145-154 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 application must wait until the next degree-conferring period to be awarded a degree. The graduation fee is $20 for undergraduates and $30 for graduate students and must be paid before the diploma will be released.

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 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 9 for additional information on nontraditional credit.
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 The University of Tennessee at Chattanooga 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 The University of Tennessee at Chattanooga.

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. The graduation fee is $20.

Preparation for Health Professions

Students wishing to enter dentistry, medicine, or one of the other health fields such as cytotechnology, dental hygiene, medical technology, pharmacy, or veterinary medicine may complete their preprofessional training at The University of Tennessee at Chattanooga before going on to a professional school.

For the Bachelor of Science in Nursing program, which is offered by The University of Tennessee at Chattanooga, see page 109. 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 The University of Tennessee at Chattanooga must complete 98 semester hours of the program outlined on page 38, 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.

Medicine

Although the majority of students now earn the 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 preveterinary medicine courses are required.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Math 135, 136 or 150, 160</td>
<td>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>Biology 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>Biology 325</td>
<td>3</td>
</tr>
<tr>
<td>Biology 328</td>
<td>4</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.

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</td>
<td>4</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 135)</td>
<td>3</td>
</tr>
<tr>
<td>Social science</td>
<td>12</td>
</tr>
<tr>
<td>Electives*</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>90</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 210 or 311</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>English 121, 122 and one additional English course</td>
<td>9</td>
</tr>
<tr>
<td>Psychology 101 and one additional psychology course</td>
<td>6</td>
</tr>
<tr>
<td>Sociology 151 and one additional sociology course</td>
<td>6</td>
</tr>
<tr>
<td>One course from Theatre and Speech</td>
<td>6</td>
</tr>
<tr>
<td>Electives*</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
</tr>
</tbody>
</table>

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>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>8</td>
</tr>
<tr>
<td>English 121, 122</td>
<td>8</td>
</tr>
<tr>
<td>One course from Theatre and Speech</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration: Accounting 201</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Electives*</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>66</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. These standards apply to all undergraduate degree candidates regardless of the catalog under which they entered.

William E. Brock Scholars Program

Each year the University Honors Program recruits some 30 to 40 freshmen to join the ranks of the university's most prestigious honors program. This program attempts to create an atmosphere, both academic and social, that encourages its member 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 97); 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 are eligible for William E. Brock Scholarships, which provide recipients with 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).

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.

For further information and an application form, write to Dr. Robert Fulton, Director University Honors Program, The University of Tennessee at Chattanooga, 615 McCallie Ave., Chattanooga, TN 37403

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.

The chair of the departmental honors committee will appoint for each candidate for honors a member of the departmental honors committee to act as liaison. This member will be kept informed of progress by student and department, will see a copy of the rough draft of the honors thesis, and participate in the oral examination concerning the thesis.

Interested students shall consult with their advisers or department heads prior to the beginning of the senior year. The honors program is a two-semester program and should require substantially more work than would be required for the four hours granted were they in regular courses or other independent study courses. Formal application to departmental honors candidacy must be made during the third semester before graduation, on the first school day in March for students working in summer and fall or fall and spring terms and on the first school day in November for students working in spring and summer or spring and fall.

Forms for admission to departmental honors candidacy 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.

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 Mu Alpha** (marketing)
- **Beta Beta Beta** (biology)
- **Beta Gamma Sigma** (business administration)
- **Beta Sigma Tau** (engineering)
- **Delta Omkron** (music)
- **Delta Tau Omega** (geology)
- **Gamma Sigma Epsilon** (chemistry)
- **Kappa Delta Pi** (education)
- **Kappa Omkron Phi** (home economics)
- **Lambda Alpha Epsilon** (criminal justice)
- **Lambda Iota Tau** (literature)
- **Omkron Delta Epsilon** (economics)
- **Phi Alpha Theta** (history)
- **Pi Delta Phi** (French)
- **Pi Gamma Mu** (social sciences)
- **Pi Mu Epsilon** (mathematics)
- **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)
- **UpsHon Pi Epsilon** (computer science)
GRADUATE STUDIES

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, Finance, Marketing, Operations/Production or Organizational Management (includes Executive M.B.A. Program)

M.Ed. Administration & Supervision: Elementary or Secondary; Elementary Education: Curriculum, Early Childhood, Reading; Guidance and Counseling: Community, Elementary, and Secondary; Secondary Education: Art, English, Health, History, Mathematics, Natural Sciences, Physical Education, Social Sciences; Special Education: Diagnostic and Prescriptive; Gifted.

M.M. Music: Education or Performance

M.P.A. Public Administration: Personnel Management or Public Policy

M.S. Computer Science; Engineering: Chemical Sciences, Civil, Electrical, Industrial, or Mechanical; Engineering Management; Psychology: Industrial/Organization, School, or Research

M.S.C.J. Criminal Justice: Correctional Psychology, Education, or System Application

M.S.N. Nursing: Administration, Clinical or Education

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
Director of Graduate Studies
114 Race Hall
615 McCallie Avenue
Chattanooga, Tennessee 37403-2598

Post-baccalaureate Admission

Post-baccalaureate is an undergraduate admission classification which indicates that the applicant has a baccalaureate. A student who does not qualify for graduate admission because of an inadequate grade point average may use non-degree status to demonstrate that he or she can do acceptable work. The attainment of a 3.25 average on nine to twelve hours of 300-400-level courses recommended by the proposed major department may be accepted as evidence for admission to graduate study, provided all other requirements are met. Upon earning the required grade point average, the student must reapply for admission to graduate study and complete the admission procedures as specified for the proposed degree program.

It should be noted that 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 may 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

STUDENT SERVICES

Bookstore
The Bookstore has two locations: Guerry Center and McCallie Avenue and supplies textbooks, both new and used, for all courses. Both stores are operated by Barnes & Noble Bookstores, Inc. A buy back is operated daily where students may sell their books for cash based on wholesale buyback prices. Prices vary depending upon supply and demand, and fluctuate at different times of the year. Gift items, UTC imprinted clothing, trade books, magazines, computer supplies and health and beauty aids are sold. Special sales are advertised frequently in the student paper. MasterCard, Visa, American Express, and personal checks are accepted for purchases with student ID. (Minimum of $10 required for charge purchase.)

Check Cashing Service
The Bookstore provides 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. Only one check per person per day may be cashed.

Counseling and Career Planning
The services of the Counseling and Career Planning Center are available to students, alumni, faculty, and staff. Professionally trained counselors provide assistance in resolving personal, vocational, developmental, transitional, and emotional concerns, as well as psychological assessment. The staff also assists the center clientele to explore career and curricular alternatives, as well as maintains resources on careers, graduate opportunities, and other growth and development issues. The center sponsors and cosponsors developmental and educational programs on a variety of issues such as values clarification, career and life planning, interpersonal communication, stress management, and other topics. All services are confidential. The services are available without charge, with the exception of testing.

Food Service Facilities
Marriott Dining Services provides meals and snacks in the University Center cafeteria, grill and Chamberlain Deli form 7 a.m. to 7 p.m. daily (except during holidays). Declining balance accounts and other meal plans are available. Cash is accepted at all operations. A variety of foods is offered, including vegetarian and low fat entrees. Pizza Hut and Taco Bell and other brand name foods are also available. For informational brochure please contact this department at (615) 755-4200.

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 Dr. John Delaney, Office of Student Affairs, 216 University Center (755-4534).

Health Services
Emergency first aid service under the supervision of a registered nurse is available to all members of the University community from 7 a.m. to 3:30 p.m. weekdays. For those covered under the Student Health Service Plan (which includes all dormitory residents), a physician makes on-campus sick calls three days a week (Monday, Wednesday, and Friday). In addition, the Student Health Plan covers the cost of the physician's services for the referral by the Student Health Service Director to the medical group under contract to the University. The student is responsible for all services above the physician's fee, such as surgery, X-rays, laboratory work, and medicines. Commuter students may join the Student Health Service Plan at $10 a semester.
Additional services or hospitalization are not covered by the Student Health Service Plan. The university recommends that the student obtain separate hospitalization and medical insurance. Such a health insurance policy is offered through the university and covers a schedule of expenses for surgery and hospitalization in case of accidents and illness. Information about this policy is mailed to students in the summer. The insurance policy can also be requested at the time of fee payment. Information is available in the Student Health Service of Student Affairs Office. This plan is particularly useful for parents whose family policy does not cover the dependent child after the 19th birthday. Additional information concerning the Student Health Insurance policy contact Carolyn Robinson, Director, Student Health Service, 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 card at a cost of $2. 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. New and replacement cards cost $2. Lost ID cards should be reported to the Student Affairs Office immediately. Validation stickers are issued each semester and are placed on the back of the ID card. One card is intended to last throughout a student’s entire stay at UTC.

**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 free and 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**

In an attempt to maintain a healthy campus environment, The University to 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 reason. A verification of immunization, signed by a health care provider, should be returned to the student Affairs Office, second floor of the University Center or mail to the office. An official copy of the "Permanent Tennessee Certificate of Immunization" (form PH 2414) or a comparable immunization form from another state will also be acceptable.
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, birthplace and date, 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, address, birthdate, sex, high school and high school graduation date, admission classification, 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 (effective July 1, 1991) 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 (615) 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.
College of Arts and Sciences

Professor Paul Gaston, Dean

American Studies
See Interdisciplinary Studies.

Anthropology
See Sociology, Anthropology, and Geography.

Art
Associate Professor White, Head

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)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
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.
Remainder 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>University Studies 101</td>
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<td>Art 101 Visual Studies 1</td>
<td>Art 102 Visual Studies II 3</td>
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<td>Art 105 Drawing I</td>
<td>Art 106 Drawing II 3</td>
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<td>Art 104 Visual Studies III 3</td>
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<td>EHLS021</td>
<td>Color Theory and Fundamentals 3</td>
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<td>Total 16</td>
<td>EHLS Activity 1</td>
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</table>

Total 18

SOPHOMORE

Apply for Portfolio Review
Art 205 Drawing III 3
Art 281 Photography 3
Art 214 Art History 3
Art History 3 hours from: 207, 233, 244, 305, 306
Art 260 Drawing for G.D. 3
General Education 3

Total 18

Total 18
**JUNIOR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tr>
<td>Art 371 Inter. Typography</td>
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<tr>
<td>Art History</td>
<td>3</td>
</tr>
<tr>
<td>3 hours from Art</td>
<td>3</td>
</tr>
<tr>
<td>207, 233, 244, 305, 306</td>
<td></td>
</tr>
<tr>
<td>Art 380 Photography for Graphic Design</td>
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<td>Total</td>
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**SENIOR**

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<tr>
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<tr>
<td>General Education</td>
<td>3</td>
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<tr>
<td>General Education</td>
<td>3</td>
</tr>
<tr>
<td>Art Elective</td>
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<tr>
<td>Art 465 Problem Solving in Graphic Design</td>
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<tr>
<td>Art 491 Senior Exhibition</td>
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**TOTAL**

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<th>Hours</th>
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**Art (B.F.A.): painting and drawing**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
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<tr>
<td>FRESHMAN</td>
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<td>University Studies 101</td>
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<td>General Education</td>
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<td>Art 101 Visual Studies I</td>
<td>3</td>
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<tr>
<td>Art 105 Drawing I</td>
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<th>Hours</th>
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<td>Art 101 Visual Studies I</td>
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<td>Art 105 Drawing I</td>
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<tr>
<td><strong>Sophomore</strong></td>
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<td>Apply for Portfolio Review</td>
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<td>General Education</td>
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<td>Art 205 Drawing III</td>
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<td></td>
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<tr>
<td>Art 244 Ceramics I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Art 233 Sculpture I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Art 214 Art History</td>
<td>3</td>
<td></td>
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<tr>
<td>General Education</td>
<td>3</td>
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<tr>
<td>Total</td>
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<table>
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<tr>
<th>Semester</th>
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<th>Hours</th>
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<tbody>
<tr>
<td><strong>Junior</strong></td>
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<tr>
<td>Apply for Senior Exhibition</td>
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<tr>
<td>Art 405 Drawing V</td>
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<tr>
<td>Art 407 Painting V</td>
<td>3</td>
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<tr>
<td>Art Elective</td>
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<tr>
<td>Art Elective</td>
<td>3</td>
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<tr>
<td>Elective</td>
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<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>Senior</strong></td>
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<tr>
<td>Apply for Senior Exhibition</td>
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<td></td>
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<tr>
<td>Art 406 Drawing VI</td>
<td>3</td>
<td></td>
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<tr>
<td>Art 408 Painting VI</td>
<td>3</td>
<td></td>
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<tr>
<td>Art 409 Senior Studio in Painting and/or Drawing</td>
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<tr>
<td>Art Elective</td>
<td>3</td>
<td></td>
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<tr>
<td>Art 491 Senior Exhibition</td>
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<td>Total</td>
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**TOTAL HOURS 128**

**Art Education (B.S.)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>2 approved courses in written communication in the English language</td>
<td>6</td>
</tr>
<tr>
<td>B</td>
<td>1 approved course in literature, Philosophy B201, and Theatre and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speech B115 (3 hours each)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>1 approved behavioral or social science course, and Psychology C101</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>2 physical or natural science courses to total 8 hours (one course must</td>
<td>8</td>
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<tr>
<td></td>
<td>be an approved laboratory science)</td>
<td></td>
</tr>
<tr>
<td>FJ</td>
<td>Mathematics F120 (3 hours)</td>
<td>3</td>
</tr>
<tr>
<td>G</td>
<td>1 approved perspectives course (3 hours)</td>
<td>3</td>
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</tbody>
</table>

**The Freshman Seminar**

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

**Major and related courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science 102</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 336</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 221</td>
<td>3</td>
</tr>
<tr>
<td>54 hours art including 101, 102, 103, 105, 106, 203, 205, 207, 214, 215, 233, 321, 324, 490; 2 courses from Art 314, 315, 414, 431, 432; and 6 hours in one studio concentration.</td>
<td></td>
</tr>
<tr>
<td>25 hours in professional education including Curriculum and Instruction 201, 21, 433, 438, and Special Education 332 or 333.</td>
<td></td>
</tr>
</tbody>
</table>
For graduation: 2.0 average in art and 2.0 average in School of Education 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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>General Education Category A</td>
<td>General Education Category A</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>Ed Curr. &amp; Instr. 201</td>
</tr>
<tr>
<td>Art 101 Visual Studies I</td>
<td>Art 102 Visual Studies II</td>
</tr>
<tr>
<td>Art 103 Intro to Art Educ.</td>
<td>Art 106 Drawing I</td>
</tr>
<tr>
<td>Art 105 Drawing I</td>
<td>Theatre &amp; Speech 115</td>
</tr>
<tr>
<td>USTU 101</td>
<td>Total 15</td>
</tr>
<tr>
<td><strong>TYPICAL HOURS 128</strong></td>
<td><strong>TOTAL HOURS 128</strong></td>
</tr>
</tbody>
</table>

### SOPHOMORE

| **Apply for Student Teaching** | Psychology C101 |
| Philosophy 201 | Art 215 Art History |
| Art 205 Drawing III | Art 203 Intro to Printmaking |
| Art 233 Sculpture I | Computer Science 102 |
| EHLSo21 | EHLSo22 |
| **Total 17** | **Science Elective 4** |

### JUNIOR

| **Philosophy 336** | Psychology 221 |
| **Art History** | Ed Special Education 333 |
| **Art 323 Mat. & Proced. in Art Education** | Art History |
| **Studio Concentration** | General Education Category C |
| **Total 15** | **Total 18** |

### SENIOR

| **Art 490 Seminar in Art Ed.** | ED Curr. & Instr. 438 |
| **EDCurr.&Instr.433** | Senior Exhibition |
| **General Education Category B** | **General Education Category G** |
| **Studio Concentration** | **Total 16** |
| **Total 16** | **Total 12** |

### ART COURSES

101 Visual Studies I: Color and 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. Corequisite: 102 for the art major or approval of 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 stand point of their compositional and expressive possibilities. Experimentation with various media. Study of art anatomy. 205 fall/206 spring semester. Prerequisites: JO J, 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)

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, 233. Studio hours 6.

244 Ceramics I (3)
Problems in die 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.

251 Photography for Publications (3)
Introduction to black and white photography with an emphasis on photo journalism. Basic camera operation, film processing, and darkroom printing. (For the non art major). Adjustable lens camera with electronic flash required. Spring semester. Credit not allowed in both Art 251 and 281 •
333 Three-Dimensional Design (3)
Basic problems involving mass and space relationships. Experimentation with foundry techniques. Lectures on the historical development of sculpture. On demand. Prerequisites: 101, 105, 106.

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 233, 235, 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)
Investigation of the concept and application of design through commercial formats. Budget constraints of print media, Design and production of mechanicals for various print processes. Skills, craftsmanship, and visual aesthetics are emphasized. Spring semester. Prerequisite: Art 271, 380. Studio hours 6.

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 the 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: 214 or 215 (formerly 211,212, 213).

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 the 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 305, 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.
The Department of Biological and Environmental Sciences offers biology, a B.S. in Environmental Science. The course requirements are divided into three majors: a B.S. in biology, a B.S. in medical technology and veterinary medicine. Preprofessional programs in dentistry, medical technology, medicine, cytotechnology, dental hygiene, pharmacy, and veterinary medicine are described in the Preprofessional Programs section of the Bulletin.

### 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 (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 biology with laboratory (4 hours; 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 other than biology (3 hours)

The Freshman Seminar

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; F145, F150 are recommended for prospective graduate students**
- **Physics 103,104 or Geology 111, 112**
- **Biology - 38 hours including 121,122, four laboratory courses above the 100 level, 3 hours of a single, formal lecture or laboratory course at the 400 level, and courses from the following areas:**
  - **Botany (select 1 course): 207, 352**
  - **Zoology (select 1 course): 312, 313, 342**
  - **Courses offered in Botany and Zoology at Gulf Coast Research Laboratory may be substituted. Permission of the department head required.**

### Typical course of study in biology (B.S.)

#### First Semester

**FRESHMAN**

- General Education Category A: 3
- Chemistry 121 Category D: 4
- Biology 121: 4
- University Studies 101: 3
- EHLS021: 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 or Geology 111: 4
- Molecular: 4
- General Education Category B: 3
- General Education Category C: 3
- Elective: 1-2
- **Total 15-17**

**SENIOR**

- Population: 3-4
- Physiology: 3-4
- General Education Category G: 3
- Biology Elective: 3-4
- **Total 15-18**

**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; 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)

The Freshman Seminar

Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
Typical course of study in medical technology (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
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<td>SOPHOMORE</td>
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</tr>
<tr>
<td>Mathematics 135 or F145</td>
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</tr>
<tr>
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<tr>
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<td>30 hours from approved school of medical technology.</td>
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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 other than discipline concentration (6 hours)
Category D: 1 approved physical or natural science course, other than environmental science or discipline concentration, 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)

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, Geology 436, 445
- Environmental Methods (select 1 course): Environmental Science 340, 360, Geography 465, 466
- Senior Experience (2 credit minimum): Environmental Science 480, 490, 491, 495, 496, 497, 498
- 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 concentrations:

Biology:

- Computer Science 110 or 118
- Chemistry D121, 122, 341, 351
- Biology D121, 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 D121, 122, 341, 342, 351, 352, 443
- Recommended: Chemistry 371 for students seeking federal certification.

Chemistry 371 has Mathematics 160 and Physics 104 as prerequisites.

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, 206 (409 recommended)
- Geology 111, 112, 341, 342, and 9 additional hours from 225, 404, 407, 436, 445, or 496. These hours are additional to any Geology hours taken as part of the 30 hours required of all EST majors.

Geography:

- Computer Science 110 or 118
- Sociology C151, 209, 314
- Geography 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 EST majors. With permission of the Biology/Environmental Science department head, Geography 307 or Biology 416 or an upper level EST course may be substituted for 3 hours.

Mathematics:

- Computer Science 118
- 1 two semester sequence from biology, chemistry, engineering, geology, physics
## Environmental Science (B.S.)

### Environmental Science (B.S.): biology concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td>Environmental Science 150</td>
<td>Environmental Science 151</td>
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<td>Environmental Science 360</td>
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<td>or 416</td>
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<td>Chemistry 341</td>
<td>Biology 306,307</td>
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<td>16-17</td>
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### Environmental Science (B.S.): chemistry concentration

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### Environmental science (B.S.): engineering concentration

<table>
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<tbody>
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<td>Environmental Science 150</td>
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Environmental science (B.S.): geography concentration

**First Semester**
- **FRESHMAN**
  - Environmental Science 150 4
  - Geology 111 4
  - General Education Category A 3
  - Geography 101 or 103 3
  - University Studies 101 3
  - Total 17

**Second Semester**
- **FRESHMAN**
  - Environmental Science 151 4
  - Geology 112 4
  - General Education Category B 6
  - General Education Category A 3
  - Total 18

**SOPHOMORE**
- Mathematics F145 4
- Mathematics F150 4
- Elective 3
- Total 16-17

**JUNIOR**
- Environmental Science 410 or 360 3
- Environmental Science 240 or 250 3
- Mathematics F150 4
- Mathematics F210 3
- General Education Category C 3
- Chemistry 122 4
- Total 18

**SENIOR**
- Environmental Science 410 or 360 3
- Geography 465 3
- Mathematics F210 3
- Environmental Science 300/400 level elective* 3
- Elective 3
- Total 15-16

**TOTAL HOURS 128**

*Chosen with permission of the biology/environmental science department head.

Environmental science (B.S.): mathematics concentration

**First Semester**
- **FRESHMAN**
  - Environmental Science 150 4
  - General Education Category A 3
  - Mathematics F150 (135/145)* 4
  - University Studies 101 3
  - Total 15

**Second Semester**
- **FRESHMAN**
  - Environmental Science 151 4
  - Mathematics 160 4
  - Mathematics 212 3
  - Biology D121 4
  - Total 19

**SOPHOMORE**
- General Education Category B 3
- Mathematics 255 3
- Mathematics 308 3
- General Education Category C 3
- Total 16

**TOTAL HOURS 128**

*Chosen with permission of the biology/environmental science department head.
**Environmental science (B.S.): physics concentration**

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<tr>
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<th>First Semester</th>
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<td>Environmental Science</td>
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<td>17-18</td>
<td><strong>Total</strong></td>
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**TOTAL HOURS 128**

- Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.

### General Education Categories
- **A** 3
- **B** 3
- **C** 3
- **G** 3
- **H** 3

### ENVIRONMENTAL SCIENCE MINOR

18 hours including Environmental Science 150, 151, 480, Geography 407 and two additional upper level environmental science courses. Minimum 2.0 average in the minor.

### 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. Prerequisite: 121.*

**191 Functional Human Anatomy (4)**
The structure of the human body as seen in its various levels of organization: cellular, tissue, organ, and system. Every semester. *Lecture 3 hours, laboratory 2 hours.*
199r Special Projects (1-4)
On demand. Maximum credit 4 hours. Prerequisite: approval of instructor.

207 Plant Morphology (4)
A 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: 122 or equivalent.

208 Human Physiology (3)

209 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: 208.

210 Microbiology and Health (4)
Microorganisms as related to disease, immunity, food preservation, and sanitation. Every semester. Lecture 3 hours, laboratory 2 hours. Credit not allowed toward a biology or medical technology major. Prerequisite: Chemistry 121 or equivalent.

300 Genetics: A Human Concern (3)
An investigation of our current knowledge of genetics, both traditional and modern, 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.

303 Vertebrate Embryology (4)
Comparative development of the body from gamete formation through early organ formation in selected vertebrates. Consideration of advances in experimental embryology. Spring semester alternate years. Lecture 2 hours, laboratory 4 hours. Prerequisite: 122; 313 recommended.

304 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: 122; Chemistry 121,122 or equivalent. Pre- or corequisite: Chemistry 351.

306 Ecology (3)
The community concept with reference to structure, energy, cycles, and populations; the distribution of plants and animals with analysis of the factors involved. Spring, fall, or summer semester. Prerequisite: 122 or equivalent, or approval of instructor.

307 Ecology Laboratory (1)
Field application of ecological principles. Spring, fall, or summer semester. Laboratory 2 hours. Field trips. Prerequisite: 122 or equivalent. Corequisite: 306.

311 Principles of Microbiology (4)
Morphology and physiology of microorganisms. Fall semester. Lecture 2 hours, laboratory 4 hours. Credit not allowed in both Biology 210 and 311. Prerequisites: 122; Chemistry 122 or equivalent.

312 Invertebrate Zoology (4)
A survey of the invertebrate phyla up to the chordates with an emphasis on their evolution, morphology, and physiological adaptations. Formerly 225. Fall semester alternate years. Lecture 3 hours, laboratory 2 hours. Prerequisite: 122 or equivalent.

313 Comparative Vertebrate Zoology (4)
The biology of the protochordates and the vertebrates with an emphasis on their evolution, comparative morphology and adaptations to the environment. Laboratory dissection of the shark and cat. Fall semester alternate years. Lecture 3 hours, laboratory 3 hours. Prerequisite: 122 or equivalent.

315 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: 122 or equivalent.

325 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: 122; Chemistry 122 or equivalent. Corequisite (Biology major only): 326.

326 Genetics Laboratory (1)
Investigations in classical, molecular, and population genetics. Fall semester. Laboratory 2 hours. Pre- or corequisite: 325.

328 Cellular Biology (4)
Metabolic and chemical organization of the cell; cellular metabolism; metabolic energy relationships; nature of enzymes; fermentative and oxidative metabolism; photosynthesis. Spring semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: 122; Chemistry 122 or equivalent. Pre- or corequisite: Chemistry 351.

330 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: 122; Chemistry 122 or equivalent. Pre- or corequisite: Chemistry 351.

342 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: 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: 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: 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: 122.

420 Molecular Genetics (3)
Genetic code, gene control, recombinant DNA, cloned genes, mutations, antibody genes, tumor viruses, transferring genes into mammalian cells, recombinant genes and diseases. Spring semester alternate years. Prerequisite: 325 or 328.

423 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 or equivalent, and a course in organic chemistry.

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. Prerequisites: 122; Chemistry 122 or equivalent, and 8 additional semester hours of biology. Pre- or corequisite: Chemistry 351.

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: 122 or equivalent.
463 Endocrinology (3)
The hormones of animals with emphasis on those of mammals. Fall semester.
Prerequisites: 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, geophysical 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: 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/ zooplankton/benthic
dynamics, and physical similarities and differences in lakes and reservoirs). Fall
semester alternate odd years. Lecture 2 hours, laboratory 2 hours. Prerequisites:
generchemisty,gerierdibiology, ecology, junior starusy;generdphysicisrecomended.

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:
minor 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: 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: 150.
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 (1-3 hours per term, 4 hours for the two terms)
On demand. See "Departmental Honors," page 27.

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 course are offered each year.

Marine Science I: 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.

Brock Scholars Program
See University Honors Program.

Business Administration
See School of Business Administration.

Chemistry
Professor McNeely, 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 E: 1 approved mathematics course (3 hours; approved related courses below will apply)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
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
32 hours chemistry including 121 (or 125), 122,341,351,352,371,386,443,486r
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.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td>Freshman</td>
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<tr>
<td>Chemistry 121</td>
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<td>USTU 101</td>
<td>Mathematics F150</td>
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<tr>
<td>Math F145</td>
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<td>14</td>
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**SOPHOMORE**

| Chemistry 341  | Chemistry 352  |
| 4              | 4               |
| Chemistry 351  | Physics 104    |
| 4              | 4               |
| Physics D103   | Elective       |
| 4              | 4               |
| Math 160       | Category C     |
| 4              | 3               |
| **Total**      | **Total**       |
| 16             | 16              |

**JUNIOR**

| Chemistry 371  | Chemistry 443  |
| 4              | 4               |
| Chemistry 386  | Foreign Language I |
| 1              | 4               |
| Foreign Language I | Electives |
| 4              | 3               |
| General Education Category B | Category C |
| 3              | 3               |
| Electives      | Category G     |
| 4              | 3               |
| **Total**      | **Total**       |
| 16             | 17              |

**SENIOR**

| Chemistry 486r | Chemistry Elective | 2 |
| 1              |                   |   |
| Foreign Language III | Foreign Language IV | 3 |
| 3              |                   |   |
| Category B     | Electives         | 11 |
| 3              |                   |   |
| Electives      |                   | 9  |
| **Total**      | **Total**         | 16 |

**TOTAL HOURS 128**

Chemistry (B.S.)

**General Education** (see page 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 E:** 1 approved mathematics course (3 hours; approved related course below will apply)

**Category G:** 1 approved perspectives course (3 hours)

The Freshman Seminar

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

Major and related courses

One year of either German, French, Russian or Japanese. German is strongly recommended.

English 278
Mathematics F150, 160, 212
Physics D230 (or Physics D103 and 104), 231
Computer Science 118
Chemistry 121 (or 125), 122, 341, 351, 352, 371, 372, 386, 436, 443, 446, 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.)

<table>
<thead>
<tr>
<th>FRESHMAN</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
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<tr>
<td>16</td>
<td>17</td>
</tr>
</tbody>
</table>

**SOPHOMORE**

| Chemistry 341  | Chemistry 352  |
| 4              | 4               |
| Chemistry 351  | Physics D230   |
| 4              | 4               |
| General Education Category C | General Education Category C |
| 3              | 3               |
| Mathematics 160 | English 278 |
| 4              | 3               |
| EHS021         | EHLS Activity  |
| 1              | 1               |
| **Total**      | **Total**       |
| 16             | 15              |

**JUNIOR**

| Chemistry 371  | Chemistry 443  |
| 4              | 4               |
| Chemistry 386  | German 102     |
| 1              | 4               |
| German 101     | Mathematics 212 |
| 4              | 3               |
| General Education Category G | Chemistry 372 |
| 3              | 4               |
| Physics 231    | Chemistry 486r |
| 4              | 1               |
| **Total**      | **Total**       |
| 16             | 16              |

**SENIOR**

| Chemistry Lab Elective | Chemistry 436 |
| 4                      | 5              |
| Chemistry 497r         | Chemistry Elective |
| 2                      | 2              |
| General Education Category B | Electives |
| 3                      | 3              |
| Electives              |                |
| 4                      |                |
| Electives              | 3              |
|                         | 3              |
| **Total**              | **Total**      |
| 16                     | 16             |

**TOTAL HOURS 128**

CHMISTRY 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.

CHMISTRY COURSES

111 Chemistry and the Environment (3)
Basic concepts and methods of investigation with applications of chemical principles to the environment. Spring semester odd years. Credit may not be applied toward a chemistry major.

121 General Chemistry I (4)
Survey of principles and concepts involving structure, properties, and reactions of matter with experiments to demonstrate these principles. Every semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: 2 years of high school algebra or Mathematics 106. Chemistry 125 may be substituted for Chemistry 121 in meeting all requirements.

122 General Chemistry II (4)
Survey of applications of principles to inorganic, organic, biological, analytical, and physical chemistry. Laboratory experiments in qualitative analysis. Every semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: 121 or 125.

125 Honors General Chemistry (4)
Advanced survey of principles and concepts of chemistry including structure, properties, and chemical reactions. Experimental work with emphasis on advanced laboratory 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.

199r Special Projects (1-4)
Individual or group projects. On demand. Maximum credit 4 hours.
211 Forensic Chemistry (3)
Survey of the applications of chemical analysis to criminalistics including studies of physical evidence, microscopy, analysis of drugs, 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)
An examination of 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.

341 Quantitative Analysis (4)
Theory and practice of volumetric, electrochemical, and spectrophotometric analysis applied to the study of stoichiometry and equilibrium. Fall semester. Lecture 2 hours, laboratory 4 hours. Prerequisite: 122.

342 Analytical Methods (4)
Advanced theory and practice of analytical chemistry including instrumental approaches to separation and analysis. Spring semester every year. Lecture 2 hours, laboratory 4 hours. Prerequisite: 341.

351, 352 Organic Chemistry (4,4)
Study of 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 351. Spring semester. Laboratory 3 hours, laboratory 3 hours. Prerequisites: 122; 351 is prerequisite to 352.

367 Current Topics in Biochemistry (3)
Study of 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)
Thermodynamic, kinetic, and other descriptions of laws governing physical and chemical change. Fall semester. Laboratory 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)
Survey of primary, secondary, and tertiary sources of chemical information including 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 as part of the Cooperative Education Program. Students will 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 for 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)
Survey of 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.

436 Advanced Inorganic Chemistry (5)
Advanced concepts in theoretical and descriptive inorganic chemistry with emphasis on valence bond, molecular orbital, and crystal field theories. Spring semester. Lecture 3 hours, laboratory 4 hours. Prerequisites: 352, 371.

443 Instrumental Analysis (4)
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 351. Co- or Prerequisite: Physics 104 or 231.

453 Advanced Organic Chemistry (4)
Advanced concepts of organic chemistry: 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.

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

475 Polymer Chemistry (2)
Chemistry of synthetic polymers including mechanisms of polymeriza-tion and relation of properties to structure. Spring semester even years. Prerequisites: 352 and 371 or equivalent knowledge.

486r Seminar (1)
Participation seminar based on student papers, invited speakers, and other activities. Every semester. Prerequisite: 24 semester hours of chemistry. 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 Industrial Research (2)
Group participation in 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)
Laboratory or library research on individual chemical problem under staff supervision. Seminar presentation of results. Student should confer with instructor prior to registration. Every semester. Laboratory 4 hours. Maximum credit 4 hours.

498r Individual Studies (1-4)
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)
Special topic of a selected area of chemistry as specified in schedule of classes. Student should confer with instructor prior to registration. On demand.

Classical Civilization
See Foreign Languages and Literatures.

Communication
Associate Professor Rushing, Head

The Department of Communication offers a Bachelor of Arts degree requiring a combination of broad liberal learning and specialized study in communication. In addition to meeting the general education requirements, the communication major must complete a minor in one department outside the program. Besides required courses in communication, the major can choose from a number of departmental electives available in advertising, broadcasting, journalism, and public relations courses.

Communication (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)
48 — Communication

Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category Fs 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
Exercise Science Health and Leisure Studies 021 plus one additional semester of exercise science activity
Foreign Language through second college year

Related Study
One minor approved by the department. Courses in the minor approved for general education may be used to satisfy general education requirements.

Major
Completion of 33 hours of communication courses including 101, 230, 231, 320, 351, 420, and 485 or 480, and other communication courses as electives for the total of 33 hours.

Communication majors must take a minimum of 90 semester hours in courses outside the major, with no fewer than 65 semester hours from the liberal arts and sciences.

2.0 average in communication courses

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

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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>FRESHMAN</td>
<td></td>
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<tr>
<td>Communication 101</td>
<td>3</td>
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<tr>
<td>English 121</td>
<td>3</td>
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<td>Foreign Language 101</td>
<td>4</td>
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<td>University Studies 101</td>
<td>3</td>
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<tr>
<td>EHL021</td>
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<td>17</td>
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<tr>
<td><strong>SOLOMOROE</strong></td>
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<tr>
<td>Communication 230</td>
<td>3</td>
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<tr>
<td>Foreign Language 211 or 213</td>
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<td><strong>JUNIOR</strong></td>
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<tr>
<td>Communication 351</td>
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<tr>
<td>EHL0 Activity</td>
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<td><strong>Total</strong></td>
<td>16</td>
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<tr>
<td><strong>SENIOR</strong></td>
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<tr>
<td>Communication 420</td>
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<td>15</td>
</tr>
<tr>
<td><strong>TOTAL HOURS 128</strong></td>
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</table>

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: 230. 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.

351 Mass Communication Law and Ethics (3) (formerly COMM 451)
United States legal system, elements of constitutional law, the law of mass communication. Personal and professional ethics as they apply to communications disciplines. Fall semester. Lecture 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.

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.

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.

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.

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

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

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

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

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**Computer Science**

See School of Engineering

**Criminal Justice**

See College of Health and Human Services.

**Education**

See School of Education.

**Engineering**

See School of Engineering

**English**

Professor T. Ware, 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.

**English and American Language and Literature (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 English; 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 G**: 1 approved perspective course other than English (3 hours)

The Freshman Seminar

Exercise Science Health and Leisure Studies 021 plus one additional semester of 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
50 — English

**Major and related courses**

39 hours English in addition to general education requirements including: English 203; 207; 211 and 212; 213 and 214; 361; at least one course in the novel at the 300 or 400 level

At least 9 of the remaining hours must be in 300- and 400-level courses, with one course in English literature before 1800

12 hours additional in supporting courses beyond the General Education requirements: these courses in conjunction with the academic adviser.

2.0 average in all English courses (excluding general education Category A courses)

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

For teacher certification see School of Education section.

**Writing Concentration**

The Department of English permits a concentration in writing within the English major. To take a concentration in writing, a student must complete the major in English including at least 12 hours from the following courses, no more than two courses on the 200 level and at least one at the 400 level: English 270, 277, 278, 279, 300, 370, 375r, 376r, 410, 471r, 473, 479r, 495r when topic is appropriate, Communication 230, 363.

**Typical course of study for English and American language and literature (B.A.)**

**FRESHMAN**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>English 121-122</td>
<td>6</td>
</tr>
<tr>
<td>Behavioral Science</td>
<td>3</td>
</tr>
<tr>
<td>University Studies 101</td>
<td>3</td>
</tr>
<tr>
<td>Humanities, Fine Arts</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics, Natural Science</td>
<td>7</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>8</td>
</tr>
<tr>
<td>Exercise Science, Health and Leisure Studies</td>
<td>2</td>
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**SOPHOMORE**

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<tr>
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<tbody>
<tr>
<td>English 203</td>
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<tr>
<td>English 211, 212</td>
<td>6</td>
</tr>
<tr>
<td>English 213 and 214</td>
<td>6</td>
</tr>
<tr>
<td>Humanities, Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>6</td>
</tr>
<tr>
<td>Support course (chosen with adviser)</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Behavioral Science</td>
<td>3</td>
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<td><strong>Total</strong></td>
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**JUNIOR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>English 207</td>
<td>3</td>
</tr>
<tr>
<td>English Electives, including novel course</td>
<td>9</td>
</tr>
<tr>
<td>Support courses (chosen with adviser)</td>
<td>6</td>
</tr>
<tr>
<td>Perspectives</td>
<td>3</td>
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<tr>
<td>Electives</td>
<td>9-12</td>
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<td><strong>Total</strong></td>
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**SENIOR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>English 361</td>
<td>3</td>
</tr>
<tr>
<td>English Electives (300-400 level)</td>
<td>12</td>
</tr>
<tr>
<td>Support course (chosen with adviser)</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9-12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27-30</td>
</tr>
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</table>

**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 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 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 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 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 more difficult points of English usage. Formerly English 111. Spring semester alternate years.

**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 semester.

**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.

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)
Emphasis on 20th-century authors. Fall semester.

333r Masterpieces of Asian Literature (3)
Study of representative works with emphasis on a country, period, or genre. On demand.

336 The Development of Medieval Germanic Epic (3)
The major epics of the Germanic tradition, studied in the context of the cultural and historical background out of which they came. On demand.

350 Introduction to the Theory and Function of Literary Criticism (3)
The concepts, terminology, and procedures of formal literary study. Emphasis on the basic theoretical problems of criticism and relation of literary analysis to literary evaluation, etc. Fall semester.

351 History of Literary Criticism (3)
Selected readings from representative literary critics. On demand.

360 Introduction to Linguistics (3)
Designed to make the student aware of language as a field of study; to show the basic assumptions and methods of linguistics; and to introduce the terminology and scholarship in the field. On demand.

361 History of the English Language (3)
A survey of the history of the English language, beginning with its Indo-European backgrounds, tracing the development of Old, Middle, and Modern English through major changes in vocabulary, sound, word formation, and syntax. Fall semester. Prerequisite: /22.
370 Persuasion and Propaganda (3)
A study of the powers and abuses of persuasion, using historical and contemporary examples. On demand. May not be used for English minor.

375r Creative Writing: Poetry (3)
Instruction and practice in the understanding and writing of poetry. Permission of department head and instructor required to register for credit after 6 hours earned. Spring semester.

376r Creative Writing: Fiction (3)
Instruction and practice in the understanding and writing of fiction. Permission of department head and instructor required to register for credit after 6 hours earned. Spring semester.

395 Greek and Roman Tragedy in Translation (3)
On demand. See Classics 395.

400 Seminar in the Novel (3)
A seminar in the senior year designed to integrate the student's understanding of literature. Spring semester.

410 Approach to Composition (3)
Designed to improve the student's writing and to improve the individual's ability as a critic of writing, particularly as a potential teacher of writing; focus on expository prose. Fall and spring semester.

420 Early English Drama, Origins to 1642 (3)
The English drama as a literary type, its history and development from Medieval times to 1642, exclusive of Shakespeare. On demand.

421 Later English Drama, 1660-1800 (3)
Study of English drama from the Restoration through the 18th century. On demand.

423 American Novel to 1900 (3)
Representative novels of American romanticism, realism, and naturalism. On demand.

430 Development of the British Novel: from Defoe to George Eliot (3)
The development of the British novel from its origins in the 18th century through George Eliot and her contemporaries. On demand.

431 The Modern British Novel (3)
On demand.

433 Modern Poetry (3)
On demand.

434 Twentieth-Century American Novel (3)
On demand.

435 Modern Drama (3)
Selected plays of representative dramatists with special emphasis on American drama since 1920. On demand.

443r Major British Figures (3)
A reading course in the works of a major British writer: the writer to be studied will be specified in the schedule of classes. On demand. Maximum credit 6 hours for the degree.

445r Major American Figures (3)
A reading course in the works of a major American writer. On demand. Maximum credit 6 hours for the degree.

460 Modern English Grammar (3)
An introduction to the system phonological, morphological, syntactical of present-day American English. Emphasis on various recent presentations of this system. On demand. Prerequisites: 360, 361, or special permission of the department head.

471r Writing Workshop (3)
An advanced seminar in writing with individual projects in imaginative, expository, or critical writing. Permission of department head and instructor required to register for credit after 6 hours earned. On demand. Prerequisites: two writing courses above 100 level.

473 Proposals, Articles and Technical Research (3)
Proposal-writing as practiced in government, academic, business, and industry, grounded in persuasive theory. Students will also learn technical research skills and write several technical/scholarly articles. Spring semester. Prerequisite: 121 and 122.

479r Writing Internship (3)
The writing internship provides 160 hours of hands-on experience for the student who is interested in a career as a writer in business, industry, government, or the helping professions and social services. Students must apply for the internship during the fall semester to be accepted as writing interns for the spring semester. Student interns work an average of 10 hours per week under the supervision of a professional writer in the Chattanooga area. Spring semester. Prerequisite: 121 and 122 and approval of internship coordinator one full semester in advance. Maximum 6 hours credit.

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

498r Individual Studies (1-3)
Individual study projects by special permission of department head. On demand. Maximum 3 hours for B.A. in English or B.S., Secondary Education in English.

499r Group Studies (1-3)
Group study projects by special permission of department head. On demand. Maximum 3 hours for B.A. in English or B.S., Secondary in English.

Exercise Science, Health and Leisure Studies
See School of Education.

Foreign Languages and Literatures
Associate Professor Stanley, Acting 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.

There is no prescribed program which departmental majors should follow other than to meet the required number of hours for the respective major. Upper level courses are offered based on student needs.

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.

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.
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.

301 Greek Art and Archaeology (3)
A study of the development of art and archaeology from the Minoan-Mycenaean period through the age of classical Greece. On demand.

302 Etruscan and Roman Art and Archaeology (3)
The development of Etruscan and Roman art and archaeology including a brief survey of the Hellenistic period. 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.

395 Greek and Roman Tragedy in Translation (3)
A study of the origins, development, and changes in comedy as seen in the works of Aristophanes, Menander, Plautus, and Terence. On demand. May be registered as History 395.

396 Classical Mythology (3)
A study of the origins and meaning of Greek and Roman myths, their importance for understanding ancient culture, and their influence on later literature and art. On demand.

397 Greek and Roman Comedy in Translation (3)
A study of the origins, development, and changes in comedy as seen in the works of Aeschylus, Sophocles, Euripides, and Seneca. On demand. May be registered as History 397.

FOREIGN LANGUAGE

101r, 102r Elementary Foreign Language (4,4). Basic Grammar, elementary reading, (and conversation for a modern spoken language), 101 fall/102 spring. On demand. Student should consult department regarding use in satisfying University foreign language requirement.

213r, 214r Intermediate Foreign Language (3,3). Intermediate foreign language study with grammar review and extensive reading, (conversation for a modern spoken language), 213 fall/214 spring. On demand. Student should consult department regarding use in satisfying University foreign language requirement.

French

French Languages: French (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 French: 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 Foreign Languages (3 hours)

The Freshman Seminar
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
24 hours French beyond second college year
2.0 average in all French courses

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

Typical course of study in foreign languages:

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

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SOPHOMORE

Advanced French 3
General Education Category B 3
General Education Category C 3
Electives 7
Total 16

JUNIOR

2 Advanced French courses 6
General Education Category G 3
Electives 7
Total 16

SENIOR

2 Advanced French Courses 6
Electives 10
Total 16

TOTAL HOURS 128

FRENCH MINOR
18 hours in French including second year; 9 hours must be at the 300 level or above.
Beginning language students must complete 23 hours.
Minimum 2.0 average in the minor.
FRENCH COURSES

101, 102 Elementary French (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, 212 Intermediate French for Conversation (3,3)
Grammar review, intensive oral practice in French, limited readings. 211 fall/212 spring semester. Prerequisites: 101, 102 or 2 years high school French.

213, 214 Intermediate French for Reading (3,3)
Grammar review, extensive reading in French with discussion in English. 213 fall/214 spring semester. Prerequisites: 101, 102 or 2 years high school French.

311, 312 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.

321 Advanced French Grammar (3)
Special problems in syntax, illustrative reading, composition. On demand. Prerequisites: 211, 212 or approval of the department.

323 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.

331, 332 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.

401r 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. B> special arrangement with the head of the department and the instructor. Prerequisites: 211, 212 or approval of the 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.

407 Seventeenth Century French Literature (3)
On demand. Prerequisites: 211, 212 or approval of the department.

409 Eighteenth Century French Literature (3)
On demand. Prerequisites: 211, 212 or approval of the department.

411 Nineteenth Century French Literature (3)
On demand. Prerequisites: 211, 212 or approval of the department.

413 Twentieth Century French Literature (3)
On demand. Prerequisites: 211, 212 or approval of the department.

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.

German

101, 102 Elementary German (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, 212 Intermediate German for Conversation (3,3)
Grammar review, intensive oral practice in German, limited readings. 211 fall/212 spring semester. On demand. Prerequisites: 101, 102 or two years high school German.

213, 214 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.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r 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)

The Freshman Seminar
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.)

First Semester Second Semester

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**Foreign Languages**

**SOPHOMORE**
- Latin 201 3
- General Education Category B 3
- General Education Category F 3
- Electives 7
- Total 16

**JUNIOR**
- Advanced Latin 3
- Greek 101 3
- General Education Category G 3
- Electives 7
- Total 16

**SENIOR**
- Advanced Latin 3
- Advanced Greek 3
- Electives 10
- Total 16

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**GREEK MINOR**
21 hours of Greek 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)
- 211, 212 Intermediate Italian for Conversation (3,3)

**Italian**

**General Education**
- 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)

**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.)**

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**SOPHOMORE**
- Latin 201 3
- General Education Category B 3
- General Education Category D 4
- General Education Category F 3
- Electives 9
- Total 16

**JUNIOR**
- Advanced Latin 3
- Classical Civilization 3
- General Education Category G 3
- Electives 7
- Total 16

**SENIOR**
- 2 Advanced Latin Courses 6
- Electives 10
- Total 16

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**TOTAL HOURS 128**
LATIN MINOR
21 hours of Latin 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)
Intensive review of basic Latin grammar; selections from Cicero, Livy, Pliny, and Ovid. Fall semester. Prerequisites: Latin 101, 102 or 2 years of high school Latin. At the discretion of the department properly qualified students without 1 year of high school Latin may be admitted.

202 Intermediate Latin (3)
Readings from Vergil's Aeneid. Spring semester. Prerequisite: Latin 201.

207 Cicero (3)
Selected readings from the Letters and Orations of Cicero. On demand.

208 Horace (3)
Selections from the Odes and Epodes. On demand.

310 Readings in Latin Literature (3)
A study of the development of Latin literature with selections from representative authors. On demand.

312 Latin Prose and Composition (3)
On demand.

350r Latin Prose (3)
Sallust, Caesar, Tacitus, Seneca, and Petronius considered in different semesters. On demand. Maximum credit 9 hours.

351r Latin Poetry (3)
Latin lyric poetry, Roman comedy, Latin satire, and Lucretius considered in different semesters. On demand. Maximum credit 9 hours.

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

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.

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.

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.

497r Research (1-4)
On demand.

498r Individual Studies (1-4)
On demand.

499r 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 E: 1 approved mathematics course (3 hours)

Category G: 1 approved perspectives course other than Foreign Languages (3 hours)
The Freshman Seminar
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
24 hours Spanish beyond second college year
2.0 average in all Spanish courses

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)

First Semester
FRESHMAN
General Education Category A 3
General Education Category B 3
Spanish 211 3
EHLS021 1
General Education Category C 3
University Studies 101 3
Total 16

Second Semester
General Education Category A 3
General Education Category B 3
Spanish 212 3
EHLS Activity 1
General Education Category C 3
Elective 3
Total 16

SOPHOMORE
Advanced Spanish 3
General Education Category B 3
General Education Category F 3
Electives 7
Total 16

JUNIOR
2 Advanced Spanish Courses 6
General Education Category G 3
Electives 13
Total 16

SENIOR
2 Advanced Spanish Courses 6
Electives 10
Total 16

TOTAL HOURS 128

SPANISH MINOR
18 hours in Spanish including second year; 9 hours must be at the 300 level or above. Beginning language students must complete 23 hours.

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, 212 Intermediate Spanish for Conversation (3,3)
Grammar review, intensive oral practice in Spanish, limited readings. 211 fall/212 spring semester. Prerequisites: 101, 102 or 2 years high school Spanish.

213, 214 Intermediate Spanish for Reading (3,3)
Grammar review, extensive reading in Spanish with discussion in English. 213 fall/214 spring semester. Prerequisites: 101, 102 or 2 years high school Spanish.

311, 312 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 demand. Prerequisites: 211,212 or approval of the department.

400r Topics in Spanish Literature (3)
Study of topics such as Spanish literature of the Golden Age, 18th and 19th century literature. The Generation of 1898, and contemporary Spanish literature. On demand. Prerequisites: 211,212 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: 211,212 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: 211, 212 or approval of the department.

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.

German
See Foreign Languages and Literatures.

Greek
See Foreign Languages and Literatures.
History (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 history; 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 history (6 hours)

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

Category F: 1 approved mathematics course (3 hours)

Major

36 hours in history including 101, 102, and 301; no more than one-half of the history courses at the 100 and 200 level. One course from four of the following areas:

I. History 331,332,335,336,337,338
II. History 311,312,313,314,317,318,319
III. History 364,365,368,369,370,371,372
IV. History 411,412,415, 416,419,463,470
V. History 401

2.0 average in all history courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

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

First Semester

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Total Hours: 128

Some of the electives should be chosen to complete the minor requirement for majors. Students should make certain they select enough electives to complete 128 hours.

HISTORY MINORS

A minor in American history requires History 203-204 (6 hours) plus an additional 12 hours in American history at the 300-400 level (total of 18 hours). A minor in world history (European or non-Western history) requires History 101,102, or 208 (6 hours) plus an additional 12 hours in European or non-Western history at the 300-400 level (total of 18 hours).

Minimum 2.0 average in the minor

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.

199T 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; a brief review of early colonial period; more intensive study beginning with 1763; special attention given to national leaders, their ideas and contributions, as well as to the main currents and developments in American life. First semester study extending to 1865. Every semester.

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 CI000 through the early twentieth century. On demand.

215, 216 Latin American History (3, 3)

A survey of Latin American history from the time of discovery to the present, emphasizing economic, political, and social institutions as well as cultural developments; the first semester, the colonial period (to about 1825); the second semester, since independence. 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)

An introduction to historical interpretation and analysis through an examination of specific topics in American, European, or non-Western history. Required of both those majoring in history or secondary education in history, but other students welcome. Every semester.
310 The Greco-Roman World (3)
The history, culture, and life-styles of the ancient Greeks and Romans. On demand.
*May be 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 Reformation 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.

325, 326 History of the British Empire and Commonwealth (3, 3)
A study of the rise and fall of the first British Empire, social reform and the rise of opposition to imperialism, mid-Victorian Imperialism, the growth of the second British Empire, the origins of African and Asian nationalism, the impact of World Wars I and II, the emergence of the Commonwealth and colonial development. First semester to c. 1867. 325 fall/326 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.

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.

335 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. On demand.

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 French 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 is 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 is placed on literary, cultural, and artistic achievements, and on studies of the social structure of traditional Japanese society. 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.

369 China Since 1949 (3)
Examines the People's Republic of China from its founding in 1949 to the present. Both domestic developments and foreign affairs considered. Topics include: Mao Tse-tung, the Korean War, Great Leap Forward, the Cultural Revolution, and events since Mao's death in 1976. 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 101, 102, or permission of instructor.*
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 specific 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.

421 Changing Interpretations in American History (3)
An analysis of changing interpretations of selected topics in American history, from the Puritans to the present. On demand. Prerequisites: 203, 204, or permission of instructor.

463 Social and Economic History of Europe (3)
The impact of the social and industrial revolutions on the societies of Europe: agrarian conditions, urbanization, and the population explosion, living standards, status and class and social movements. On demand.

470 Psycho-history (3)
Beginning with the contributions of Freud, this course will familiarize the student with the content and method of psychohistory from its modern origins to the present; major emphases will include the Erikson model of biography and the Fromm approach to the development of social character in given historical, social, or institutional environments. 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.

Geology
See Physics, Geology and Astronomy.

Human Ecology
See School of Education.

Humanities
See Interdisciplinary Studies.

Human Services
See College of Health and Human Services.

Interdisciplinary Studies
Professor Paul L. Gaston, 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 programs: American Studies (B.A.); Humanities (B.A.). Nondegree program: University Studies.

American Studies
Professor John E. Trimpey, Coordinator
The American studies major is a Bachelor of Arts degree consisting of two parts: 1) a core curriculum required of all majors and 2) a concentration of study in one of the following areas: American literature, American history, philosophy and religion, political science, or sociology-anthropology. American studies courses are described below; all other required courses are described in the listing of each named department.

American Studies (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; approved related courses below will apply)
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 F: 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
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
The following core courses are required of all majors:

- American Studies 200: Introduction to American Studies
- American Studies 400: American Studies Seminar
- American Studies 499r: Topics in American Studies
- Computer Science 110: Computer Information Systems I
- Economics C101, C102: Principles of Economics
- ED Curr. & Instr. 201: History of Education in U.S.
- English 213, 214: American Literature
- History B203, B204: United States History
- Mathematics F210: Introductory Statistics
- Philosophy 360: American Philosophy
- Political Science C101: American Government
- Religion B236: Religion in American Life
- Sociology C151: Principles of Sociological Analysis

2 courses from:
- Art 414, Major Trends in American Art; Music 212, America's Musical Heritage; Music 317, Survey of Jazz

Each major must complete 18 semester hours of approved courses in one of the following concentrations:

1. **American History:** History 331, 335, 336, 337, 338, 341, 411, 412, 415, 416, 419, 421
2. **American Literature:** English 332, 370, 423, 434, 435, 445r
3. **Philosophy and Religion:** Philosophy 353; Religion 232, 337, 362, 467, 482, 491r
4. **Political Science:** 231, 234, 321, 322, 331, 333, 335, 431r
5. **Sociology-Anthropology:** Anthropology 334r*, 425r*; Sociology 215, 300, 305, 345, 365, 394.

3 additional courses from the above list outside one's area of concentration

2.0 average in all American studies courses and also in all concentration courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

*Only when appropriate topics offered

Typical course of study in American studies (B.A.)

Below is a typical program of study for an American studies major. The specific courses, however, might vary from student to student since one's area of concentration considerably affects course choices, especially for the junior and senior year.

American Studies (B.A.): American history concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Economics C101</td>
<td>Economics C102</td>
</tr>
<tr>
<td>English A121</td>
<td>English A122</td>
</tr>
<tr>
<td>Political Science C101</td>
<td>Math F210</td>
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<tr>
<td>History B101</td>
<td>History B102</td>
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<td>University Studies 101</td>
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<td>EHLS 021</td>
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<td>Fine Arts</td>
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<td>Total</td>
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<td>16</td>
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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:** 5 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 F:** 1 approved mathematics course (3 hours)
- **Category G:** 1 approved perspectives course (3 hours)

The Freshman Seminar

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

**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.

**First Semester**

<table>
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<tr>
<th>Course</th>
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<tr>
<td>University Studies 101</td>
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<td>General Education Category F</td>
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<td>General Education Category C</td>
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**Second Semester**

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<tr>
<td>History B101</td>
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<td>General Education Category D</td>
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<td>General Education Category B</td>
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<td>Foreign Language</td>
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**SOPHOMORE**

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<td>English 203</td>
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<td>Art B214</td>
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<td>History 311</td>
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<td><strong>Total</strong></td>
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</table>

**TOTAL HOURS 128**

**HUMANITIES COURSES**

199r Special Projects (1-4)

Individual and group studies. On demand.

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.

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. **Prerequisite:** English 122.

483 Feminist Theory (3)

See Philosophy 483.

490 Senior Educational Experience (3)

Thesis; oral and written presentation of progress required. The complete project will be presented for approval to the Faculty Board for the Humanities in the student’s final semester. On demand. **Prerequisite:** senior standing, final semester. May not be taken concurrently with 497r.

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 the coordinator and the department head.

498r Individual Studies (1-4)

On demand. **Prerequisite:** approval of the coordinator and the department head.

499r Group Studies (1-4)

On demand.

**INTERDISCIPLINARY STUDIES MINORS**

**Asian Studies**

John Trimpey, Coordinator

18 hours selected from the following courses: Anthropology 333; English 233, 333r; Geography 405; History 208, 364, 365, 368, 369; Humanities 300; Religion 316r. Not more than 6 hours may count toward both the major and this minor.

Minimum 2.0 average in the minor.

**Black Studies**

18 hours selected from the following courses with at least 8 hours at the 300-400 level: Criminal Justice 315; History 346, 371, 372; Psychology 241, 424; Sociology 305.

Minimum 2.0 average in the minor.
Women's Studies
Felicia Sturzer, Coordinator
18 hours required with at least 8 hours at the 300-400 level:
University Studies 200
6 hours from English 331, Modern Languages 301, University Studies 301, English 445r,* Philosophy/Humanities 483
6 hours from Anthropology 310, Economics 417, Human Services 204, Psychology 451, Political Science 336
Nursing 222
Minimum 2.0 average in the minor
* Approved for Women's Studies credit only when topic is a woman or women.

University Studies
Professor Paul L. Gaston, 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. Open only to students with fewer than 30 hours. Required of all students who enter UTC with fewer than 15 hours. Offered Fall and Spring semesters.

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.

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 (EDCI 320, EDCI 406, PSY 221). Corequisite: EDCI 413.

499r Interdisciplinary Seminars (1-4)
Specific topics, themes, and subjects for which the interdisciplinary approach is useful. On demand.

Mathematics
Head, Appointment Pending

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 graduate from UTC after December 1993 and who plan to teach at the secondary school level must meet new state certification requirements. These students need to consult with advisors in the School of Education and the Mathematics Department.

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 appropriate college level mathematics coursework or those receiving advanced placement credit must take the Mathematics Placement Test. The UTC Mathematics department uses the test score both to assess the student's pre-college preparation and to determine whether pre-requisites for certain of the 100 and 200 level courses are met. Students not making the required minimum must take math 105 or math 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 F: 1 approved mathematics course (3 hours; courses below will apply)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
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
(four computer science option, 3 hours must be 403)
Economics C101, C102; Computer Science 121
One of the following concentrations
1. Actuarial Science: courses from the School of Business Administration including Accounting 201, 202, 236; Finance 302, 321; Finance 337; Marketing 450 or Economics 460; one elective from: Accounting 300, 301; Finance 422, Economics 301, 324, 429.
2. Computer Science: Computer Science 122, 201, 251, 252, 312; Either Mathematics 418 or 428 (may not be used to satisfy math elective course); two electives from Computer Science 300-400 level courses (excluding 340).
3. **Corporate Science**: Accounting 201, 202; Finance 302; Management 311; Economics 324, 429; Marketing 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.

A.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.

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**Typical courses of study in applied mathematics**

**Applied mathematics (B.S.): actuarial science 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>Economics 101</td>
<td>Economics 102</td>
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<tr>
<td>F150</td>
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<td>(135/F145)*</td>
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<td>General</td>
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* (Mathematics 160 in summer school—if needed)

**SOPHOMORE**

| Mathematics 245 | 3 |
| Mathematics 295 | 3 |
| General Education Category B | 3 |
| B Accounting 201 | 3 |
| Elective | 3 |
| Total | 15 |

**JUNIOR**

| Mathematics 407 | 3 |
| Mathematics 350 | 3 |
| Mathematics 412 | 3 |
| B Finance 302 | 3 |
| Elective | 3 |
| Total | 15 |

**SENIOR**

| Mathematics Elective | 3 |
| Mathematics Elective | 3 |
| B Finance 321 | 3 |
| General Education Category G | 3 |
| Elective | 3 |
| Total | 15 |

**TOTAL HOURS 128**

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

**Applied mathematics (B.S.): corporate science 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>Total</td>
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</table>

* (Mathematics 160 in summer school—if needed)

**SOPHOMORE**

| Mathematics 245 | 3 |
| Mathematics 295 | 3 |
| General Education Category B | 3 |
| B Accounting 201 | 3 |
| Elective | 3 |
| Total | 15 |

**JUNIOR**

| Mathematics 407 | 3 |
| Mathematics 350 | 3 |
| Mathematics 412 | 3 |
| B Finance 302 | 3 |
| Elective | 3 |
| Total | 15 |

**TOTAL HOURS 128**

*Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.
### Mathematics (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 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)

The Freshman Seminar

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

- Computer Science 121
- 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

A 2.0 average in all mathematics courses and also in all 300,400-level mathematics courses

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

**Typical course of study in mathematics (B.A.)**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tr>
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<tr>
<td>Mathematics 150</td>
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<td>General Education Category A</td>
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<tr>
<td>Mathematics F150</td>
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<td>General Education Category B</td>
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<td>University Studies 101</td>
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**Second Semester**

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<tr>
<th>Course</th>
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<tr>
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<td>Mathematics 160</td>
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<td>General Education Category A</td>
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<tr>
<td>Computer Science 121</td>
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<td>Physics D230</td>
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<td><strong>Total</strong></td>
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**Sophomore**

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<thead>
<tr>
<th>Course</th>
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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>
<tr>
<td>Physics 231</td>
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<td>Economics 102 Category C</td>
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**Junior**

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<tbody>
<tr>
<td>Mathematics 407</td>
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</tr>
<tr>
<td>Mathematics 350</td>
<td>3</td>
</tr>
<tr>
<td>Engineering 325</td>
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<tr>
<td>Mathematics 412</td>
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**Senior**

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<th>Hours</th>
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<td>Mathematics Elective</td>
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<td>Mathematics 414 or 424</td>
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</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

**Total Hours 128**

*Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.
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 ardpiecement level
30 or 135 with minimum grade of C. Credit not allowed in 136 after 136, 145, or 150 with grades of C or better.

145 PreCalculus II (3)
Trigonometric functions; identities and equation; 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 ardpiecement 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 135.
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.

121 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.

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.

212 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 order 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. 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
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. 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
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.

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. 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 o/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 o/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 and 295 with minimum grades o/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, 295 with minimum grades o/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, Mathematics 212 with minimum grade o/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 o/C, or approval of 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 o/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, 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.
Music

Cadek Department of Music

Associate Professor Carter, Head

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. For all music majors, a 2.0 average in music courses is required for enrollment in 300 level courses.

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 only. 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)

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 F: 1 approved mathematics course (3 hours)

Category G: 1 approved perspectives course other than music (3 hours)

The Freshman Seminar

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

Music 103, 104, 107, 108, 203, 204, 207, 208, 315, 316

Ensemble participation required each semester of residence, minimum 8 hours credit (4 hours of credit permitted beyond 42-hour limit in music)

8 semesters (8 hours) primary instrumental or vocal study

4 hours music electives in music history, music theory, or composition

4 hours music electives

2.0 average in all music courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
<td></td>
</tr>
<tr>
<td>Music 000</td>
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<td>General Ed. A 3</td>
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<td>Ensemble</td>
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<tr>
<td><strong>Total</strong></td>
<td>17</td>
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| **SOPHOMORE** |                |
| Music 000     | 0              |
| Foreign Language 3 | Foreign Language 3 |
| General Ed. F 3| General Ed. C 3|
| Music 203     | 1              |
| Music 207     | 3              |
| Music 315     | 3              |
| Applied Music | 1              |
| Ensemble      | 1              |
| **Total**     | 15             |

| **JUNIOR**    |                |
| Music 000     | 0              |
| General Ed. B 3| General Ed. D 4|
| General Ed. G 3| General Ed. G 3|
| Non-Music     | 9              |
| Applied Music | 1              |
| Ensemble      | 1              |
| **Total**     | 17             |

| **SENIOR**    |                |
| Music 000     | 0              |
| Music Elective 3 | Music Elective 2 |
| Applied Music | 1              |
| Ensemble      | 1              |
| Non-Music     | 9              |
| **Total**     | 14             |

**TOTAL HOURS 128**
Music (B.M.)

**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 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 F:
1 approved mathematics course (3 hours)

### Category G:
1 approved perspectives course other than music (3 hours)

The Freshman Seminar

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

Foreign language through second college year

**Major**

Core: Music 103, 104, 107, 108, 203, 204, 207, 208; 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 the 400 level; Music 332 (for piano majors). 19-21 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 the 400 level; Music 217, 218; 333. 13 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), 309, 310, 404, 405, 406, 498r (field work). 12 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; 307; 4 hours from 309, 310, 327, 328; 8 hours of 401r, or 407, 408, 409, 410. 20-21 hours music electives

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>
</tr>
</thead>
<tbody>
<tr>
<td>FRESHMAN</td>
<td></td>
</tr>
<tr>
<td>Music 000</td>
<td>Music 000</td>
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<td>General Education Category A</td>
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<td>Music 103</td>
<td>Music 108</td>
</tr>
<tr>
<td>Music 107</td>
<td>Applied Music (Primary)</td>
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<tr>
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<td>Ensemble</td>
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#### SOPHOMORE

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<td>Music 203</td>
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#### JUNIOR

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**Total HOURS:** 128

For nonkeyboard majors. Course number to be determined by audition.

*For piano majors.*

**Music (B.M.): sacred music concentration**

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<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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#### JUNIOR

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<td>Ensemble</td>
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</table>
Music (B.M.): theory and composition concentration

First Semester
- University Studies 101 3
- Music 107
- Music Elective 3
- Total 16

Second Semester
- Music 000 0
- General Education Category A 3
- Foreign Language 4
- EHLS021
- Music 103
- Music 107
- Applied Music (Primary) 4
- Ensemble 1
- Music 131 or 251 1
- University Studies 101 3
- Total 18

TOTAL HOURS 128

Music (B.M.): vocal performance concentration

First Semester
- University Studies 101 3
- Music 107
- Applied Music (Primary) 4
- Total 17

Second Semester
- Music 000 0
- General Education Category A 3
- Foreign Language 4
- University Studies 101 3
- Music 103
- Music 107
- Applied Music (Primary) 4
- Ensemble 1
- Music 217 2
- Total 19

TOTAL HOURS 128

Music 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)
- Psychology ClOl

Category B: Theatre and Speech Bl5, Art Bl1 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 F: Mathematics F120

The Freshman Seminar
- 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

18 hours applied music including: ensemble participation required each semester of residence, with the exception of student teaching semester, minimum of 7

For nonkeyboard majors. Course number determined by audition.

For composition majors.

For theory majors.
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.

One of the following concentrations

1. **Instrumental:**  
   - Music 221: 2 hours of 223r; 2 hours of 224r; 2 hours of 225r; 226, 307 or 326; 325, 327, 328

2. **Vocal Music:**  
   - 135, 251 or 133 and 134, 221, 222, 307 or 326, 309, 310, (3--*)

Recital (Music 000) is required each semester of residence. A minimum of 7 semesters with a grade of 'Satisfactory' is required.

22 hours from the School of Education including Curriculum and Instruction 201, 433, 439; Special Education 333 or 332

For graduation: 2.0 average in music and 2.0 average in School of Education courses

For certification: 2.5 average overall, 2.5 average in teaching field, and 2.5 average in School of 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

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**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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<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>Music 000 Recital</td>
<td>Music 000 Recital</td>
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<tr>
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<tr>
<td>Mathematics F120</td>
<td>Theatre and Speech B1 15</td>
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<tr>
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<tr>
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<td>General Education Category A</td>
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<tr>
<td>3</td>
<td>3</td>
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<tr>
<td>Music 030r marching band or Music 050*</td>
<td>Music 031r cone band or Music 050r Orchestra</td>
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<tr>
<td>1</td>
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<tr>
<td>Applied Music</td>
<td>Applied Music</td>
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<tr>
<td>1</td>
<td>1</td>
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<tr>
<td>Music 103 Ear Training</td>
<td>Music 104 Ear Training</td>
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<tr>
<td>1</td>
<td>1</td>
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<tr>
<td>Music 107 Theory</td>
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<tr>
<td>Music 131 Class Piano</td>
<td>Music 132 Class Piano</td>
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<tr>
<td>University Studies 101</td>
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<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

**SOPHOMORE**

| Music 000 Recital | Music 000 Recital |
| 0               | 0               |
| Art B11         | Apply for admission to TEP |
| 3               |                 |
| Music 030r Marching Band or Music 050* | Special Education 333 |
| 1               | 3               |
| Applied Music   | Music 03 Ir Cone Band or Music 050r Orchestra |
| Music 203 Ear Training | Applied Music |
| Music 207 Theory | Music 204 Ear Training |
| Music 141 Class Piano | Music 208 Theory |
| Category D, Lab Science | Music 142 Class Piano |
| 4               | 2               |
| **Total**       | **17**         |

**JUNIOR**

| Apply for Student Teaching | Music 000 Recital |
| 0               | 0               |
| Music 000 Recital | Music 327 Conducting |
| 0               | 2               |
| Music 307 Orchestration or 326 Arranging | Music 223 Woodwinds |
| 2               | 2               |
| 3               | 1               |
| Music 030r Marching Band or Music 050* | Music 03 Ir Cone Band or Music 050r Orchestra |
| 1               | 1               |
| Applied Music   | Music 316 Music History |
| 1               | 3               |
| Music 315 Music History | Music 221 Strings |
| 3               | 2               |
| Music 224 Brass | General Education Category G |
| 2               | 3               |
| General Education Category C | Psychology 221 Child |
| 3               | 1               |
| Psychology 101  | Psychology 222 Adolescent |
| 3               | 3               |
| Music 226       |                 |
| 2               |                 |
| **Total**       | **17**         |

**SENIOR**

| Music 000 Recital | Music 000 Recital |
| 0               | 0               |
| ED Curr. & Instr. 433 | ED Curr. & Instr. 439 |
| 12              | 12              |
| Music 030r Marching Band or Music 050* | Applied Music |
| 1               | 1               |
| Applied Music   | Category A (English) |
| 1               | 3               |
| Music 103 Ear Training | Mathematics 120 |
| 1               | 3               |
| Music 107 Theory | Music 103 Ear Training |
| 3               | 1               |
| EHLS 021        | Music 108 Theory |
| 1               | 3               |
| Music 131 Class Piano | EHLS Activity |
| 1               | 1               |
| University Studies 101 | Music 132 Class Piano |
| 3               | 1               |
| **Total**       | **12**         |

**TOTAL HOURS 135**

- Participation in band or orchestras is required each semester.

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**Music education (B.S.): vocal**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
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<td>Music 000 Recital</td>
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<tr>
<td>Music 000 Recital Choral Group or Opera Workshop</td>
<td>Music 000 Recital Choral Group or Opera Workshop</td>
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<td>Music 103 Ear Training</td>
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**SOPHOMORE**

| Music 000 Recital | Music 000 Recital |
| 0               | 0               |
| Music 000 Recital Choral Group or Opera Workshop | Apply for admission to TEP |
| 1               |                 |
| Applied Music   | Music 000 Recital |
| 1               | 0               |
| Music 103 Ear Training | ED Curr. & Instr. 201 |
| 1               | 3               |
| Music 207 Theory | Music 208 Theory |
| 3               | 3               |
| Music 141 Class Piano | Music 142 Class Piano |
| 1               | 1               |
| Category D      | Category D, Lab Science |
| 4               | 4               |
| Art B11         | Philosophy B201 |
| 3               | 3               |
| **Total**       | **17**         |

**JUNIOR**

| Apply for Student Teaching | Music 000 Recital |
| 0               | 0               |
| Music 000 Recital | Music 327 Conducting |
| 0               | 2               |
| Music 000 Recital Choral Group or Opera Workshop | Music 223 Woodwinds |
| 1               | 2               |
| Applied Music   | Applied Music   |
| 1               | 1               |
| Music 315 Music History | Music 03 Ir Cone Band or Music 050r Orchestra |
| 3               | 1               |
| Music 309 Choral Conducting | Music 316 Music History |
| 2               | 3               |
| Music 307 or 326 | Music 221 Strings |
| 2               | 2               |
| Psychology 101  | General Education Category G |
| 3               | 3               |
| Music 251 Recital Piano | Psychology 221 Child |
| 1               | 1               |
| Music 135 Guitar | Psychology 222 Adolescent |
| 1               | 3               |
| Category C      |                 |
| 3               |                 |
| **Total**       | **17**         |

**TOTAL HOURS 17**

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*New course yet to be approved

See School of Education section for teacher education, licensure, and student teaching requirements.
72 — Music

SENIOR
Music 000 Recital 0  ED Curr. & Instr. 439  12
Music 000 Recital Choral Group
or Opera Workshop  1
Applied Music  1
ED Curr. & Instr. 433  4
ED Curr. & Instr. 432 Sec
Method- Instrumental  3
Music 321 El Methods  3
Music 3— Choral Tech.  3
General Education Category C  3
Total 18

Total hours 12

1 New course yet to be approved.

TOTAL HOURS 133

MUSIC MINORS
Music Performance:
22 hours of music including a core of 14 hours: 100, 101, 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 100 and 101.
Minimum 2.0 average in the minor.

Music History:
20 hours of music including a core of 14 hours: 100, 101, 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 100 and 101.
Minimum 2.0 average in the minor.

Music Composition:
23 hours of music including a core of 14 hours: 100, 101, 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 100 and 101.
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. Every 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.

041r Opera Theater (1)
Study of extended works for the lyric stage giving students the opportunity to appear
with professional singing actors and orchestral musicians from the Chattanooga
community and the larger music profession. Emphasis on various aspects of musical
theater including musical, dramatic, 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

000r Recital (0)
Every semester.

100 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. Every
semester. May not be included as a music elective for music majors.

101 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 100 for music minors.
Spring semester. Prerequisite: Music 100.

103, 104 Ear Training I (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: 100 or placement examination; Music 105 corequisite to Musk 107
107/Music 104 corequisite to Musk 108. Musk 107 prerequisite to Musk 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. 151
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.

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

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 204-

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 Mystery Train: A History of Rock (3)  
A consideration of the history of rock music in a social context. Prerequisite: Muak  
111 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. Open  
to voice majors; others by permission.

221 String Methods (2)  
Class instruction of the string instruments: violin, viola, cello, and double bass;  
tuning and care of instruments; teaching techniques. Fall semester.

222 Instrumental Methods for Vocal Music Education Majors (3)  
Class instruction of woodwinds, brass, and percussion instruments; tuning and care  
of instruments. Teaching techniques. Flute, single, and double reed instruments;  
trombone, French horn, and piston valve instruments; drum and mallet  
musical instruments. Spring semester. Prerequisite: Vocal Muak Education Major status.

223r Woodwind Methods (1)  
Class instruction of woodwind instruments; tuning and care of instruments.  
Teaching techniques. Single reed instruments, double reed instruments, and flute.  
Fall semester. Class 1 hour, laboratory 1 hour.

224r Brass Methods (1)  
Class instruction of brass instruments; tuning and care of instruments. Teaching  
Class 1 hour, laboratory 1 hour.

225r Percussion Methods (1)  
Class instruction of percussion instruments; sticking techniques; care of the  
musical instruments; teaching techniques. Drum and mallet instruments. Spring semester.  
Class 1 hour, laboratory 1 hour.

226 Matching Band Techniques (2)  
A study of the techniques and style employed in training the marching band. Fall  

230r Orchestral Literature for Elementary and Secondary School Students (1)  
A survey of literature available for teaching orchestral music to students from  
 elemental through secondary levels. 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 literature for choral ensembles from elementary through secondary  
levels. 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.

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  
musical 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. Prerequisites: 208.

307 Orchestration (2)  
Scoring for strings, woodwinds, brasses, and full orchestra. Piano transcriptions  
from orchestral scores. Fall semester alternate years. Prerequisite: 208.
309, 310 Choral Conducting (2, 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. 309 fall/310 spring semester. 309 prerequisite to 310. Prerequisites: 207, 208.

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. Every 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.

327, 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. 327 fall/328 spring semester. 327 prerequisite to 328. Prerequisites: 207, 208.

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.

340 Music for Children (1)
Introduction of discipline based music education concepts for implementation by teachers of children, pre K through grade 6. Fall and spring semesters. Prerequisites: ThSp 115, PST221 orHECO241, Music U/Art301, Corequisites: THSP340, 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. Every semester. Prerequisite: 132, 208, or permission.

397 Music, Poetry, and Ideas (3)
A consideration of technique, meaning, style, form, expression, and value in music and poetry. On demand.

401r Composition II (1-4)
Advanced composition study. Every semester. Prerequisite: 305, 307.
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 academic 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. degree.

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 F: 1 approved mathematics course excluding Philosophy 212 (3 hours)
Category G: 1 approved perspectives course other than philosophy and religion (3 hours)

The Freshman Seminar
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 or 212, 351, 353, 498rj 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:
- Religion 211, 313, 314, 316r, 417, 493r
- Religion 232, 337, 355, 362, 467, 482, 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 337, 355, 362, 467, 482, 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.)

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

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
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<tr>
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<tr>
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</tbody>
</table>

SOPHOMORE

| Philosophy 201 | 3 | Philosophy 221 | 3 |
| General Education Category F | 3 | General Education Category D | 4 |
| Philosophy 211 or 212 | 3 | Electives | 6 |
| Elective | 3 | University Studies 101 | 3 |
| Total 15 | Total 16 |

JUNIOR

| Philosophy 351 | 3 | Philosophy 353 | 3 |
| Philosophy 341 or 345 | 3 | Philosophy (300 or 400 level) | 3 |
| General Education Category B | 3 | General Education Category C | 3 |
| Electives* 6 | | General Education Category B | 3 |
| Total 15 | Total 16 |

SENIOR

| Philosophy (300 or 400 level) | 3 | Philosophy 498r | 3 |
| General Education Category G | 3 | Philosophy (300 or 400 level) | 3 |
| Electives | 10 | Electives | 10 |
| Total 16 | Total 16 |

TOTAL HOURS 128

*This course does not count toward major.
*Major requires 30 hours philosophy beyond the 100 level, including Philosophy 211 or 212, 351, 353, 498r, and one course in ethics, metaphysics, or epistemology. Not more than 42 hours in any one department may be applied

Completion of a minor within the College of Arts and Sciences with a minimum 2.0 grade point average
76 — Philosophy & Religion

toward a B.A. degree. One course outside the department may count toward major with approval by department head.

*Correlative courses in religion should be considered as appropriate electives.

Philosophy and religion (B.A.): religious studies concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
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<td>University Studies 101</td>
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<tr>
<td>Total</td>
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</tr>
</tbody>
</table>

SOPHOMORE

| Religion (300 level)² | 3 |
| Foreign Language | 3 |
| General Education Category F | 6 |
| Electives³ | 6 |
| Total | 15 |

JUNIOR

| Philosophy 351 | 3 |
| Religion (300 or 400 level)² | 3 |
| General Education Category B | 3 |
| Electives | 6 |
| Total | 16 |

SENIOR

| Religion (300 or 400 level)² | 3 |
| General Education Category G | 3 |
| Electives | 10 |
| Total | 16 |

TOTAL HOURS 128

Philosophy and religion (B.A.): combined concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
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<td>FRESHMAN</td>
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<td>Religion 103</td>
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<td>General Education Category C</td>
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<td>University Studies 101</td>
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<tr>
<td>Total</td>
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</tr>
</tbody>
</table>

SOPHOMORE

| Philosophy (200 level) or Religion (200 level)² | 3 |
| Foreign Language | 3 |
| General Education Category F | 3 |
| Electives³ | 6 |
| Total | 15 |

JUNIOR

| Philosophy 351 | 3 |
| Religion 355,362, or 492r | 3 |
| General Education Category B | 3 |
| Electives | 6 |
| Total | 15 |

SENIOR

| Philosophy (300 or 400 level)² | 3 |
| Religion (300 or 400 level)² | 3 |
| General Education Category G | 3 |
| Electives | 10 |
| Total | 16 |

TOTAL HOURS 128

PHILOSOPHY AND RELIGION MINORS

One of the following concentrations

1. Philosophy:
18 hours of philosophy beyond 100 level including Philosophy 211 or 212, 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, 316r, 417, 493r
Religion 221, Introduction to Ethics

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.

212 Symbolic Logic (3)
Sentential and quantificational logic; techniques of natural deduction; relations, identity, definite descriptions; consistency and completeness of formal deductive systems. On demand. Prerequisites: 2 years of high school algebra and acceptable test scores or Mathematics 106.

221 Introduction to Ethics (3)
230 Social and Political Philosophy (3)
An inquiry into various philosophical theories of the state and society, with critical examination of such concepts as law, rights, sovereignty, justice, liberty, and civil disobedience. On demand.

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; die 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.

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.

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

211 Religions of the World (3)
An introduction to major world religions with emphasis on Hinduism, Buddhism, and Islam. 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)

232 Religion and the Modern Consciousness (3)
Examination of die influence of modern scientific discoveries on the interpretation of some principal Jewish and Christian beliefs. Particular attention to the impact of astronomy, evolutionary theory, and psychoanalysis. Background lectures. Reading and discussion of modern interpreters of Christian faith. Spring semester.

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 die common elements of primitive religion. On demand.

316r Religions of Asia (3)
Concentration alternates among three major religious traditions of Asia: (1) Hinduism; (2) Buddhism; (3) interrelated traditions of Taoism, Confucianism, and Shinto as found in China and Japan. Use of primary materials in translation. Philosophical and religious concepts examined along with historical developments and changes. 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.
Physiology, Geology, and Astronomy

Professor Churnet, Head

The Department of Physics, Geology, and Astronomy offers the bachelor of science degree with majors in geology and physics and participates in programs leading to the Bachelor of Science degree in secondary natural sciences. The department also offers minors in geology, physics and health physics.

The geology program emphasizes a hands-on experience and many courses are supported by field examination of nearby exposures of sedimentary, metamorphic and igneous rocks.

The curriculum is designed to train students to pursue graduate degrees, or enter the work force particularly in the area of environmental geology.

The physics program has a strong emphasis in Mathematics and is recommended for students with a career interest in Physics as a profession or in teaching Physics or in pursuing graduate studies.

As a fundamental science, Physics is required in the training of students in many disciplines. To accommodate students in disciplines that do not emphasize a strong Mathematics background, the curriculum also offers algebra-based Physics.

The Astronomy program is augmented by observations at the University's Jones Observatory. This off-campus observatory is also used for demonstration purposes for the community at large.

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 E: 1 approved mathematics course (3 hours; approved related courses below will apply)

Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar

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

Major and related courses

Geology 111, 112, 303, 321, 330, 341, 342, 351, 352, 404, 480, 490, plus two electives in Geosciences including one course at the 400 level

Biology D121, 122
Chemistry D121, 122
Physics D103, 104 or Physics D230, 231
Mathematics F150
English 278

Computer Science 110 or 118
Recommended: Environmental Studies 150
2.0 average in all geology courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours
Field work
Geology majors are encouraged to enroll in a field geology course 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.

Through an agreement with Memphis State University, UTC students are accepted preferentially for Memphis State’s Geology Field Camp (Geology 4622, 6 hours credit) held each summer in the Black Hills of South Dakota. Additional information and application forms are available from the Geosciences Department.

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. Therefore, students intending to pursue a master’s 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.)

<table>
<thead>
<tr>
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<th>Second Semester</th>
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<tr>
<td>Geology 111</td>
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<td>Total 1S</td>
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</tbody>
</table>

| SOPHOMORE       |                 |
| General Education Category G | 3               |
| Biology D121    | 4               |
| Physics D103 or 230 | 4               |
| Mathematics F150* | 4               |
| Total 15        | Total 16        |

| JUNIOR          |                 |
| Geology 303     | 4               |
| General Education Category B | 3               |
| Computer Science 110 or 118 | 3               |
| Geology 341     | 4               |
| General Education Category C | 3               |
| Total 17        | Total 17        |

| SENIOR          |                 |
| Geology 351     | 4               |
| Geology 400 level | 4               |
| Environmental Studies 150 | 5               |
| Electives       | 6               |
| Total 17        | Total 16        |

TOTAL HOURS 128

*Mathematics 106, 135, and F145 may be recommended to precede Mathematics F150, depending on preparation of the individual student.

GEOLOGY COURSES

100 Earth Science (4)
An interdisciplinary approach to the planet earth: an overview of the origin and evolution of the earth’s interior and surface features, as well as the oceans and atmosphere. Explores the advances of modern technology in the confirmation of the plate tectonic theory and a look toward Earth’s future. On demand. Lecture 3 hours, laboratory 2 hours.

108 Geomorphology (3)
Designed to discuss the distribution of large scale features of the earth’s surface, and to provide a cogent and scientific accounting of the processes that lead to the observed configuration.

111 Physical Geology (4)
Introduction to geology; age and origin of the earth; earth materials, processes, and resultant structures. Field trips. Every semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: 2 years of high school algebra or Mathematics 106.

112 Historical Geology (4)
Origin of the earth and its geologic history, the concept of geologic time, the fossil record. Spring semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: 111 or permission of instructor.

123 Environmental Geology (4)
Natural or mining related geologic hazards with emphasis on water-rock, air-water, air-rock interactions, and the attempts of humanity to tame or remedy the problems. 3 hours lecture, and 1 hour of case studies and field work. On demand.

199r Special Projects (1-4)
Individual or group projects. On demand. Prerequisites: consent of instructor, receipt of an acceptable proposal, and permission of the department head. Graded on a satisfactory/unsatisfactory basis. Maximum credit 4 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 Environmental Studies 225.

226 Oceanography Laboratory (1)

303 Sedimentary Rocks and Stratigraphy (4)
Introduction to the principles of sedimentary rock classification and stratigraphic correlation with an emphasis on the classic stratigraphy of the U.S.; the facies concept; correlation, and paleogeographic reconstruction techniques. Field trips. Fall semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: 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 Invertebrate Paleontology (4)
Characteristics of the fossil record, centering on the invertebrate animals; principles of taxonomy and population analysis; interpretation of faunal assemblages; concept of biostratigraphy. Laboratory work centers on the morphology and time range of the major fossil groups. Field trips. Spring semester alternate even years. Lecture 3 hours, laboratory 3 hours. Prerequisite: 112.

330 Sedimentation (4)
Recognition of modern environments such as tidal flat and beach and stream channel deposits in ancient rocks. Mapping of critical criteria in ancient deposits in outcrop and from well logs to interpret environments of deposition. Extensive field work. Spring semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: 303.

341 Mineralogy (4)
Crystallography, physical properties, and geochemistry of minerals and their occurrence and classification in natural rocks. Fall semester alternate odd years. Lecture 3 hours, laboratory 3 hours. Prerequisite: 111. Pre- or corequisite: Chemistry 121.
342 Petrology (4)
Study of igneous and metamorphic rocks, their classification and their geological environments of formation. Field trips on weekends. Spring semester. Lecture 3 hours, laboratory 3 hours. Prerequisite: 341.

351 Field Methods and Structure I (4)
Instruments and methods of geologic mapping, local stratigraphic studies along with the preparation of geologic maps and reports. Fall semester. Variable lecture and laboratory time. Pre-or corequisites: 111 and 342.

352 Field Methods and Structure II (4)
Nature, classification, and genesis of geologic structure with emphasis on field relationships. Spring semester. Variable lecture and laboratory time. Prerequisite: 351.

404 Geologic Mapping (3)
Mapping of sedimentary and crystalline rocks with approximately equal emphasis. Techniques of both small-scale and large-scale mapping of a variety of rock types and structural features. Requires drafting, report writing, and weekend field work. Spring semester alternate odd years. Prerequisites: Geology 352 or Environmental Studies 340 and approval of instructor.

405 Principles of Geochemistry (4)
Origin and distribution of the elements. Applications of chemistry to geological 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 to explain the dynamic actions of the earth. On demand. Formerly Geology 206. Prerequisite: Geology 111 or approval of instructor.

431 Sedimentary Petrology (3)
Genesis of sedimentary rock clans including arkose, graywacke, orthoquartzite, and carbonates. Microscopic analysis and field studies. Fall semester alternate even years. Variable lecture and laboratory time dependent on topic. Prerequisite: 330.

436 Fossil Fuels (3)
Stratigraphic and sedimentological study of fossil fuel environments, especially of the Cumberland Plateau; and the scientific basis for fossil fuel exploration, including the reading and interpretation of gamma ray well logs and the preparation of panel diagrams, structure contour maps and isopach maps.

445 Hydrology (3)

450 Economic Geology (4)
The origin, distribution, and classification of mineral deposits formed by igneous, sedimentary, and metamorphic rocks, as well as secondary processes. Introduction to methods of exploration and development. Spring semester alternate even years. Lecture 3 hours, laboratory 3 hours. Prerequisites: 342 and Chemistry 122.

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)
A culminating senior experience giving students an opportunity to exercise judgment in solving geological problems. Spring semester. Prerequisite: consent of 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.
JUNIOR

Physics 341 4
Physics Electives 5
General Education Category G 3
Physics 381r 2
Foreign Language* 3
Total 17

SENIOR

Physics 411 4
Physics 481r 2
Electives 14
Total 15

TOTAL HOURS 128

*Select a computer class (1 semester) or a foreign language (2 semesters).

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 without) Descriptive and conceptual. The structure, 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) The 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. Maximum credit 4 hours. On demand.

300r Advanced Astronomy Laboratory (1) Laboratory techniques in astronomy. Applications of spectroscopy, optics, modern photographic techniques, and photometry to observational astronomy. Extensive use of the University's observatory. Every semester. Maximum credit 2 hours. Prerequisite: Astronomy 101 or 102 or permission of instructor.

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.

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

GENERAL SCIENCE COURSES

111 The Physical Environment: Atoms to Galaxies (4) Explores physical science in three ways: physical science in its historical and sociological significance, the process of science, and the present content of scientific fact and theory. Topics include physics, chemistry, geology, and astronomy. Fall semester. Lecture 3 hours, laboratory 2 hours. Prerequisite: 2 units of college preparatory mathematics or Mathematics 106.

PHYSICS COURSES

103 General Physics - Mechanics (4) An algebra-based introduction to forces and uniform motion, conservation principles, sound, and the law of thermodynamics, with applications to problems of modern science and technology. Required in pre-medical, pre-dental, pre-pharmacy, and physical therapy programs. Fall semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: 3 units of college preparatory mathematics.

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

230 Principles of Physics - Mechanics and Heat (4) A calculus-based introduction to the laws of classical dynamics, kinematics, and thermodynamics, with applications to simple physical systems. Offered both fall and spring semesters. Lecture 3 hours, laboratory 2 hours. Corequisite: Mathematics 160 or permission of the instructor.

231 Principles of Physics - Electricity and Magnetism (4) A calculus-based introduction to electric and magnetic fields, electric currents, electromagnetic induction and waves. For all engineering students. Fall semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: Engineering 103 and 104, or Physics 104 or Physics 230; Mathematics 150, 160; or permission of the instructor.

232 Principles of Physics - Optics and Modern Physics (4) A 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. Spring 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 ML integrated circuits and their applications. Spring semester. Lecture 3 hours, laboratory 2 hours. Prerequisites: Physics 103 and 104, or Physics 231; Mathematics 160; or permission of the instructor.

304 Electronic Circuits (4) The theory and use of basic electronic instruments for electrical measurement or control. Multi-stage amplification, feedback, oscillators, and digital/logic circuitry treated with permission of the instructor.

307 Optics (4) Geometrical and physical optics, including reflection, refraction, interference, diffraction, and polarization; introduction to theory of spectra. Spring semester every other year. Lecture 3 hours, laboratory 2 hours. Prerequisites: Physics 230, 231, 222 (or 103, 104); Mathematics 160; or permission of the instructor.

310 Introduction to Thermal Physics (4) The laws of thermodynamics, kinetic theory, and statistical mechanics through the macroscopic description and microscopic theory of thermal phenomena. Spring semester every other year. Prerequisites: Physics 230, 231, 232 (or 103, 104). Corequisite: Mathematics 255; or permission of the instructor.
318 Radiation Physics and Introductory Health Physics (3)
An 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: 104 or 232, or permission of the instructor.

341 Classical Mechanics (4)
An introduction to the 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: 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: 341 or Mathematics 245 255, or permission of the instructor.

381r Methods of Experimental Physics (2)
An introduction to experimental design and techniques. Introduction to timing and timing coincidence measurements, measurement of thermodynamic properties, and electrical and magnetic measurements. Fall semester. Maximum credit 4 hours. Lecture 1 hour, laboratory 2 hours. Prerequisites: 230, 231, 232 (or 103, 104); Mathematics 245, 255, or permission of the instructor.

382r Classical Physics Laboratory (2)
An 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. Maximum credit 4 hours. Lecture 1 hour, laboratory 2 hours. Prerequisites: 230, 231, 232 (or 103, 104); Mathematics 245, 255, or permission of the instructor.

400r Physics Seminar (1)
A study of reporting and review for physics research, including the abstracting of published reports. On demand. Maximum credit 2 hours.

411 Atomic Physics: An Introduction to Quantum Mechanics (3)
Elements of atomic theory with emphasis on atomic structure, radiation processes, spectroscopic analysis, crystal structure, and wave phenomena. Fall semester. Prerequisites: 230, 231, 232 (or 103, 104); Mathematics 245, or permission of the instructor.

412 Nuclear Physics (3)
The 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: 230, 231, 232 (or 103, 104); Mathematics 245, 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. May be taken a maximum of three times.

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: 412 or equivalent, or permission of the instructor.

424 Instrumentation, Interfacing, and Microcomputers (3)
Interfacing instruments, measuring devices, and controls to mini and microcomputers. Including 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. Spring semester. Lecture 2 hours, laboratory 2 hours. Prerequisites: 104, 232 or equivalent; Computer Science 110 or equivalent, permission of the instructor.

425 Computer Based Materials Development in Science (3)
The 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 or permission of the instructor. Enrollment limited to juniors or above or permission of the instructor.

430 Physics of Living Systems - Hemodynamics (3)
A study of the physical properties and nature of the cardiovascular system. Topics include steady flow, viscous properties of blood, properties of the vessel wall, pulsatile pressure flow, the normal hemodynamic state, vascular impedance, wave reflection, wave propagation, cardiac dynamics, methods of measurement, recording and analysis of data. Spring, alternative year. Prerequisites: Physics 230, 231; Mathematics 255 or permission of the instructor.

441 Radiation Dosimetry (3)
An 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: 104 or 232, or permission of the instructor.

442 Radiation Biology (3)
The 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 of exposure to populations. On demand. Prerequisites: 104 or 232, or permission of the instructor.

481r Atomic Physics Laboratory (2)
An advanced laboratory on experimental methods used in atomic physics. Laboratory experiments may be chosen from a menu of experiments that includes 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. Maximum credit 4 hours. Lecture 1 hour, laboratory 2 hours. Prerequisites: 230, 231, 232 (or 103, 104); Mathematics 245, or permission of the instructor.

482r Nuclear and Health Physics Laboratory (2)
A 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: 230, 231, 232 (or 103, 104, 318); Mathematics 245, or permission of the instructor.

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.
Students majoring in political science may earn a B.S. degree, choosing one of four concentrations: Public Administration, American Studies, International 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, 411r); public law and administration (221, 223, 321, 322, 323, 421r); American institutions and processes (233, 234, 331, 333, 335, 431r); and international relations and comparative government (242, 244, 343r, 345, 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)

The Freshman Seminar

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 at least 3 but no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 480, 481, 495r, 497r, 498r or 499

Related courses (12 hours):

3 hours Mathematics F210

6 hours from Economics C101, C102, 306, 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) including 3 hours from the following: Political Science 203; 213; 221 or 223; 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 at least 3 but no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 480, 481, 495r, 497r, 498r or 499

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 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 343, 345 or 346

15 hours from Political Science courses at the 400 level including at least 3 hours from International Studies area approved by the departmental advisor and at least 3 but no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 480, 481, 495r, 497r, 498r or 499

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 at least 3 but no more than 6 hours from Political Science 461r, 462r, 463, 464, 471r, 472, 480, 481, 495r, 497r, 498r or 499

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

Minimum of 30 hours of 300 and 400 level courses

Approved program of elective courses outside the Department of Political Science 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 adviser.

**Political Science (B.S.): public administration concentration**

**First Semester**

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<th>Course</th>
<th>Hours</th>
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<tr>
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<tr>
<td>Economics C101</td>
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<td>Economics C102</td>
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<td>University Studies 101</td>
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**Second Semester**

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<th>Course</th>
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<td>Political Science 102</td>
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<tr>
<td>Electives</td>
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**SOPHOMORE**

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<th>Course</th>
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<td>Political Science 200</td>
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<td>Elective</td>
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### Political Science (B.S.)s

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<th>First Semester</th>
<th>Second Semester</th>
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<td>Political Science 101</td>
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<td>Political Science 200</td>
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<td>2 Political Science courses at the 300 level</td>
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<tr>
<td>Computer Science 110</td>
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**TOTAL HOURS 128**

### Political Science (B.S.): American studies concentration

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<td>Computer Science 110</td>
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<td>English 277 or 279 or 300</td>
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</table>

**TOTAL HOURS 128**

### Political Science (B.S.): International studies concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
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**TOTAL HOURS 128**

### Political Science (B.S.): Legal studies concentration

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<td>Foreign Language</td>
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<td>Computer Science 110</td>
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<td>Electives</td>
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</tr>
</tbody>
</table>

**TOTAL HOURS 128**

### Political Science Minors

#### American Government:
- Required and elective courses totaling 18 hours.
- **Required:** 18 hours including Political Science 101, 6 hours from Political Science 203, 213, 233 and 234, and 9 hours from Political Science 333, 335, 336, 431r, 461r, 462r, 463, 464, 471r, 472, 475, 481, 498r, 499r. No more than three hours from 461r, 462r, 463, 464, 471r, 472, 481, 498r and 499r. Minimum 2.0 average in minor.

#### International Studies:
- Required and elective courses totaling 18 hours.
- **Required:** 18 hours including Political Science 102, 242 and 244, and 9 hours from Political Science 343r, 345, 441r, 442r, 481, 498r and 499r. Minimum 2.0 average in minor.
Legal Studies:
Required and elective courses totaling 18 hours.
Required: 18 hours including Political Science 101, 221, and 12 hours from Political Science 321, 322, 323, 421r, 461r, 462r, 463, 464, 471r, 472, 481, 498r and 499r. No more than three hours from 461r, 462r, 463, 464, 471r, 472, 481, 498r and 499r.
Minimum 2.0 average in minor.

Political Psychology & Behavior:
Required and elective courses totaling 18 hours
Required: 18 hours including Political Science 101, 202 and 203, and 9 hours from Political Science 302, 303, 401r, 461r, 462r, 463, 464, 471r, 472, 481, 498r and 499r. No more than three hours from 461r, 462r, 463, 464, 471r, 472, 481, 498r and 499r.
Minimum 2.0 average in minor.

POLITICAL SCIENCE COURSES

101 American Government (3)
Contemporary issues in American national politics with emphasis on national political processes and institutions. Every semester.

102 World Politics (3)
The evolution of the contemporary international political system with a comparison of ideologies and governments in Western and non-Western countries. Every semester.

105 Introduction to Political Science (3)
Language, symbols, methods, and data of political discourse and analysis. Required for political science majors. Formerly Political Science 201. Spring 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)
Political attitudes, beliefs, and behaviors; their sources and effects. Emphasis primarily on the United States with selected examples from Western European democracies. On demand.

203 Public Opinion (3)
Sources, content, and impact of public opinion on the political process. On demand.

213 American Political Ideas (3)
A study of the major political ideas that have influenced the development of the United States since its founding. Formerly Political Science 315. On demand.

221 Introduction to the 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.

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.

322 Civil Liberties (3)
Case studies of key Supreme Court decisions affecting the rights and freedoms of the individual in American society. On demand.

323 Law and Politics (3)
Lawyers, judges, police, and the political process. On demand.

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.
Psychology

Professor R. Metzger, Head

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 E: 1 approved mathematics course (3 hours)
Category F: 1 approved perspectives course (3 hours)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
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
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 | Second Semester
---|---
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
EHLS021 | 1 | EHLS Activity | 1
University Studies 101 | 3 | Elective | 3
Total | 17 | Total | 17

SOPHOMORE
Research Course | 3 | Psychology | 3
Psychology | 3 | Psychology | 3
General Education Category F | 3 | General Education Category D | 4
General Education Category B | 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
General Education Category C | 3 | General Education Category G | 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

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)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
Exercise Science, Health and Leisure Studies 021 plus one additional semester of exercise science activity

Major and related courses
33 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, 311, 312, 314, 315, 412
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

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.)

First Semester | Second Semester
---|---
Psychology 101 | 3 | Psychology 201 | 3
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
Electives | 3 | Electives | 6
University Studies 101 | 3 | Total | 16 | Total | 16
Total | 16 | Total | 16

SOPHOMORE
Psychology 202 | 3 | Psychology | 3
Psychology | 3 | Psychology | 3
General Education Category F | 3 | General Education Category D | 4
General Education Category B | 3 | Electives | 6
Elective | 4
Total | 16 | Total | 16

JUNIOR
Psychology | 4 | Psychology | 4
Psychology | 3 | Psychology | 3
General Education Category C | 3 | General Education Category C | 3
Electives | 6 | Major-related courses | 6
Total | 16 | Total | 16

SENIOR
Psychology | 3 | Psychology | 3
General Education Category G | 3 | Psychology | 3
Electives | 10 | Major-related course | 3
Elective | 7
Total | 16 | Total | 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 (3)
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. Prerequisite: 2 years of high school algebra or Mathematics 106.

### 202 Research Methodology: Laboratory and Field Research Techniques (3)
General introduction to research methods in psychology with an emphasis on basic strategies for empirically identifying causal and correlational relationships. Laboratory and field research techniques will be examined. Every semester. Prerequisite: 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 adolescent 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 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. Spring semester. Prerequisite: 101, 201 or equivalent, or by permission of instructor.

### 313 Cognitive Processes (3)
Examination of the ways in which people process information; topics from perception, thinking, problem solving, and language behavior. Spring semester. Prerequisite: 101, 201 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 or equivalent.

### 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.

### 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 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.
Social Work

See CoMege of Health and Human Services.

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: General, Anthropology, Sociology, Urban Studies

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 E: 1 approved mathematics course (3 hours)
Category Gs 1 approved perspectives course other than anthropology and sociology (3 hours)

The Freshman Seminar

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
90 — Sociology, Anthropology, & Geography

**Major**

Completion of one of the following concentrations

1. **General**:
   - A statistics course (SOC 250 recommended)
   - 33 hours sociology and anthropology including Sociology 151, 314, 394; Anthropology 152 or 208; Anthropology 302 or Sociology 312; plus 18 hours of sociology/anthropology electives of which at least 9 hours are at the 300-400 level.

2. **Anthropology**:
   - 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.

3. **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.

4. **Urban studies**:
   - A statistics course (SOC 250 recommended)
   - 33 hours sociology and anthropology including Sociology 151, 314, 394; Anthropology 152 or 208; Anthropology 302 or Sociology 312; plus 18 hours of electives of which at least 9 hours are at the 300-400 level (6 of the 18 hours must be selected from Sociology 209, 300, 317, 318, 345, 415)
   - 18 hours additional from Economics 306, 455; Geography 415; Human Services 301; Political Science 101, 233, 323, 331, 401r and 421r (when appropriate to urban studies); 461r, 462r, 463, 464, or 471r; Psychology 316, 331, 421, 431, 456r

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**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Language 101</td>
<td>3-4</td>
</tr>
<tr>
<td>Anthropology 152</td>
<td>3</td>
</tr>
<tr>
<td>University Studies 101</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category C</td>
<td>3</td>
</tr>
<tr>
<td>EHLS021</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16-17</strong></td>
</tr>
</tbody>
</table>

**SOPHOMORE**

| Language (2nd year) | 3 | Language (2nd year) | 3 |
| General Education Category F | 3 | General Education Category D | 4 |
| Anthropology 210 or 211 | 3 | General Education Category B | 3 |
| General Education Category G | 3 | General Elective | 3 |
| General Elective | 4 | **Total** | **16** |

**JUNIOR**

| Anthropology field or lab course*3-6 | 3 | Anthropology 302 | 3 |
| Anthropology Elective* | 3 | Anthropology field or lab course* | 3 |
| Social Science Elective | 3 | Social Science Elective | 3 |
| General Electives | 7 | General Elective | 4 |
| **Total** | **16-19** | **Total** | **16** |

**SENIOR**

| Anthropology 498r or elective | 4 | Elective-Humanities or | 3 |
| General Education Category B | 3 | Fine Arts | 3 |
| Fine Arts | 3 | Anthropology Elective | 2 |
| General Electives | 9 | General Electives | 11 |
| **Total** | **16** | **Total** | **16** |

**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**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology 151</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
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<tr>
<td>Language</td>
<td>4</td>
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<tr>
<td>General Education Category B</td>
<td>3</td>
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<tr>
<td>University Studies 101</td>
<td>3</td>
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<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**SOPHOMORE**

| Sociology or Anthropology Elective | 3 | Sociology or Anthropology Elective | 3 |
| Language (2nd year) | 3 | General Education Category D | 4 |
| General Education Category B | 3 | Language (2nd year) | 3 |
| General Education Category F | 3 | Statistic | 3 |
| General Education Category C | 3 | **Total** | **15** |

**JUNIOR**

| Sociology 312 | 3 | Sociology 394 | 3 |
| Sociology 314 | 3 | Sociology, 300-400 level | 3 |
| General Electives | 6 | General Education Category C | 3 |
| Other Social Sciences Electives | 6 | General Elective | 3 |
| **Total** | **18** | **Total** | **15** |

**SENIOR**

| Sociology, 300-400 level | 3 | Sociology, 300-400 level | 3 |
| Other Social Science Electives | 6 | Other Social Science Electives | 3 |
| General Education Category G | 3 | **Total** | **15** |
| General Elective | 3 | **Total** | **15** |

**TOTAL HOURS** 128

**Sociology and Anthropology: Anthropology, Sociology, Urban Studies Concentrations (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)
The Freshman Seminar
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity.

Major and related courses
Computer Science 110
One course in written communication above the 100 level
Mathematics 135, F136, and a statistics course (SOC 250 recommended).

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.

3. Urban Studies:
33 hours sociology and anthropology including Sociology 151, 314, 394; Anthropology 152 or 208; Anthropology 302 or Sociology 312; plus 18 hours of sociology/anthropology electives of which at least 12 hours must be at 300-400 level (6 of the 18 hours of electives in the major to be selected from Sociology 209, 219, 300, 317, 318, 345, 415)
18 hours additional from Economics 306, 455, Geography 415; Human Services 301; Political Science C101, 233, 323, 331, 401r or 421r (when appropriate to urban studies), 461r, 462r, 463, 464, 471r; Psychology 316, 331, 421, 431, 456r

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 in sociology and anthropology (B.S.)

Sociology (B.S.)

Sociology, Anthropology, & Geography— 91

<table>
<thead>
<tr>
<th>Sociology, Anthropology, &amp; Geography— 91</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
</tr>
<tr>
<td><strong>FRESHMAN</strong></td>
</tr>
<tr>
<td>General Education Category A</td>
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<tr>
<td>Anthropology 152</td>
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<tr>
<td>General Education Category C</td>
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<tr>
<td>EHLS 021</td>
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<tr>
<td>Mathematics 135</td>
</tr>
<tr>
<td>University Studies 101</td>
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<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>SOPHOMORE</strong></td>
</tr>
<tr>
<td>General Education Category D</td>
</tr>
<tr>
<td>Anthropology 210 or 211</td>
</tr>
<tr>
<td>Computer Science 110</td>
</tr>
<tr>
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**TOTAL HOURS 128**

Sociology and anthropology (B.S.): sociology concentration

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**TOTAL HOURS 128**

Sociology, Anthropology, & Geography— 91

MINORS

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 the culture of contemporary humans. Every semester.

199r Special Projects (1-4)
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 human kind from the perspective of the modern synthetic 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. On demand.

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 alternate years. 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 the search for the prerequisites of civilization. On demand.

310 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 411 • Prerequisites: 3 hours of anthropology or approval of instructor.

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. Prerequisite: ANTH208 or 211 or 340 or approval of instructor.

330 Ethnography 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.

333 Peoples and Cultures of India (3)
Social and ethnological study of the peoples and cultures of India. Traditions and modernization analyzed in the light of the contact with the Western cultures. Uniformity and diversity of society in India compared and contrasted with the West. Fall semester alternate years.

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. On demand. 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. On demand. 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 ethnographic sources. Emphasis is given to the late prehistoric and early historic periods. Prerequisites: Anthropology 208 or 211, or approval of the instructor.

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, ethnolinguistics, and sociolinguistics. On demand.

356 Archaeological Collections (3)
Principles of organization, analysis, and interpretation of prehistoric and historic archaeological materials. Techniques of preservation and presentation. On demand. Lecture 2 hours, laboratory 2 hours. Prerequisite: any general education Category C course or approval of instructor.

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. On demand. Prerequisite: any general education Category C course or approval of instructor.

370 Social and Cultural Change (3)
See Sociology 370.

375 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.

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. On demand. Prerequisites: 3 hours of sociology, anthropology, or psychology or approval 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 (1-4)
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. Fall 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.
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. Graded on a satisfactory/no credit basis. Maximum credit 4 hours.

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. Fall semester alternate even years.

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 other 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. Spring semester alternate odd years. Lecture 3 hours. May be registered as Environmental Science 250. Credit not albied in both Geography 250 and Environmental Science 250

303 Geography of North America (3)
Introduction to the physical and cultural geography of North America. Prerequisite: Geography 103 or approval of instructor.

305 Geography of Asia (3)
Introduction to the physical and cultural geography of Asia. Prerequisite: Geography 103 or approval of instructor.

407 Environmental Conservation (3)

409 Economic Geography (3)
Spatial influences on economic behavior, analysis of the location and spatial structure of world economic activities. Fall 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. 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. On demand. 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. Prerequisite: senior standing or approval of instructor.

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.

SOCIOL OGY 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 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. Maximum credit 4 hours.

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. Fall semester alternate years.

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. On demand.

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. Spring semester alternate years.

225 History of Social Thought (3)
Trends in beliefs and values regarding human society, in their interrelationships in ancient cultures, and in Western thought to the 19th century. On demand.

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. On demand. Prerequisite: TVJO years of high school algebra and math placement level 20 or Math 106 with minimum grade of C. Credit not allowed in 250 after any other statistics course.

300 Urban Sociology (3)
Analysis of how urban areas grow and are spatially organized. Examination of the cultures, social stratification systems, and modes of governance in contemporary American cities. Emphasis on urban problems. On demand. Prerequisite: any general education Category C course or approval of instructor.

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.
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. 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 (SOC 250 recommended); SOC 151, or
ANTH 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. On demand. 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. On demand. Prerequisite: any general education
Category C course or approval of instructor.

320 Sociology of Law (3)
Law as a social phenomenon and as a social process. Historical and cross-cultural
comparison of law, legal institutions, and enforcement of law. Special attention
given to American law enforcement. On demand. 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. Fall 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
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. On demand. Prerequisite: any general education Category C course or
approval of instructor.

331 Social Psychology (3)
Every semester. See Psychology 331.

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. On demand.
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. Fall 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. Fall 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 other third term. Prerequisite: any general education
Category C course or approval of instructor. Maybe registered as Anthropology 365.
Credit not allowed in both Sociology 365 and Anthropology 365.

370 Social and Cultural Change (3)
How cultures develop, mature, and face disruption or decline, stability, and change;
special attention to technological change, "cultural lag," and problems of
developing nations and peasant societies. On demand. Formerly 440. Prerequisite:
3 hours of sociology or anthropology or approval of instructor. Maybe registered as
Anthropology 370. Credit not allowed in both Sociology 370 and Anthropology 370.

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)
On demand. See Geography 415

425 Advanced Sociology of the Family (3)
Examination of selected topics in the sociology of the family. Emphasis on the
interaction between the family and the society. Special attention given to power
relationships and gender roles in marriage and the family. Spring semester.
Prerequisite: 215, or Human Ecology 205 or 340, or Social Work 210, or approval of
the instructor.

430 Intergroup Dynamics (3)
Social and psychological aspects of prejudice, discrimination, and minority
relations; effects of shifting social, economic, and power relationships; and
examinations of varying strategies aimed at change, and their consequences. On
demand. Prerequisite: 305 or approval of instructor.

431 Advanced Social Psychology (3)
On demand. See Psychology 431.

470r Special Studies and Problems (1-3)
Investigation and reporting on specialized topics in research or theory under faculty
direction. Primarily for seniors. On demand. Prerequisite: permission of instructor.
Maximum credit 6 hours.

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.
Spanish

See Foreign Languages and Literatures.

Theatre and Speech

Associate Professor Lewis, Head

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 certification for theatre (both secondary and elementary), the department has begun plans to implement a theatre education track for its majors.

Production activity in the department is open to all students enrolled at the university regardless of major.

Theatre and Speech (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 theatre and speech: 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)

The Freshman Seminar
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
6 hours design and technical theatre: 141, 143
6 hours acting: 221, 223
6 hours directing: 331, 431
9 hours dramatic literature and theatre history: 151, 251, 253
9 hours of approved theatre and speech electives selected from 343, 421, 457, 461r, and 463r
6 hours (6 semesters) of performance and production: 2 hours each of 200r, 300r, and 400r
2 courses outside the department may count toward major with approval of department head
2.0 average in all theatre and speech courses

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

Typical course of study in theatre and speech (B.A.)

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Theatre Minor

Theatre: 19 hours including Theatre and Speech 143, 151, 251 or 253, and 343;
3 hours from Theatre and Speech 457, Classics 395, 397, English 420,421, or 442r; 2 semesters of 200r and 2 semesters of 300r.
Minimum 2.0 average in the minor.

Theatre and Speech Courses

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.

109 Public Speech Communication (3)
Practical application of the principles of public speaking and group discussion. Every semester.

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 (3)
A basic study of production organization; traditional and modern conventions and techniques involved in the use of the theatrical instrument; and application of these principles in the execution of scenery, costumes, properties and lighting for University Theatre productions. Formerly 101. Fall 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.

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.

223 Acting II (3)
Continuing development of basic acting and speech for theatre. Spring semester. Prerequisite: 221 and/or permission of instructor. Corequisite: 200r.

251 The Development of Drama in the Theatre (3)
Forms and styles of theatrical literature from its beginnings in the classical-age to the present. Fall semester.

253 Theatre in Western Civilization (3)
An examination of the artistic and institutional development of the theatre from its beginnings to the contemporary period. Theatre architecture, scenic investiture, theatre organizations and modes and theories of performance. Spring semester.

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 200r 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 die application of rhetorical principles in speeches and oral reports. On demand.

311 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, 223, 251, 253, and permission of instructor. Corequisite: 300r or 400r.

335 Costume Design (3)
Basic procedures and principles of costume design for representative types and styles of drama. On demand. Prerequisites: 102, 105; Art 101; and permission of instructor.

340 Theatre Arts for Children (3)
Implementation of discipline-based theatre arts concepts and creative drama techniques for diе child. Laboratories in addition to regularly scheduled classes will be included. Fall and Spring semester. Prerequisites: THSP 115, PSY 221 OR HECO 240, MUS 111, ART 301. (Corequisites MUS 340, ART 340.

343 History of Costume (3)
Study of wearing apparel, principally in die western world from ancient Egypt to die 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.

421 Acting III (3)
Scene study, interpretation, characterization, and introduction to period style. Emphasis upon individual needs of each actor. Formerly 327. Fall semester alternate years. Prerequisites: 223 and permission of instructor. Corequisite: 300r or 400r.

431 Directing II (3)
Directing of short scenes for laboratory presentation and participation in diagnostic criticism. Spring semester. Prerequisite: 331 and/or 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 die twentieth-century theatre and its drama. Spring semester alternate years. Prerequisite: permission of instructor.

461r Directed Studies in Advanced Production (3)
Advanced problems in design and technical theatre. On demand. Permission of department head. May be repeated for credit.

463r Directed Studies in Advanced Performance (3)
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 die 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
Fall Semester
University Honors 101, ................................................................. 6
Laboratory Science, ....................................................................... 4
Mathematics 155, ........................................................................ 4
(if placement, test scores, and preparation indicate; otherwise, appropriate mathematics course)

Spring Semester
University Honors 102, ................................................................. 6
University Honors 114, ................................................................. 3
University Honors 120, ................................................................. 3

SOPHOMORE
Fall Semester
University Honors 115, ................................................................. 3

Spring Semester
University Honors 116, ................................................................. 3

IN FIRST TWO YEARS
One (1) course from:
University Honors 117, ................................................................. 3
University Honors 118, ................................................................. 3

Two (2) courses from:
University Honors 103, ................................................................. 3
Art 111H (Honors Introduction to Art), ....................................... 3
Theatre and Speech 111H (Honors Introduction to Theatre), ......... 3
to Theatre)

SENIOR
Departmental Honors 495, ............................................................ 4

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.

114 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.

115 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: 114.

116 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.

117 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.

118 The Tradition of India (3)
A study of Indian culture through a reading of texts selected from classical and modern Indian literature, supplemented by lecture, audio-visual materials, and library materials. 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.

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 Walker, Dean

The College of Health and Human Services offers five distinct programs leading to baccalaureate degrees. These programs are criminal justice, human services, nursing, physical therapy, and social work. In addition to the undergraduate degrees, Master of Science degrees in Criminal Justice and Nursing are offered.

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 Center for Community Career Education, Tennessee's Early Intervention System, the East Tennessee Center for Assistive Technology, and the Military Science Department are also administered through the College of Health and Human Services.

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 self-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

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

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 advance course.

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.

*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 discharged from the ROTC program in the 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>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS 101</td>
<td>Basic Survival and Military Skills</td>
<td>2</td>
</tr>
<tr>
<td>MS 102</td>
<td>Military Weapons and Fire Power</td>
<td>2</td>
</tr>
<tr>
<td>MS 201</td>
<td>Advanced Survival Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MS 202</td>
<td>Military Management and Leadership Skills</td>
<td>3</td>
</tr>
<tr>
<td>MS 300</td>
<td>Camp Challenge</td>
<td>4</td>
</tr>
</tbody>
</table>

Advanced Military Studies

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS 301, 302</td>
<td>Advanced Leadership and Management (3,3)</td>
<td>6</td>
</tr>
<tr>
<td>MS 400</td>
<td>Army ROTC Advanced Camp</td>
<td>4</td>
</tr>
<tr>
<td>MS 401, 402</td>
<td>Seminar in Leadership and Management (3,3)</td>
<td>6</td>
</tr>
</tbody>
</table>

Total credit possible not to exceed 26

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, drowproofing 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 bearing oriented toward the development of proficiency in advanced map reading, and fundamentals of survival. Spring semester. Prerequisites: Military Science 101 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 Walker, 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, grade trend, the ability to handle a full academic load, general knowledge of physical therapy, demonstrated interpersonal abilities, interview, extracurricular and leadership activities, and maturity. The applicants with the best combination of these factors will be selected for the class. On the basis of this competition, students who are accepted will have an overall and science grade point average greater than 3.0 on a 4.0 grading scale. Residents of the state of Tennessee are given preference for admission.

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
Sixty-two 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 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.

<table>
<thead>
<tr>
<th>General Education</th>
<th>Allied to Major</th>
</tr>
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<tbody>
<tr>
<td>Freshman Seminar</td>
<td>Biology 121</td>
</tr>
<tr>
<td>English 121</td>
<td>Biology 122</td>
</tr>
<tr>
<td>English 122</td>
<td>Math F210 or</td>
</tr>
<tr>
<td>Humanities &amp;</td>
<td>Psychology 201</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>Chemistry 122</td>
</tr>
<tr>
<td>Chemistry 121</td>
<td>Physics 103</td>
</tr>
<tr>
<td>MathF145</td>
<td>Physics 104</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Electives</td>
</tr>
<tr>
<td>Psychology 241</td>
<td></td>
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<tr>
<td>Perspectives</td>
<td></td>
</tr>
<tr>
<td>EHLS021</td>
<td></td>
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<tr>
<td>EHLS022</td>
<td></td>
</tr>
</tbody>
</table>

Total 36 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.

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.

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.

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. RT.)

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

General Education 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 E: 1 approved mathematics course (3 hours; approved related course below will apply)
Category F: 1 approved perspectives course (3 hours)

The Freshman Seminar
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 C101 and Psychology C241

30 hours mathematics, natural or applied science courses including Biology D1 21, 122; Chemistry D121, 122; 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, 462, 490, 493, 495r, 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 149 hours.

Typical course of study in Physical Therapy (B.S.P.T.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRESHMAN</td>
<td></td>
</tr>
<tr>
<td>Freshman Seminar</td>
<td>3</td>
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<tr>
<td>English Al 21</td>
<td>3</td>
</tr>
<tr>
<td>Biology D121</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry D1 21</td>
<td>4</td>
</tr>
<tr>
<td>EHLS021 or 022</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

PEHLS021

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 gaits 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.

312 Human Physiology (5)
Details the function of the organ system emphasizing mechanisms of control and regulation. Topics include function of the central nervous system, musculoskeletal system, cardiovascular system, respiration, and exercise physiology. Lecture 3 hours, laboratory 6 hours.

314 Kinesiology (3)
An introduction to kinesiology by the study of biomechanics, including statics and dynamics, osteoarthrokinesematics, 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.

Total 150
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.

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 the clinical setting. 40 clinical hours. Graded Satisfactory/No credit.

This clinical experience 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 supervisor. 40 clinical hours. Graded Satisfactory/No credit.

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.

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.

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. Prerequisite: Math 210 or PSY 201.

This clinical 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.

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/client of all age groups with neurological dysfunction. 80 clinical hours. Prerequisites: 330, 331, 430. Graded Satisfactory/No credit.

Using case studies, this course will survey the clinical correlations of signs and symptoms of dysfunction of the musculoskeletal system, with emphasis on the extremities. Components of disease will be studied at the cellular, tissue, and organ levels. Components of disease will be studied at the cellular, tissue, and organ levels.

Using case studies, this course will survey the clinical correlations of signs and symptoms of dysfunction of the nervous system, components of disease will be studied at the cellular, tissue, and organ levels.

Using case studies, this course will survey the clinical correlations of signs and symptoms of the cardiac, vascular, metabolic, pulmonary, and integumentary systems. Components of disease will be studied at the cellular, tissue, and organ levels.

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 3 hours, laboratory 6 hours.

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 3 hours, laboratory 6 hours.

Investigation of human development across the life span. An emphasis will be placed on changes in cognitive, physical, and physiological processes.

Provides the student with the didactic and clinical applications of evaluative measures, therapeutic interventions, and treatment rationale for select neurological conditions. Lecture 3 hours, laboratory 6 hours.

Provides the student with the didactic and clinical applications of evaluative measures, therapeutic interventions, and treatment rationale for select cardiac, vascular, metabolic, pulmonary, and integumentary conditions. Lecture 3 hours, laboratory 4 hours.

Examination of the financial restrictions and cost containment in health care, efficient and effective use of available time, personnel, and equipment and financial resources. This course also provides a comparison and analysis of policies and procedures from various health care settings, departmental planning, and quality assurance activities.

This clinical experience will follow the successful completion of all professional didactic courses and clinical courses. The student will evaluate signs and symptoms, integrate findings and initiate appropriate therapeutic intervention of any given patient/client in a variety of settings. The student will work under direct supervision of a physical therapist. 480 clinical hours, full time during the summer. Prerequisites: 330, 331, 430, 431.

Physical therapy concepts and skills gained throughout the curriculum will be integrated in a formal presentation of a patient case study. Emphasis will be placed on evaluating the physical therapy plan of care in the context of the total patient as he or she exists in society. Treatment alternatives selected will be validated through the use of professional literature. The oral defense of each case study will include interactions between student, faculty, and clinical instructors.

Opportunity to investigate some aspect of physical therapy or health care in greater depth than offered in other courses. This experience which is required of all senior physical therapy students, unless accepted into departmental honors, will be designed by the student with guidance from the appropriate faculty.
School of Social and Community Services

Assistant Professor McDonell, Acting 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, and 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.

Criminal Justice

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 F: 1 approved mathematics course (3 hours)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
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.

Typical course of study in criminal justice (B.S.)

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<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td>FRESHMAN</td>
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<tr>
<td>CJP 1010</td>
<td>CJP31070</td>
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<tr>
<td>Criminal Justice 301</td>
<td>Criminal Justice 303</td>
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<td>General Education Category B</td>
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<td>Criminal Justice 410</td>
<td>Electives 15</td>
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<td>General Education Category G</td>
<td>Criminal Justice 465</td>
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<td>Criminal Justice 485</td>
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<td>Electives</td>
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**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 320; 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.
104 — Criminal Justice

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. On demand.

301 Information Systems in Criminal and Juvenile Justice (3)
An introduction to information management took and processes of accountability as they relate to the two systems of justice. Every 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 CKMJ 411 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. Spring semester.

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 die black perspective. 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.

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. Every semester.

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. On demand. 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* 1110 (or 113) or approval of instructor.

410 Theories of Criminal and Delinquent Behavior (3)
An analysis of theory and research on epidemiology and etiology of crime. Fall 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. Spring semester. Prerequisite: 301.

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. Fall semester. 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. 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 in Criminal Justice 470 or 471. personal interview with the internship coordinator; and a 2.00 grade point average, both overall and in criminal justice. Every semester. Prerequisite: criminaljustice 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.
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 100 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 director, 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

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.

All students wishing to graduate with a major in human services must fulfill a writing requirement before they may be admitted to Human Services 470-471. The department’s writing requirement consists of several examples of previous assignments to be gathered in a portfolio and submitted to the departmental faculty for evaluation. Specific contents will be determined by a faculty adviser.

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 Gi: 1 approved perspectives course other than human services (3 hours)

The Freshman Seminar
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 one of the following cognate areas: economics, political science, psychology (above courses not applicable), 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 practicum from Human Services 470 and 471 or 472,474, and 471; Political Science 47 1r
Completion of successful writing portfolio (see adviser)
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

First Semester
Electives

Second Semester
Electives

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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)

The Freshman Seminar
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity
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
Completion of successful writing portfolio (see adviser)
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)

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 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 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.

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 the 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 uniting requirement. Corequisite: 471r (2 hours). Graded on a satisfactory/no credit 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.

Social Work

Assistant Professor J. McDonell, 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:
4. Complete personal interview with a social work faculty member.

5. The Social Work Admissions and Continuation Committee (SWACC) reviews applicants and makes recommendations. The decision of the SWACC are given to applicants in writing. Those applicants granted admission will be assigned an academic adviser. When majors complete the necessary prerequisites and present written application to the SWACC for admission to the Advanced Instruction II (Social Work 470). The application for both courses 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)
108—Social Work

SOCIAL WORK COURSES

100 Volunteerism and Civic Responsibility (2)
Introduction to the role of civic responsibility in voluntary community service.

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 inappropriate 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. Prerequisite: 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: 204, 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.

315 Child Welfare Services and Policies (3)
An examination of contemporary issues and questions in the field of child welfare with emphasis 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 with specific reference to principles for social group work practice. On demand.

370 Field Instruction I (4-6)
An opportunity for application and integration of method theory through supervised experiential learning in a social agency or setting. A minimum of 12 hours per week in such setting and a 1-hour integrative seminar required. Fall semester. Prerequisites: 204, 205, 300, Corequisites: 304, 371.

371 Field Seminar I (2)
An integrative seminar emphasizing issues common to social work theory, methods, and field experience. Fall semester. Prerequisites: 204, 205, 300, Corequisites: 304, 370.

401 Health Care Services and Policies (3)
Designed to introduce the student to the health care system. Focus will be upon the effect this system has for social work. On demand. Prerequisite: 301; other students admitted by written permission of instructor.

404 Advanced Social Work Methods (3)
Additional opportunities for students to refine and extend their skill in social work intervention. Examination of theories of intervention and implications for practice. Attention given to practice in selected specialized settings. Spring semester. Prerequisites: 303, 304, 370, 371; Corequisites: 400, 471. Not open to pre-social work major.

406 Social Work Values and Ethics (3)
An in-depth study of the consequences of prejudice for social work practice with the disadvantaged, minorities, and culturally different. Not open to pre-social work students. Fall semester.

411 Interaction with Families (3)
An examination of problems experienced by dysfunctioning families in contemporary American society and the role of social work in relation to these problems. Specific areas of concentration will include emotional and physical abuse (both child and adult), child neglect, divorce, changing values relating to sex roles and patterns of heterosexual and homosexual relationships. On demand.

415 Child Abuse (3)
An examination of dynamics in abusing families with emphasis on causal models. Analysis of the child welfare system, public agencies, the courts, and role of law enforcement. Developmental delays and deviations in personality resulting from abuse will be evaluated from a psychiatric perspective. Discussion of model systems for emergency intervention and treatment. On demand.

420 Women’s Issues (3)
An examination of issues faced by women in contemporary society and the role and responsibility of social work and other helping professions in responding to women's issues. On demand.

421 Crisis Counseling: Women (3)
Designed to introduce the student to crisis counseling. Focus will be on the special crises that occur in women’s lives. On demand.

430 Social Work Practice with the Dying (3)

431 Social Work Practice for the Aged (3)
A multi-disciplinary approach to the development of an understanding of the roles, treatment modalities, and practice settings in which the professional social worker may become involved working with older adults. On demand.
432 Aging Services and Policies (3)
Consideration will be given to the various strategies of social intervention designed to meet the specific needs of the aged population. Attention will also be given to social policy development in the area of aging. On demand.

434 Adaptation to Loss in Later Life (3)
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.

440 Social Work Supervision (3)
An examination of the objectives and methods of social work supervision. On demand.

450 Community Organization: Theories and Methods (3)
Identification and analysis of theories and methods of community organizing. Emphasis upon organizing and planning strategies and tactics for group mobilization and social change. On demand.

470 Field Instruction II (6)
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.

471 Field Seminar II (2)
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.

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.

School of Nursing

Associate Professor Holder, Acting Director

Accreditation

The School of Nursing is approved by the Tennessee Board of Nursing and is accredited by the National League for Nursing.

Prenursing

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 insure acceptance into the nursing major.

Eligibility Requirements for Participation in the Nursing Program

Nursing is a practice discipline, with cognitive, sensory, affective, and psychomotor performance requirements. The faculty of 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 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 written application on forms available from the School of Nursing. Candidates for Nursing 205 must make formal application in the September preceding the January enrollment. 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 that can be admitted. Selection by the admissions committee is based upon an evaluation of the following factors:

1. Completion of 45 semester hours 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.

   Chemistry 121, 122
   Biology 191, 208, 209, 210
   Sociology 151 or 215
   Psychology 101, 221
   English 121
   Biology 121, 122
   Sociology 151 or 215
   Psychology 101, 221
   Nursing 100

2. Personal interview with a member of the nursing faculty.

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.

Preference will be given to applicants with a composite ACT score of 20 or higher who have completed their prerequisite courses at UTC. Students with a lower ACT score may be required to take certain additional courses and/or diagnostic testing as prescribed by the director of the School of Nursing.

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 committee for admissions after an official application for admission has been filed.

Candidates will receive written notice of their admission status. Individuals who are not accepted for a given class, and who desire
to be considered for the next class, must submit another formal
application form for admission.
Acceptance of transfer and substitute credits in nursing to meet
requirements of the curriculum will be determined by the school
faculty. 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,
immunization costs, and yearly liability 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.

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; and c) maintain an active liability insurance
policy for clinical courses; and d) maintain current
immunizations and CPR certification.

2. 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.

3. 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.

4. Students who fail non-clinical courses may be denied
progression in the program.

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 committee for admissions and progression or the director
of the School of Nursing.

*Clinical courses series includes Nursing (205), (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. Complete an application for admission to the Gateway
(registered nurse) Program.
5. Provide proof of a physical examination within the year and
updated immunizations according to the infection control
policy prior to taking clinical courses.
6. 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.
7. Show a C average on all postsecondary courses.
8. Students must be admitted to the nursing major before taking:
   a. Registered Nurse Seminar (323)
   b. Nursing Research (321)
   c. Community Health clinical sequence (414, 415, 416)
   d. Issues in Nursing (417)
   e. Leadership in Nursing (421)

Continuation Standards (for Gateway Program)
1. Students must be admitted to the nursing major before taking
   a. Registered Nurse Seminar (323)
   b. Nursing Research (321)
   c. Community Health clinical sequence (414, 415, 416)
   d. Issues in Nursing (417)
   e. 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 an active liability insurance policy for clinical
courses
   d. Maintain current immunizations and CPR certification
3. 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.

4. 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.

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 students, he/she may appeal to the director and thereafter in accordance with university policy.

6. Students who fail non-clinical courses may be denied progression in the program.

7. Exceptions to the above policies may be made at the discretion of the committee for RN Admissions and Progression or the director of the School of Nursing.

*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 (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)

The Freshman Seminar

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

12 hours behavioral sciences including: Psychology C101, 221, 223; Sociology C151 or C215

26 hours mathematics, natural, or applied science courses including: Biology 191, 208, 209, 210; Chemistry D121, 122; Mathematics F210; Human Ecology 135

Nursing 100, 205, 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.)

**First Semester** Second Semester

**FRESHMAN**

Introduction to Nursing 100 3  Chemistry 122 4

Chemistry D121 4  Biology 191 4

English A121 3  English A122 3

Psychology C101 3  Psychology 221 3

Freshman Seminar USTU 101 3  Exercise Science 021 1

Total 16 Total 15

**SOPHOMORE**

Human Ecology 135 3  Nursing Process 205* 5

Biology 208, 209 4  Psychology 223 3

Biology 210 1  Mathematics F210 3

Sociology C151/215 3  Category B Elective 3

Category B Elective 3  Category G Elective 3

Total 17 Total 17

**JUNIOR**

Adult Nursing Concepts 1318 3  Psychosocial Nursing 4

Adult Nursing Concepts H319 3  Concepts 314 3

Adult Nursing Care 320 4  Psychosocial Nursing Care 315 4

Pathophysiology 316 3  Nursing Research 321 3

Physical Assessment 317 3  Category B elective 3

Total 16 Total 14

**SUMMER SESSION**

Nursing 430, Clinical Nursing Preceptorship

**SENIOR**

Nursing 414

Concepts of Primary Care 2  Family Nursing 3

Nursing 415  Family Nursing Concepts 1418 3

Nursing 416  Concepts H419 3

Care in the Community 4  Family Nursing Care 420 4

Leadership in Nursing 421 3  Issues in Nursing 417 2

Elective 3  Elective 3

Total 15 Total 15

**TOTAL HOUR 128**

*Cumulative GPA of 2.5 is required for admission to Nursing 205.

Curriculum revision in process: Some changes msequence, hours, and GPA may occur. Revised and approved December 1991.

**NURSING COURSES**

**100 Introduction to Nursing (3)**

Theoretical introduction to concepts used in nursing practice. Required for pre-nursing students. Open to non-majors. Every semester.

199r Special Projects (1-4)

Individual or group projects. On demand. Maximum credit 4 hours.

205 Nursing Process (5)

Theory and clinical application of basic nursing knowledge and skills necessary to provide a basis for baccalaureate nursing practice. Spring semester. Prerequisite: admission to nursing major. Math 106 with minimum grade of Cor Level 20 on math placement exam. Lecture 3 credit hours, clinical 2 credit hours, lab 6 clock hours. Corequisite: Psychology 223.
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.

314 Psychosocial Nursing Concepts (3)
Interpersonal, behavioral, and communication theories related to clients experiencing psychosocial difficulties. Every semester. Prerequisite: 205. Corequisite: 315.

315 Psychosocial Nursing Care (4)
Application of interpersonal, behavioral, and communication theories and concepts to clients experiencing psychosocial difficulties. Every semester. Laboratory: 12 clock hours. Prerequisite: 205. Corequisite: 314.

316 Pathophysiology (3)
Study of the causes of disease and the structural and functional alterations that occur in the illness process. Every semester. Prerequisite: 205 or permission of director.

317 Physical Assessment (3)
Physical examination and health history presented in the context of nursing practice. Every semester. Prerequisite: 205 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. Corequisites: 319, 320. Pre- or Corequisites: 316, 317.

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. Corequisites: 318, 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. Corequisites 318, 319.

321 Nursing Research (3)
Beginning knowledge and techniques in nursing research. Every semester. Prerequisites: 205 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.
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
- Economics
- Finance
- General Management
- Industrial Management
- Human Resource Management
- Marketing
- Administrative Systems

The school is organized into four departments, Accounting and Finance, Economics, Management, and Marketing.

It offers four degree programs: Bachelor of Arts with a major in economics; 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; Bachelor of Science with a major in economics; and 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)

The Freshman Seminar
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 C101
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:

Computer Science 111

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, 481; 3-6 hours chosen from Finance 321, 322, 403; Accounting 336; Economics 301, 429; Management 356

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

### Typical course of study in business administration (B.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.

**First Semester**

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<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tr>
<td>Economics 101</td>
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<td>General Education and Electives 6-9</td>
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**Junior**

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<td>B Finance 302</td>
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<td>B Management 311</td>
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<td>B Accounting Elective</td>
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<td>B Marketing 313</td>
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<td>English 277, 300, 410, or B Management 310</td>
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<tr>
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### Total Hours 128

#### Accounting Electives (6-9 Hours):

- B Accounting 306
- B Accounting 401
- B Accounting 406
- B Accounting 407
- B Accounting 411
- B Accounting 412
- B Accounting 481

#### 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)

The Freshman Seminar
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 C101
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

6 hours including Economics 325, 429

9 additional hours chosen from Accounting 300, 301, 302, 305, 307, 336; Finance 337, 403, 424, 471, 472, 482; Management 356; Economics 301, 306, 404

2.0 average in all finance courses

A minimum of 54 hours of the total 128 must be taken at the 300-400 level

*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.

**Typical course of study in business administration (B.S.): finance concentration**

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<td>Elective</td>
<td>3</td>
<td>Management, or Economics Elective</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>Total 16</td>
</tr>
</tbody>
</table>

**TOTAL HOURS 128**
First Semester | Second Semester  
---|---  
**FRESHMAN**  
Economics 101 | 3  
Mathematics 135<sup>1</sup> | 3  
General Education Category A | 3  
EHLS021 | 1  
General Education Categories | 3  
University Studies 101 | 3  
Total | 16  
**SOPHOMORE**  
B Accounting 201 | 3  
B Management 211 | 3  
General Education Category D | 4  
Total | 13-19  
**JUNIOR**  
B Finance 302 | 3  
Economics 325 | 3  
B Management 311 | 3  
B Marketing 313 | 3  
Elective | 3  
Total | 15  
**SENIOR**  
B Finance 318 | 3  
B Finance 321 | 3  
B Accounting 423 | 3  
Economics 429 | 3  
Finance Electives | 6  
Total | 18  
**TOTAL HOURS 128**  
<sup>1</sup> If exempted, student may take Mathematics F136.  
<sup>2</sup> Six hours must be selected from Political Science C101, Psychology C101, or Sociology C151.  

**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.  

**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.  

**401 Advanced Accounting (3)**  
Theory of business combinations and preparation of consolidated financial statements; accounting for foreign currency translations, and partnerships. Spring semester. Prerequisite: 302; 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: 302, 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; Computer Science 111.  

**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: 202.  

**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; Computer Science III.  

**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.
116 — Accounting & Finance

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.

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: 302, (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: 302, BMGT 212.

321 Investments (3)
Theory of investment; classification of media; security analysis; investment market mechanisms; securities legislation; institutional aids to the 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 and summer. Prerequisite: 302, senior standing. (Formerly 322).

420 Security Analysis (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; 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 which teaches 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.

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 or approval of instructor. (Formerly 283).

472 Real Estate Finance (3)
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.

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.
Economics

Professor Hutchinson, Acting 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 E: 1 approved perspectives course (3 hours)

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

Foreign language through second college year

Major
Management 211 and 212 or Mathematics F210
24 hours economics including 101,102,324,325, and electives
2.0 average in all economics courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

The maximum credit hours in the School of Business Administration that a student majoring in Economics can take:
36 hours in Economics
15 hours in Business Administration

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

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<tr>
<th>First Semester</th>
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<td>FRESHMAN</td>
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<tr>
<td>Economics 101</td>
<td>Mathematics 102</td>
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<tr>
<td>Economics 135*</td>
<td>Mathematics F136</td>
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<td>EHLS 021</td>
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<td>Total</td>
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<td>16-17</td>
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| SOPHOMORE       |                 |
| Mathematics F210 | Foreign Language |
| B Management 211 | B Management 212 |
| Foreign Language | Elective        |
| General Education and Electives | General Education and Electives |
| Total           | Total           |
| 16              | 16              |

| JUNIOR          |                 |
| Economics 324   | Economics 325   |
| General Education and Electives | General Education and Electives |
| Total           | Total           |
| 16              | 16              |

TOTAL HOURS 128
118—Economics

SENIOR
Economics Elective 3  Economics Electives 6
General Education and Electives 13  Electives 10
Total 16  Total 16

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.

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.

199r Special Projects (1-3)
Individual or 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)
Wage and employment theories, labor law, and history of the labor movement. 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, or equivalent.

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.

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.

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 Marxian Political Economy (3)

453 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.

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

460 Introduction to Econometrics (3)
Introduction to the use of mathematical models in economic analysis and the statistical verification of those models. On demand. Prerequisites: 101, 102; Management 212 and Mathematics 136.

465 Economics of Regulated Industries (3)

470 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.

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

497r Research (1-3)
On demand.

499r Individual Studies (1-3)
On demand.

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

00 Ir Cooperative Work Experience (0)
Cooperative work terms as a part of the cooperative education program in business. Student participation in off-campus work terras in business as a parallel work/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 SBI Director; Management 315; Marketing 313. 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 F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

The Freshman Seminar
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

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 offered during the junior and senior years.

First Semester
FRESHMAN
General Education Category A 3
Economics 101 3
B Management 121 3
Economics 102 3
EHLS021 1
General Education Categories 3 3
University Studies 101 3
Total 16

SOPHOMORE
Mathematics F136 3
B Accounting 201 3
General Education and electives 12
Total 18

JUNIOR
B Management 212 3
B Accounting 335 3
B Marketing 313 3
B Management 310 3
Elective 3
Total 15

SENIOR
B Management 400 3
B Management 450 3
B Management 360 3
Electives 7
Total 17

TOTAL HOURS 128

If exempted, student may take Mathematics F136.
Placement test required.
6 hours must be selected from Political Science C101, Psychology C101, or Sociology C151.
Business Administration (B.S.): General

Management concentration

**General Education** (see pages 00-00 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)

The Freshman Seminar

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

General management concentration:

- 12 hours including Management 330, 331, 332, 438, 439, 451, 452, 456
- 9 hours chosen from Business Management 331, 410, 438, 439, 451, 452, 456; Business Administration 459r

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

* If exempted, student may take Mathematics F136.

**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.

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>Economics 101</td>
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<tr>
<td>General Education Category A</td>
<td>General Education Category A</td>
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<tr>
<td>EHLS021</td>
<td>Computer Science 110</td>
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<tr>
<td>General Education Categories</td>
<td>EHLS Activity</td>
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<tr>
<td>University Studies 101</td>
<td>Electives</td>
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<tbody>
<tr>
<td>B Accounting 201</td>
<td>B Accounting 202</td>
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<tr>
<td>B Management 211</td>
<td>B Management 212</td>
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<tr>
<td>General Education Category D</td>
<td>Elective</td>
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<tr>
<td>Gen. Education Categories</td>
<td>General Education and Electives</td>
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<tr>
<td>Total</td>
<td>Total</td>
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<tr>
<td>13-19</td>
<td>15-18</td>
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</table>

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; 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)

The Freshman Seminar

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

Human Resource management concentration:

- 15 hours consisting of Management 330, 332, 411, 434, 435, 438, 439, 459r and 498r (maximum 6 hour); Economics 317 and 425; Business Finance 337; Sociology 318; Human Services 300 and 405; Psychology 241, 242, 331, 406, 451, 455, 498r

- 2.0 average in all management courses

A minimum of 54 hours of the total 128 must be taken at the 300-400 level

If exempted, student may take Mathematics F136.

These hours must be selected from Political Science C101, Psychology C101, or Sociology C151.

**Business Administration (B.S.): General Management concentration**

- 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

- A minimum of 54 hours of the total 128 must be taken at the 300-400 level

The Freshman Seminar

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

**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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<tr>
<th>First Semester</th>
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<tr>
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<tr>
<td>Economics 101</td>
<td>Economics 102</td>
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<td>Mathematics 135*</td>
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<td>Computer Science 110</td>
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<td>General Education Categories</td>
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<td>Electives</td>
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<tr>
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<tr>
<td>B Management 211</td>
<td>B Management 212</td>
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<tr>
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<td>Gen. Education Categories</td>
<td>General Education and Electives</td>
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<tr>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td>13-19</td>
<td>15-18</td>
</tr>
</tbody>
</table>
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.

*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.

<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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<tr>
<td>Mathematics 135</td>
<td>3</td>
</tr>
<tr>
<td>University Studies 101</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 110</td>
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</tr>
<tr>
<td>E HLS Activity</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
</tbody>
</table>

| **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 C1OI | 3 | Elective | 6 |
| **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 | Elective | 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.

**Human Resource Management 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.

### 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 E:** 1 approved mathematics course (3 hours; approved related course below will apply)
- **Category F:** 1 approved perspectives course (3 hours)

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

**Major and related courses**

- Six hours selected from Political Science C1OI, Psychology C1OI, 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
- 18 hours including Accounting 305; Management 356,451,452,456; Engineering 457
- 9 hours selected from Engineering 354,458; Management 330,331,332,410,411, 435,438,439; Marketing 319,355; Economics 429
- 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.

*If exempted, student may take Mathematics F136.

*Six hours, one course being Psychology C1OI and the other Political Science C1OI or Sociology C151.
122 — Management

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.

First Semester  
**FRESHMEN**
- Economics 101  
- Mathematics 135  
- General Education Category A  
- EHLS 021  
- General Education Category  
- University Studies 101  
- Total: 16  

Second Semester  
- Economics 102  
- Mathematics F136  
- General Education Category A  
- EHLS Activity  
- General Education and Electives  
- Total: 16-19  

**SOPHOMORE**
- B Accounting 201  
- B Management 211  
- General Education Category P  
- Gen. Education Categories  
- Total: 13-19  

**JUNIOR**
- B Finance 302  
- B Management 311  
- B Management 315  
- B Marketing 313  
- B Management 310 or equivalent  
- Electives  
- Total: 18  

**SENIOR**
- Engineering 457  
- B Management 451  
- Elective  
- Electives  
- Total: 15  

**TOTAL HOURS 128**

**Industrial Management Electives (any 9 hours):**
- B Management 330  
- B Management 331  
- B Management 332  
- B Management 438  

**TOTAL MINIMUM 54 HOURS**

If exempted, student may take Mathematics F136.

Six 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 keying 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. Computer application of statistical analysis. Every semester. Prerequisite: 121 or one year of high school typewriting.

220 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 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.

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 analyses, 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.

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).

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: 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 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.

483 Study Abroad: Management Concepts (3)
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 term, 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.
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)

**The Freshman Seminar**
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, 356, 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, 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

**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.

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>Economics 101</td>
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<tr>
<td>Mathematics 135</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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**Second Semester**

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<tr>
<td>Economics 102</td>
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<tr>
<td>Mathematics F136</td>
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<td>Computer Science Activity</td>
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<tr>
<td>B Management 211</td>
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**Junior**

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<td>B Finance 302</td>
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<td>B Management 311</td>
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</tr>
<tr>
<td>B Accounting 335</td>
<td>3</td>
</tr>
<tr>
<td>B Marketing 313</td>
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**Senior**

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<tr>
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<td>B Management 450</td>
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**Total Hours 128**

**Marketing Electives (any 12 hours):**

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<td>B Marketing 366</td>
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</table>

A minimum of 54 hours of the total 128 must be taken at the 300-400 level.

If exempted, student may take Mathematics F136.

Either Marketing 361 or 362 is required. The course not chosen to meet 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 market 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 product to consumer. Spring semester alternate years. Prerequisite: 313.

355 Fundamentals of Purchasing (3)
The role of purchasing and materials management in modern businessorganizations; 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 the 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 non-residential 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 services 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 with 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 six additional hours in Marketing or permission of instructor.

484 Study Abroad: Marketing Concepts (3)
The field of international marketing has significantly changed in the 1980's, 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 levers 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.
The primary goal of the School of Education is twofold: to prepare qualified people to be professional leaders in various roles within educational institutions and professional agencies, 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 and the Tennessee State Department of Education.

Successful completion of all degree and licensure requirements of any undergraduate program administered by the School of Education, excluding the recreation specialist and program concentrations offered in the Department of Human Ecology, qualifies the graduate for initial licensure in Tennessee provided the student scores on the NTE examinations above the minimum required by the Tennessee State Board of Education at the time of official application for initial licensure.

The School of Education is organized into five departmental units for academic programming, communications, and administrative accountability. Each unit has a department head who serves as the official spokesperson and administrative head responsible for all programs, faculty, and activities assigned to that particular department. Since a department may have several programs or activities within its jurisdiction, certain faculty are identified as program leaders of specific program areas. Names of the program leaders may be obtained by contacting the department head responsible for the particular program or the School of Education office.

**Curriculum and Instruction**
*Professor Bartoo, Head*

**Educational Administration and Supervision**

**Educational Psychology and Special Education**
*Associate Professor B. Ray, Head*

**Exercise Science, Health, and Leisure Studies**
*Professor Norred, Head*

**Human Ecology**
*Associate Professor Tanner, Head*

**Courses of Study**

*Undergraduate* — The School of Education offers approved undergraduate programs leading to the Bachelor of Science degree and to eligibility for teacher licensure in Tennessee and in those states which grant reciprocity privileges to graduates of institutions accredited by NCATE. Pre-Fall 1990 courses of study include:

- Early childhood and elementary education
- Elementary education
- Music education
- Special education (noncategorical)
- Secondary education with concentrations in art education (BFA), business, English, foreign languages (French, Latin, Spanish), health and physical education, mathematics, natural sciences, and social sciences.

**New Courses of Study**

Any student graduating after December 1993 must complete the new courses of study outlined in this catalog.* Additional information respective to the new programs may be obtained from the Office of Teacher Certification, Hunter Hall, Room 212 or the respective departmental office in which the program concentration is located.

In addition to programs leading to teacher licensure or endorsement, the School provides courses of study in Human Ecology (food & nutrition, interior design, merchandising, child and family studies) and Exercise Science, Health and Leisure Studies (adult fitness, sports administration and leisure studies.)

*Former Licensure programs in Special Education, Health, and Physical Education are effective through December 1994.*
Graduate—The School of Education, through the VTC Graduate Division, offers NCATE accredited and Tennessee approved programs which lead to the Master of Education degree (M.Ed.) and the Master of Science degree with a concentration in School Psychology. For further information refer to the VTC Graduate Bulletin and the Office of Graduate Admissions.

Also, any student desiring to pursue doctoral-level study in education or to gain admission to candidacy for the Doctor of Education (Ed.D.) or the Educational Specialist degree (Ed.S.) granted by the University of Tennessee, Knoxville, may complete all degree requirements at one UTC campus. For further information contact the director of the VTK Graduate Education Center located in 120 Race Hall.

Admission to Teacher Education Program (TEP)

Applicants who demonstrate evidence of possessing qualifications and characteristics reasonably expected for 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 a transfer student who is required to complete a semester of study at UTC before the application will be reviewed by the TEP Committee. Applications must be filed no later than the student's completion of 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. Freshman, sophomore, and transfer students, in particular, prior to formal application to the teacher education program must consult with an adviser in the School of Education to plan their programs. This advisory procedure also applies to any student, (including post-baccalaureate degree), seeking teacher licensure or endorsement.

A post-baccalaureate or transfer student satisfy official admission standards set by UTC, the State Department of Education, and those School of Education requirements for admission to the TEP effective at the time of entry to the TEP. A student who has earned a degree or earned 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 of approval. Any student seeking admission to the TEP is encouraged to confer with a faculty adviser from the School of Education and, preferably, with an adviser from the particular department in which the program of study or licensure endorsement being pursued is located to ensure that the appropriate course work and admission criteria have been completed.

A student must have met the following requirements for official admission to the TEP:

1. Filed a formal application signed by a School of Education faculty adviser. Application forms may be obtained from the TEP Office. (Hunter Hall).
2. Filed a medical certification record signed by a licensed physician. Form may be obtained from the TEP Office.
3. Earned a 2.5 cumulative grade point average, a 2.5 average on all courses taken at UTC, and a 2.5 in EDO 200, 201, 203 or 204, and 205 or 206 with no grade lower than C. (Must have established a 2.5 minimum overall grade point average on all college-level courses attempted.)
4. Completed the Pre-Professional Skills Test (PPST) (basic skills in writing, reading, and mathematics) or an equivalent and earned at least the minimum score on each section as mandated by the State Board of Education for the particular year in which the battery is taken.
5. Filed in the TEP Office results of the speech and hearing test, which will be arranged by the TEP Office. The student will be notified by mail of the appointment date, time, and location. A fee is assessed the student for this service by the Chattanooga Speech and Hearing Center.
6. Completed an interview and received a collective positive recommendation from the TEP interviewing committee. A portfolio must be submitted to the TEP office of student teaching by the student prior to scheduling the interview.
7. Shown evidences of reasonable physical fitness, emotional maturity, high moral character, and a commitment to professional education. Violations of the honor code or student behavior policies as stated within the current UTC Student Handbook may be reviewed by the TEP Committee.

The final responsibility for satisfying each and all of these requirements for official entry in the TEP rests with the student.

The TEP office will notify by letter each applicant and his or her faculty adviser (and department head of the teacher education initial endorsement area being sought by the applicant) of a negative decision rendered by the TEP Committee.

Only two types of action are taken by the TEP Committee on applications submitted: approval or rejection. An applicant who is denied admission will be notified of the requirement(s) not fulfilled, and the applicant should take the necessary action as quickly as possible to satisfy the designated requirement(s) for approval. There is an appeal process a student may choose. Contact the TEP office for details.

The Teacher Education Program (TEP) office is located in 212 Hunter Hall.

Tests for Admission to Teacher Education Programs

Individuals seeking admission to teacher education programs in Tennessee must pass the Pre-Professional Skills Test (PPST) 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 990 or above shall be exempt from the PPST. Applicants with a bachelor's degree from an accredited institution seeking admission to graduate level programs 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 State Board of Education. This battery of tests can only be administered on these approved statewide PPST dates. Refer to the TEP office or Testing office in Hunter Hall for test application forms and administration dates for each year.

UTC is committed to strict adherence to these State Board of Education requirements regarding official admission to the TEP. An applicant to the TEP may take the PPST an unlimited number of times.

And, finally, the State Board of Education requires the National Teacher Examination (NTE) as a prerequisite for granting the teacher's professional certificate. The "Core Battery" section and
"Specialty Area" component for licensure endorsements of this examination are required with state approved minimal passing scores for this battery 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 battery of examinations is given on campus through the UTC Testing Center at least two times a year 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 for Undergraduate Programs located in Hunter Hall, Room 209A.

Admission to Student Teaching
The application for admission to the student teaching semester must be filed with the director of student teaching (212 Hunter Hall) approximately six months preceding the actual experience. For example, 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 July 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. A student, however, will not be permitted to actually student teach until he or she has satisfactorily fulfilled all requirements for admission to the TEP.

Before gaining official approval for admission to the student teaching semester from the School of Education, the student must have fulfilled the following requirements:

1. Gained official admission to the TEP one semester prior to the actual student teaching semester.
2. Completed student teaching application with signature of assigned faculty adviser (in triplicate).
3. Satisfactorily completed appropriate professional education and endorsement area (content) courses.
4. Satisfactorily completed at least 90 percent of course of study in endorsement area(s). If the percentage of course work completed is questionable, director of student teaching and appropriate department head within the School of Education will make the decision.
5. Received positive recommendation of the major department(s) (for a degree candidate in Secondary Education or K-12 initial certification, the recommendation of the department in which the teaching area concentration is based).
6. Maintained 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. Demonstrated competency in manuscript and cursive handwriting. This requirement applies to all Elementary, Early Childhood, and Special Education majors (assessment of these skills will be completed during EDO 403).
8. Completed a biographical sketch (in triplicate to be returned with completed application for student teaching to the TEP office).

Final responsibility for insuring that all of these requirements are fulfilled prior to being admitted to student teaching rests with the student.

Student Teaching
The professional semester schedule sequence in which student teaching usually occurs includes these courses:

- Elementary Education EDCI 405, 407, 423
- Early Childhood and Elementary Education EDCI 407, 419, 423
- Special Education EDSP 440, 461, 465, 469
- Secondary Education EDCI 436, 437, 438

In the new program all majors seeking teaching licensure will student teach for a full semester (16 weeks). Placement of a student will include 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 possible. For example, the elementary student teacher will teach in one of grades 1-3 for half of the semester and in one of grades 4-6 during the other half of the semester. Secondary student teachers will be assigned to a junior high or upper middle school, grades 7-9, for one-half semester and to a high school, grades 10-12, for the other half.

When appropriate and educationally feasible, the secondary student teacher may teach a different subject matter concentration for which he or she has been professionally prepared.

Special Education majors are scheduled for EDSP 440, 461, 465 during the first half of the semester and conclude the semester enrolled in EDSP 469 in the pre-1990 program.

Student teaching is evaluated on a satisfactory/fail basis. A student not satisfactorily completing student teaching will receive a failing grade and will have the opportunity to repeat the course.

Department heads have the opportunity to recommend placements 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 dean. As a general rule a student is not located in the school from which he or she recently graduated or 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 during the semester immediately preceding the student teaching experiences semester. Each candidate is expected to attend these scheduled conferences. Non-attendance could delay the student teaching semester. Particular dates and locations for these conferences may be learned from reviewing the student teaching bulletin board at the TEP office, 212 Hunter Hall.

Recommendation for Licensure
The School of Education 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 State Department of Education. Application for a professional teacher's certificate should be completed during the last week prior to graduation. Application forms may be obtained from the Office of Records, 128 Hooper Hall.

Application for a Tennessee Teacher's Professional Certificate must have been completed within the 5-year period preceding the
issuance of the certificate; otherwise, the applicant must have earned 8 semester or 12 quarter hours of resident credit within the last year.

Tennessee regulations stipulate that the applicant for a professional license or endorsement certificate must be recommended by the designated certifying officer or dean of an approved teacher training institution. To receive this recommendation, the applicant should have fulfilled the following criteria:

1. A cumulative grade point average of 2.5.
2. A 2.5 cumulative grade point average on all UTC coursework.
4. A grade point average of 2.5 in the teaching field and in professional education courses with no grade less than C in the latter.
5. Official admission to the TEP and fulfillment of all special recommendations set forth by the TEP Committee and specific departmental requirements in the area(s) of concentration (refer to particular departmental program or course of study).
6. Completion of the National Teachers Examinations (NTE) with earned scores no less than the minimum cut-off scores established by the state Board of Education for the particular year in which initial certification is requested (administered by the UTC Testing Center; scores must be sent to UTC and Office of Certification, Tennessee State Department of Education).
7. Current requirements for licensure/endorsement areas for which the Board has adopted new standards remain in effect until December 1993. However, it emphasized that all students entering in the fall of 1990 and after must enter under new programs designed for licensure/endorsement areas approved by the Tennessee Board of Education. (See respective department head for new program information, as the new programs are still under going curriculum revision).

These criteria apply to both undergraduate (B.A. and B.S.) and post-baccalaureate students desiring a licensure or certification recommendation from UTC.

The final responsibility for satisfying each and all of these 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 to earn the official UTC recommendation for licensure. To learn of the particular endorsement requirements, a student should inquire through the appropriate departmental office and certification officer within the School of Education. Written guidelines for earning UTC approval in the various endorsement areas may be obtained from the respective department head responsible for the licensure endorsement area being sought.

Any student who anticipates teaching outside of Tennessee is strongly encouraged to request a checksheet of certification requirements from the state Department of Education, Office of Certification, for the state in which he or she plans to teach. This information should be gained by the student before the end of the sophomore year so that an appropriate course of study might be scheduled. Course and competency requirements to satisfy out-of-state certification standards may be in addition to Tennessee certification requirements and UTC approved degree requirements.

Particular attention should be noted, however, for any student who has never held a valid teacher's certificate to the fact that graduation with a master's degree program from UTC alone does not guarantee licensure in that discipline area. All certification requirements of the particular state awarding the license must be fulfilled also. In some instances a student may satisfy all of the Tennessee requirements for the certification endorsement by completion of a state approved master's degree program at UTC.

**Application for Teacher Licensure/Certification, Endorsement**

An application for all teacher licensure and certification, adding a teaching area, and professional school service personnel endorsement may be obtained from the Office of Records, 128 Hooper Hall. The Tennessee State Department of Education, Office of Teacher Certification, requires that an application for any type of initial certification finally approved by that office must be initiated through a Tennessee institution with an approved program. This includes in-state and out-of-state applicants for certification.

UTC does not guarantee that satisfactory completion of a program listed in the UTC Bulletin upon initial admission to the University by the student will meet all of 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 of 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 does or does not intend 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.

In view of this Tennessee mandate, 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 School of Education 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.

A fact sheet to assist an applicant in completing the certification application is available upon request to the Records Office. Applicants are encouraged to follow closely the procedures listed within this fact sheet to insure completion of all information which will be reviewed by the UTC certification officer and then forwarded to the Tennessee State Department of Education, Office of Teacher Certification for issuance of the Probationary License. The Apprentice License after year one is valid for three years. Upon completion of four successful years of teaching experience, the Professional License maybe issued and is valid for 10 years/renewable.

Clarification of any of the above-mentioned requirements should be referred to the appropriate department head or, if necessary, to the certification officer.
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Career Education Resource Center
The Career Education Resource Center 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 Oaatkmal Entry system, numerals cassettes, and other pertinent career publications and materials. Materials are geared for grades K-12. The center is located on the third floor of Frist Hall and operated under the direction of the Educational Psychology and Special Education Department.

Center for Environmental/Energy Education
In conjunction with TVA, the Department of Curriculum and Instruction provides instruction and academic support services for pre-service and in-service teacher education and programs. Instructional materials focusing on environmental and energy education along with professional consultants are also available. The center is located on the second floor of Hunter Hall at UTC.

Certification Office
The Certification Office is responsible for processing initial applications and approval of additional endorsements for certification to teach in the state of Tennessee. Students should refer questions concerning certification to the certification officer. This office, located in Hunter Hall, Room 212, can also provide assistance in processing certification applications to states other than Tennessee.

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 School of Education. These grade point average requirements apply only to those students officially admitted to the TEP after July 1, 1986.

Art (B.S.): Art Education

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 B115 (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 approved laboratory science)
Category E: Mathematics Fl 20 (3 hours)
Category F: 1 approved perspectives course (3 hours)

Freshman Seminar
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 Curriculum and Instruction 201,321,433,438, and Special Education 332 or 333.
For graduation: 2.0 average in art and 2.0 average in School of Education 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 Art (B.S.): Art Education

First Semester
FRESHMAN
General Education Category A 3
Mathematics 120 3
Art 101 Visual Studies I 3
Art 103 Intro to Art Educ. 3
USTU 101 3
Total 18

Sophomore
General Education Category D 4
Philosophy 201 3
Art 214 Art History 3
Art 205 Drawing III 3
Art 233 Sculpture I 3
EHLS021 1
Total 15

Junior
Apply for student teaching
Philosophy 336 3
Art History 3
Art 323 3
Studio Concentration 3
Art 207 Painting I 3
Total 15

Senior
General Education Category B 3
EDCurr. & Instr. 433 4
General Education Category G 3
Art 490 3
Studio Concentration 3
Total 16

TOTAL HOURS 128

Multidisciplinary School Learning (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: History B102, Philosophy B201, and Theatre and Speech B115
Category C: Economics C102 and Political Science C101
Category D: General Science DI 11
Category F: Mathematics Fl 15
Category G: 1 approved perspectives course (3 hours)
The Freshman Seminar
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
Theatre and Speech 107 or 109
Music 111
Art 301
History 204
Geography 103
3 hours of literate elective
Computer Science 102
Environmental Science 150

Major Core:
Profession Education: 19 hours required from Curriculum and Instruction 201, 306, 320,411,412,413,414, and 423, Special Education 332
Completion of one of the following concentrations:

K-4:
27 hours required including Human Ecology 241 or Psychology 221; Human Ecology 445; Psychology 340 *; 3 hours elective in teaching discipline, and Curriculum and Instruction 410 and 419.

5-8:
24 hours including Anthropology 208, Psychology 221 or Human Ecology 241; Psychology 341 *; 3 hours elective in teaching discipline; Curriculum and Instruction 405.

For graduation: 2.0 average in School of Education courses
For certification: 2.5 average overall, 2.5 average in major, and 2.5 average in education courses with no grade less than C.
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
*Courses have not yet been developed so numbers are subject to change

Typical course of study in multidisciplinary school learning (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>English A121</td>
<td>English A122</td>
</tr>
<tr>
<td>University Studies 101</td>
<td>Economics C102</td>
</tr>
<tr>
<td>Theatre &amp; Speech BI 15</td>
<td>History B102</td>
</tr>
<tr>
<td>Political Science C101</td>
<td>General Science D1 11</td>
</tr>
<tr>
<td>Mathematics F1 15</td>
<td>Mathematics 116</td>
</tr>
<tr>
<td>EHL 3021</td>
<td>EHL Activity</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>16</td>
<td>17</td>
</tr>
</tbody>
</table>

| **SOPHOMORE**   |                 |
| Theatre & Speech 107 or 109 | Music B11       |
| Philosophy B201          | History 204    |
| Geography 103          | ESC 150        |
| Computer Science 102    | Category G     |
| EDCT 201               | English 228    |
| USTU 111               |                 |
| **Total**              | **Total**      |
| 18             | 16              |

| **JUNIOR YEAR** |                 |
| HECO 241 or PSY 221 | Teaching content elective |
| **HECO 445 or PSY 341** | USTU 340 |
| **Psych 340 or Anth 208** | EDCurr. 6k Instr. 320 |
| Art 301            | USTU 1341      |
| Art 340            | EDCurr. & Instr. 413 |
| Theatre & Speech 340 | EHL 302        |
| Literature Elective | EDCurr. & Instr. 411 |
| Music 340          |                 |
| EHL 330            |                 |
| **Total**          | **Total**      |
| 18             | 17              |

| **SENIOR YEAR** |                 |
| ED SP 332       | EDCurr. & Instr. 405 |
| EDCurr. & Instr. 412 |               |
| EDCurr. & Instr. 414 |               |
| EDCurr. & Instr. 306 |               |
| EDCurr. & Instr. 410 |               |
| EDCurr. & Instr. 423 |               |
| **Total**       | **Total**      |
| 17             | 12              |

**TOTAL HOURS 128-131**

**K-4 needs to take HECO 445, PSY 340 and EDCI 410; 5-8 needs to take PSY 341 and Anth 208**

Music 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:** Theatre Speech B115, Art B111, and Philosophy B201 (9 hours)

**Category C:** Psychology C101 plus two approved behavioral or social science course (9 hours)

**Category D:** 2 natural science courses to total 8 hours in natural sciences (one course must be approved laboratory science)

**Category F:** Mathematics F120 (3 hours)

**Category G:** 1 approved perspectives course other than music (3 hours)

The Freshman Seminar
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

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). All Music Education majors will take a Piano Proficiency Examination as described in the Music Department Undergraduate Student Handbook.

One of the following concentrations —
1. **Instrumental:** Music 221, 2hoursof223r, 2hoursof224r; 2hoursof225r; 226; 307 or 326; 325, 327, 328
2. **Vocal:** Music 135, 251 or 133 and 134, 221, 222, 307, or 326, 309, 310, 3xx

Recital (Music 000) is required each semester of residence. A Minimum of 7 semesters with a grade of “Satisfactory” is required.

22 hours from the School of Education including Curriculum and Instruction 201, 433, 439; Special Education 332 or 333

For graduation: 2.0 average in music and 2.0 average in School of Education 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

Total hours to 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>Music 100 recital</td>
<td></td>
</tr>
<tr>
<td>Mathematics F1 20</td>
<td>Theatre Speech B115</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>General Education Category A (English)</td>
</tr>
<tr>
<td>Music 030r Marching Band or Mus 050*</td>
<td>Music 03r Concert Band or Music 050r Orchestra</td>
</tr>
<tr>
<td>Applied (Wind, strg., perc, or piano)</td>
<td>Applied (Wind, strg., perc, or piano)</td>
</tr>
<tr>
<td>Music 103 Ear Training</td>
<td>Music 104 Ear Training</td>
</tr>
<tr>
<td>Music 107 Theory</td>
<td>Music 108 Theory</td>
</tr>
<tr>
<td>EHL 3021 PE</td>
<td>EHL Activity</td>
</tr>
<tr>
<td>Music 131 Class Piano</td>
<td>Music 132 Class Piano</td>
</tr>
<tr>
<td>USTU Freshman Seminar</td>
<td>Computer Science 102</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>17</td>
<td>17</td>
</tr>
</tbody>
</table>
SOPHOMORE
Music 000 Recital 0
Art Bl 11 3
Music 030r Marching Band or Music 050* 1
Applied (Wind, strg, perc, or piano) 1
Music 203 Ear Training 1
Music 207 Theory 3
Music 141 Class Piano 3
Curriculum and Instruction 201 3
General Education Category D Lab science 4
Total 17

First Semester
Second Semester
Music 000 Recital 0
Music 000 Recital 0
Special Education 333 3
Music 030r Concert Band or Music 050r Orchestra 1
Applied (Wind, strg, perc, or piano) 1
Music 204 Ear Training 1
Music 208 Theory 1
Music 142 Class Piano 1
General Education Category D Lab science 4
Art Bl 11 3
Total 17

JUNIOR
Apply for student teaching
Music 000 Recital 0
Music 307 Orchestration or 326 Arranging 2
Music 030r Marching Band or Music 050* 1
Applied (Wind, strg, perc, or piano) 1
Music 315 Music History 3
Music 224 Brass 2
Psychology C101 3
Music 226 March Band techniques 2
Total 17

First Semester
Second Semester
ED Special Education 333 3
Music 000 Recital 0
Music 327 Conducting 2
Music 223 Woodwinds 2
Music 031r Concert Band or Music 050r Orchestra 1
Applied (Wind, strg, perc, or piano) 1
Music 316 Music History 3
Music 221 Strings 2
General Education Category G Psychology 221 Child PSY or PSY 222 Adolescent 3
Total 17

SENIOR
Music 000 Recital 0
EDCurr.&Instr. 439 12
Music 030r Marching Band or Music 050* 1
Applied (Wind, strg, perc, or piano) 1
Curriculum and Instruction 432 Methods Instrumental 3
Music 321 El Methods 3
Music 328 Conducting 2
Music 325 Inst. Org. and Management 2
General Education Category C 3
Total 19

First Semester
Second Semester
Music 321 El Methods 3
Music 328 Conducting 2
Music 325 Inst. Org. and Management 2
General Education Category C 3
Total 19

TOTAL HOURS 128

*Participation in band or orchestra is required each semester.

Music Education (B.S.): Vocal

FRESHMAN
Music 000 Recital 0
Music Choral Group or Opera Workshop 1
Applied Music 1
General Education Category A Mathematics F120 3
Music 103 Ear Training 1
Music 107 Theory 3
EHLS021PE 1
Music 131 Class Piano 1
USTU Freshman Seminar 3
Total 17

First Semester
Second Semester
Music 000 Recital 0
Music Choral Group or Opera Workshop 1
Applied Music 1
General Education Category A Theatre Speech B115 3
Music 104 Ear Training 1
Music 108 Theory 3
EHLS Activity Course 1
Music 132 Class Piano 1
Computer Science 102 3
Total 17

TOTAL HOURS 138

1 New course yet to be approved.

Secondary English (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: Art Bl 11, Music Bl 11, Philosophy B201
Category C: 1 approved behavioral or social science course (3 hours) plus Psychology C101
Category D: 2 natural science courses to total 8 hours in natural sciences (one course must be approved laboratory science)
Category F: Mathematics F120
Category G: Anthropology G208

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

Major and related courses
Theatre and Speech 107 or 109 History 203, 204, 385
Foreign Language through the first year

Computer science 102
36 hours English including English 203, 207, 211, 212, 213, 214, 229, 300, 410, 460, 361; Humanities 385r
31 hours from the School of Education including Curriculum and Instruction 201, 204, 321,431,433,438; Special Education 333;

For graduation: 2.0 average in English and 2.0 average in School of Education
For certification: 2.5 average overall, 2.5 average in English, 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 English (B.S.)

<table>
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<tr>
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<tbody>
<tr>
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<td>English A121</td>
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<td>EDCurr.&amp;Instr. 204</td>
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<tr>
<td>Psychology C101</td>
<td>Art B111</td>
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<td>EHLs 021</td>
<td>English B111</td>
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<td>Theatre &amp; Speech 107 or 109</td>
<td>Foreign Language Elective</td>
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**Total:** 17

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<td>History B204</td>
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<td>English 212</td>
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<tr>
<td>EHLs Activity</td>
<td>Philosophy and Religion B201</td>
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<td>English B203</td>
<td>English B207</td>
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**Total:** 17

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<td>Humanities 385r</td>
<td>EDCurr.&amp;Instr. 433</td>
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<td>EDCurr.&amp;Instr. 431</td>
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<td>EDCurr.&amp;Instr. 438</td>
<td>Electives</td>
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**Total:** 17

**TOTAL HOURS 128**

*New course still in development.

### Secondary Education (B.S.): Foreign Language (French, Latin, or Spanish) 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), plus courses to total 12 hours humanities/fine arts 
in three fields other than history and foreign languages

**Category C:** 2 approved behavioral or social science courses (6 hours) plus one 
course to total 9 hours behavioral or social sciences in two fields other than 
education; for certification purposes, 3 of the hours may be in history

**Category D:** 2 natural science courses to total 8 hours in natural sciences (one 

course must be approved laboratory science)

**Category F:** Mathematics F120

**Category G:** 1 approved perspectives course other than foreign languages 
(3 hours)

### Major and related courses

**French and Spanish:**

- 22 hours in one language above the second college year
- Latin:
  - 21 hours beyond Latin 101,102, plus 9 hours from Classics 310,395,396,397
  - 33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 321,431,433,436r, 437,438; Special Education 333

For graduation: 2.0 average in foreign language and 2.0 average in School of 
Education 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 secondary education (B.S.): foreign language concentration

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<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
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<tr>
<td>University Studies 101</td>
<td>EHLs Activity</td>
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<td>EHLs 021</td>
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<td>French 101</td>
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<td>General Education Category B</td>
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**Total:** 18

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<td>EDCurr.&amp;Instr. 204</td>
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<tr>
<td>EDCurr. &amp;Instr. 201</td>
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**Total:** 18

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<td>EDCurr. &amp;Instr. 321</td>
<td>Elective</td>
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<tr>
<td>French 300-400 Elective</td>
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**Total:** 19

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<td>EDCurr.&amp;Instr.436r</td>
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<td>EDCurr.&amp;Instr. 431</td>
<td>EDCurr.&amp;Instr. 437</td>
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<tr>
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<td>EDCurr.&amp;Instr. 438</td>
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<td>Language Elective</td>
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**TOTAL HOURS 128**
Major and related courses

### Exercise Science, Health and Leisure Studies

Formally Secondary Education: Health, Physical Education and Recreation Concentrations

**See page 142.**

**Secondary 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:** 2 approved courses: one from fine arts and one from either humanities, or fine arts (3 hours each), plus Philosophy B201, and courses to total 12 hours humanities/fine arts other than history.
- **Category C:** 1 approved behavioral or social science course (3 hours) plus
  - Psychology C101
- **Category D:** Physics D230 plus one laboratory science course to total 8 hours
- **Category F:** Mathematics F150
- **Category G:** 1 approved perspectives course (3 hours)

The Freshman Seminar

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

**Typical course of study in secondary mathematics (B.S.):**

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<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
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</tr>
<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>English A121</td>
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<tr>
<td>Mathematics F150</td>
<td>4</td>
</tr>
<tr>
<td>EHLS021</td>
<td>1</td>
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<tr>
<td>University Studies 101</td>
<td>3</td>
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<tr>
<td>Psychology C101</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 102</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tr>
<tr>
<td><strong>SOPHOMORE</strong></td>
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</tr>
<tr>
<td>Mathematics 212</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 295</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy B201</td>
<td>3</td>
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<tr>
<td>EDCurr. &amp; Instr. 201</td>
<td>3</td>
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<td>4</td>
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<td><strong>JUNIOR</strong></td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>18</td>
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</tbody>
</table>

**APPLY FOR STUDENT TEACHING**

- Mathematics 321 3
- Mathematics 452 3
- Mathematics 255 3
- General Education Category B 3
- Mathematics 430 3
- ED Special Education 333 3
- Humanities/Fine Arts Elective 3
- Computer Science 121 3
- General Education Category G 3

**TOTAL HOURS 128**

*Mathematics sequence may begin with 145 rather than 150 depending on preparation.

**Secondary Natural Sciences (B.S.):**

- **General Education** (see pages 22-24 for list of approved courses)
- **Category A:** 2 approved courses in written communication in the English language (6 hours)
- **Category B:** 2 approved courses: one from fine arts and one from either humanities, or fine arts (3 hours each), plus Philosophy B201, and courses to total 12 hours humanities/fine arts other than history.
- **Category C:** 1 approved behavioral or social science course (3 hours) plus
  - Psychology C101
- **Category D:** 1 approved natural science course to total 4 hours in natural sciences
- **Category F:** 1 approved mathematics course
- **Category G:** 1 approved perspectives course

The Freshman Seminar

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

**Major and related courses**

- Biology concentration
  - Geology D111, or 112
  - Mathematics (135 and 136), or (145 and 150)
  - Biology D121, 122, 208, 209, 325, 326, 401*
  - Physics 103, 104
  - one course from each of the following three areas:
    - ecology (Biology 306 and 307, or 416)
    - evolution (Biology 303, 315 or 450)
    - physiology (Biology 304, 423, or 463)
- AND
  - one course from one of the following two areas:
    - botany (Biology 207, or 352)
    - zoology (Biology 312, 313, 342)

- Chemistry concentration:
  - Biology D121, 122
  - Physics 103, 104
  - Geology D111, or 112
  - Mathematics (135 and 136), or (145 and 150)
  - Chemistry 401*, 311, 341, 342, 351, 352 and 466

[Table with course details and hours]
Earth and Space Sciences concentration
Mathematics (135 and F136), or (F145 and F150)
Geology D111, 112, 303, 321, 341, 342, 401*, and 480 or 490
Astronomy D102
Geography 101
Environmental Science 482
Biology 121
Physics 103

Physics
Biology D121,122
Physics 103,104
Mathematics Fl50,160
Geology D111, 112
19 hours of physics including Physics 401*, 231, 232,318

*A new course yet to be approved.

For graduation: 2.0 average in natural sciences and 2.0 average in School of Education
For certification: 2.5 average overall, 2.5 average in natural sciences, 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: Biology concentration (B.S.)

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<th>Second Semester</th>
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<td>FRESHMAN</td>
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<tr>
<td>English A121</td>
<td>English A1 22</td>
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<td>Biology 122</td>
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<td>Chemistry 122</td>
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SOPHOMORE
Physics D103
General Education Category B
EDCurr. & Instr. 201
Philosophy B201
Mathematics 135

Total 16

JUNIOR
Apply for student teaching
EDCurr. & Instr. 321
Ecology
Evolution
Biology 401
Humanities/Fine Art Elective

Total 15

SENIOR
Physiology
Geology D111
General Education Category C
EDCurr. & Instr. 438

Total 12

TOTAL HOURS 128

Typical course of study in secondary natural sciences: Chemistry concentration (B.S.)

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<td>Biology 122</td>
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SOPHOMORE
Physics D103
General Education Category B
EDCurr. & Instr. 201
Philosophy B201
Mathematics 135

Total 16

JUNIOR
Apply for student teaching
EDCurr. & Instr. 438
Chemistry 466
Geology D111
General Education Category C
General Education Category B

Total 12

SENIOR
EDCurr. & Instr. 438

Total 12

TOTAL HOURS 128

Typical course of study in secondary natural sciences: Earth and space sciences concentration (B.S.)

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<th>SECOND SEMESTER</th>
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SOPHOMORE
Geology 303
General Education Category B
EDCurr. & Instr. 201
Philosophy B201
Mathematics 135

Total 16

TOTAL HOURS 128
Typical course of study in secondary natural sciences: physics concentration (B.S.)

**First Semester**

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<td>ED Curr. &amp; Instr. 201</td>
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<tr>
<td>Philosophy B201</td>
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**Second Semester**

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**JUNIOR**

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<td>University Studies 101</td>
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<tr>
<td>Philosophy B201</td>
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<td>Geology D11</td>
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**SENIOR**

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**TOTAL HOURS 128**

*Course have not yet been approved.*
For graduation: 2.0 average in social sciences and 2.0 average in School of Education
For certification: 2.5 average overall, 2.5 average in social sciences, 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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<th>Second Semester</th>
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<td>Fine Arts Elective</td>
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<td>Science Elective</td>
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<td>Philosophy B201</td>
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<td>History B203</td>
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TOTAL HOURS 128
## Typical course of study in secondary social sciences (B.S.): history concentration

### First Semester

<table>
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<tr>
<th>Course</th>
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<tr>
<td>English A121</td>
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### Second Semester

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### Sophomore

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### Senior

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**Total Hours 128**

## Typical course of study in secondary social sciences (B.S.): political science (government) concentration

### First Semester

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<th>Course</th>
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<tr>
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<td>University Studies 101</td>
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### Second Semester

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### Sophomore

<table>
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### Junior

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<tr>
<td>History B102</td>
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<td>Non-western History</td>
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<td>Anthropology G208</td>
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### Senior

<table>
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<th>Course</th>
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<tr>
<td>History 301</td>
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<td>ED Curr. &amp; Instr. 433</td>
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<td>EDCurr. &amp; Instr. 438</td>
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**Total Hours 128**

## Exceptional Learning K-12 (B.S.)

### General Education

- **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:** Philosophy B201, 6 hours from Art 111, Music 111, or Theatre and Speech 11 (9 hours)
  - **Category C:** Political Science C101, and approved behavioral or social science course other than psychology (6 hours)
  - **Category D:** 2 approved science courses with laboratory to total 8 hours: 4 hours from Astronomy 102, Chemistry 121,125, GNSC 111, Geology 111, Physics 103 or 230; 4 hours from Anthropology 209, Biology 121, Environmental Science 150
  - **Category F:** Mathematics Fl 15
  - **Category G:** 1 approved perspectives course (3 hours)

- The Freshman Seminar
- Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

### Major and related courses

- **Note:** Current requirements for licensure endorsement in Special Education by the Tennessee Board of Education remain in effect until December, 1994. The new program in Exceptional Learning has been approved but may be subject to minor changes in course titles and numbers.
- **Theatre and Speech 109**
- **English 228**
- **History B102**
- **Psychology C101, 221 or 222,241**
- **Mathematics 116**
- **Computer Science 102**
- **Exercise Science, Health, and Leisure Studies 302**
- **3 hours from Psychology 340** or **341** or **Human Ecology 445**
- **University Studies 340**
- **55 hours from the School of Education including Curriculum and Instruction 201, 320,413,414, and Special Education 250,320,325,330,410,415,420**, **425**, **430,440,461,469**
- **For graduation:** 2.0 average in School of Education 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**
- **Elecive* to complete 128 hours**
- **New courses yet to be approved**
Typical course of study in exceptional learning (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>English 121</td>
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<td>USTU 101</td>
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<td>Mathematics F115</td>
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<td>Psychology C101</td>
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<td>GNSCD111</td>
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<td>EHLS021</td>
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| **Sophomore**  |                  |
| ED Special Education 250 | 3               |
| Psychology C241     | 3               |
| Environmental Studies D150 | 4            |
| or Biology 111      | 4               |
| Philosophy B201     | 3               |
| Computer Science 102 | 3               |
| **Total**           | 16              |

| **Junior**      |                  |
| ED Special Education 330 | 3               |
| English 228       | 3               |
| Psychology 340 or PSY 341 or EHL 302 | 3           |
| Human Ecology 445  | 3               |
| ED Special Education 415 | 3           |
| ED Special Education 410 | 3            |
| Category G Elective | 3             |
| Social Science Elective | 3           |
| Fine Arts Elective | 3               |
| **Total**         | 18              |

| **Senior**      |                  |
| ED Special Education 440 | 3               |
| ED Special Education 461 | 3               |
| modified and one comprehensive; one student teaching placements; one half semester each | 3         |
| **Total**       | 15              |

**CURRICULUM AND INSTRUCTION COURSES**

NOTE: Program and courses are in a period of transition. Titles, numbers, content and credit hours may be revised to meet new licensure standards. Some course numbers listed in typical programs of study may not be included in the course listing below until final approval.

100 Education, Self, and Society (3)
Selected material from cultural, psychological, and social foundations of education related to contemporary issues and to the student's own educational experiences, goals, aspirations. On demand.

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 types 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 School of Education dean.

200 Investigations of the School in Society (1)
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 is 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.

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 Curriculum and Instruction 202 and Psychology 221.

203 Human Growth and Development: Child (3)
Child development factors influencing growth; characteristics, influence of concepts on the educational 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 Curriculum and Instruction 204 and Psychology 222.

205 Investigations of the Adolescent in the Classroom (1)
Laboratory course designed with structural observation and experience in the secondary school classroom. Case studies and tutoring of adolescents and analysis of classroom practice will be completed by the student. A minimum of 20 hours of field work under the supervision of a teacher in a traditional secondary school classroom is required. Fall and spring semesters only. Prerequisite: EDO 200.

206 Investigations of the Child in the Classroom (1)
Laboratory course designed to provide Early Childhood/Elementary Education majors with case studies and tutoring experiences that will be helpful in subsequent course work in their teacher education programs. Requires 20 hours of tutoring in an elementary (K-6) classroom under the supervision of a teacher. Fall and spring semesters. Prerequisite: EDO 200.

207 Educational Psychology (3)
Theories of learning and instruction applied to the classroom; classroom as psychological environment; cognitive processes and motivation; use of tests and measures; approach to guidance. Field component required. On demand.

215r Workshop and Seminar (2-4)
Current topics in education. Special programs and in-service courses. On demand. Prerequisite: approval of department head.

306 Designing Instruction and Evaluation in the Elementary Classroom (3)
Examines the elements of planning evaluation and management common to elementary school subjects. Students will demonstrate competency in unit development, selected component teaching skills and evaluation planning.

310 Elementary School Curriculum (3)
The curriculum for grades one through six; the impact of technological and social change on curriculum planning and school organization. On demand.

320 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: EDO 201, ENGL 228. May not be used for graduate credit.

321 The Teaching of Reading in the Secondary School (3)
Integrating reading skills and teaching strategies with the teaching of content area subjects. Every semester. Required of all secondary education majors.

401 Teaching Social Studies in Elementary and Middle School (3)
Planning, teaching, and evaluation of social studies in the classroom; in-depth instruction in lesson planning strategies. Every semester. Prerequisite: admission to teacher education program. May not be used for graduate credit. (Being phased out).

402 Teaching Science in Elementary and Middle School (3)
The application of the structure of science and the concepts, phenomena, and processes of science in the context of elementary school curricula. Includes instructional use of education media including the microcomputer. Every semester. Prerequisite: admission to teacher education program. May not be used for graduate credit. (Being phased out).
403 Teaching Language Arts in the Elementary and Middle School (3)
Designed to help develop an understanding of the basic concepts of language. Special consideration given to how language arts (speaking, listening, writing) are learned, diagnosed, taught, and evaluated. The interrelationships of these skills stressed to better utilize these kinds of activities and materials in teaching children to think clearly and creatively and to communicate effectively. Every semester. Prerequisite: admission to teacher education program. May not be used for graduate credit.

404 Teaching Mathematics in the Elementary and Middle School (3)
Designed to provide students with effective methods and materials for the teaching of mathematics in grades K-8. Special emphasis will be placed on the use of the micro-computer and calculator for teaching mathematics and in diagnostic and remedial procedures. Every semester. Prerequisite: admission to teacher education program. May not be used for graduate credit.

405 Observation and Student Teaching in Elementary Schools (9)
Supervised teaching in two school environments. Placements will insure experience at two different grade levels, as well as inner city and suburban or rural schools. Every semester. Prerequisites: 320, 401, 402, 403, 404 and admission to teacher education program; notification of intent to engage in student teaching six months prior to registration in 405. May not be used for graduate credit.

407 Classroom Management in Elementary Schools (2)
Techniques and strategies for creating a classroom environment which promotes learning. Behavioral management is emphasized through the development and application of approaches to individual behavioral analysis and peer control. Every semester. Corequisite: 405 or 419.

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.

411 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 given toward integrating a specific topic in a spiral curriculum. Prerequisite: EDO 306; maximum of 3 hours credit. Replacing EDCI 401.

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. Prerequisite: University Studies 111, General Science 111, Environmental Science 150 and EDCI 306. (Replacing EDCI 402).

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 the appropriate activities and materials while teaching children to think clearly, creatively, and to communicate effectively. (Replacing EDCI 403).

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. Prerequisite: Math 116 and EDCI 306 or equivalent. (Replacing EDCI 404).

419 Observation and Student Teaching in Kindergarten and Elementary Grades (9)
Field placement in both the kindergarten and elementary grades in the same semester. Schedules must permit full time involvement three days per week and half-day participation two days with at least one-third of the time devoted to responsible participation and teaching. Every semester. Prerequisites: 320, 401, 402, 403, 404, 410; admission to teacher education program; notification of intent to student teach six months prior to registration in 419. May not be used for graduate credit.

420 Emergent Literacy (3)
Survey of Emergent Literacy methods, strategies, procedures, and assessment materials. The second reading course for students who are seeking HECO PRE K-3 certification. Prerequisite: EDCI 320.

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. Fall semester. Prerequisite: admission to teacher education program.

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: 320 or equivalent, or permission of instructor; admission to teacher education program. May not be used for graduate credit.

424 The Nature and Analysis of the Reading Process (3)
A review of current theories, literature, and discussion of issues affecting the reading levels of students in today’s classrooms. Introduction of the psychological aspects necessary to read and comprehend printed material. Students will examine these processes and the relationships of these to the reading performance of students in secondary education. Prerequisite: 321 or permission of the instructor.

431 Teaching Strategies and Materials in the Disciplines (3)
Curricular and media developments appropriate for the respective discipline. Must be taken prior to student teaching. Fall semester for Mathematics, Social Sciences; Spring semester for English. POLA, Natural Science. Prerequisites: 204, 201, admission to the Teacher Education Program. Corequisite: 433. May not be used for graduate credit.

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.

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: 431.

436r Topics in Secondary Curriculum (1-2)
A seminar involving both student teachers and their cooperating teachers. Topics will deal with contemporary curricular problems of participants. Spring semester. Prerequisite: undergraduate students must be admitted to teacher education program. Corequisite: 438. Not required for EHL majors.

437 Classroom Management in Secondary Schools (2)
Techniques and strategies for creating a classroom environment which promotes learning. Behavioral management is emphasized through the development and applications of approaches to individual behavioral analysis and peer control. Spring semester. Prerequisite: admission to teacher education program. Corequisite: 438.

438 Observation and Student Teaching in Secondary School (9)
Supervised teaching in two school environments. Placement will insure experience in inner-city and suburban or rural schools and junior and senior high schools where possible. Spring semester. Prerequisites: 204, 205, 201, 200, 321, 431, 433; Special Education 333; admission to teacher education program. Corequisites: 436r, 437. May not be used for graduate credit.

439 Observation and Student Teaching in School Music (9)
Placement will be made in grades 1-6 for one-half the semester and 7-12 for one-half the semester. Spring semester. Prerequisites: 432, Music 321, admission to teacher education program. Corequisites: 436r, 437.
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 School of Education dean. May not be used for graduate credit.

490r 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. Prerequisites: approval of the School of Education dean.

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 AND SPECIAL EDUCATION COURSES

Special Education Courses

100 Special Education Program Observation and Seminar (2)
This course provides an experiential opportunity to investigate and analyze the various placement options in special education. A structured seminar is required to discuss the planned observations. A minimum of 20 hours of observation is required. Fall semester.

199r Special Projects (1-4)
Individual projects and field components; maximum credit 4 hours. Every semester. Prerequisites: transfer student and approval of School of Education dean.

215r Workshop and Seminar (2-4)
Current topics in education. Special programs and in-service courses. On demand.

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. Includes a field component.

255 Observation and Seminar Concerning Handicapping Conditions (2)
This course provides an experiential approach to understanding specific handicapping conditions and will consist of 20 hours of observation and interaction with specific handicapped children. This course requires attendance in a structured seminar. Spring semester.

320 Nature and Characteristics of Mild Disabilities (4)
An in-depth study of the psychological, physical, education, medical, behavioral and learning characteristics and needs of the mildly disabled population. Includes a field component. Prerequisite: EDSP 250.

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. Includes a field component. Prerequisite: EDSP 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: 250 or 332.

332 Exceptional Students in the Elementary School (3)
A survey of exceptional children and the philosophy of mainstreaming, adaptation techniques, curriculum, materials, resources, referrals, evaluation, and the teacher/ resource-teacher relationship. Every semester. Prerequisite: admission to teacher education program.

333 Exceptional Student in the Regular Secondary Classroom (3)
An overview of handicapping conditions and educational and therapeutic amelioration for secondary school students. An emphasis upon the techniques by and requirements of the secondary school teacher in meeting the legal, educational, and moral obligations to the exceptional student. Every semester.

410 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.

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.

430 Gifted and Talented Children and Adults (3)
This course examines the social, emotional, and intellectual characteristics of the gifted/talented child, and focuses upon the appropriate teaching/learning requirements in resource and regular classrooms. Special attention will be given to program models, curriculum development, and teaching strategies.

440 Classroom Management in Special Education (3)
An examination of the adaptation of classroom management techniques in both classroom as well as individual tutorial situations. Fall semester. Prerequisites: 250 and admission to teacher education program.

453 Speech Disabilities and Language Development (3)
Recognition and understanding of language development and speech disabilities. Basic diagnosis, remediation, and speech improvement activities incorporated. Fall semester. 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 individualizing of instruction. Includes the use of formal and informal assessment results in planning education strategy. Involves a field component.

465 Special Education Practicum (3)
This course encompasses a practicum experience for special education students with opportunity for supervised participation in public school, private school, or institutional special education programs. The student will register for this course concurrently with 461. Spring semester. Prerequisite: 460.

469 Observation and Student Teaching in Special Education (6)
Applied competencies that have been developed through preceding experiences to the actual processes of teaching and guiding children and youth. Student schedule must permit contact with the same classroom situation full time for a minimum of five days per week for at least one half of the semester. Spring semester. Prerequisite: 465.
483 Teaching Internship (9)
Undergraduate credit only. For the temporarily certified employed teacher. Provides close supervision in planning, implementation, and evaluation. Tailored to fit specific school setting. On demand. Prerequisite: 1 year full-time teaching in certifiable area; approval of School of Education dean.

490r 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 the department head.

498r Individual Studies (1-4)
On demand. Prerequisite: approval of the department head.

499r Group Studies (1-4)
On demand. Prerequisite: approval of department head.

Educational Psychology 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.

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.

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.): Adult Fitness Concentration
This concentration is designed for any person interested in professional preparation in exercise leadership, exercise prescription, exercise test technology, and program administration for preventive and rehabilitative exercise 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.

Internship Admittance
The internship practicums in exercise science 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 required.

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 fine arts, one from humanities, and one from either fine arts or humanities (9 hours)
Category C: Psychology C101 and Psychology C241 (6 hours)
Category D: Chemistry D121 (4 hours)
Category F: 1 approved course (3 hours)
Category G: 1 approved course (3 hours)

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

Major and related courses
Theater and Speech 109
Human Ecology 135 and 335
Chemistry 122
Biology 191, 208, 209
Computer Science 102
54 hours including Exercise Science, Health and Leisure Studies 100, 201, 209, 316, 317, 318, 332, 340, 401, 404, 407, 417, 418, 436, 456, 479, 480
Recommended electives: Mathematics 210, Physics 103, Exercise Science 154, Psychology 341
2.0 average required in EHLS courses
2.0 for graduation
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Exercise Science, Health, and Leisure Studies (EHLS)
Professor Norred, Head

EHLS is a department within the School of Education committed to the development and maintenance of active, creative, health-promoting life-styles 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. Five (5) distinct academic career program tracks and two (2) minor courses of study are offered:

Career Program Tracks:
1. Exercise Science: Adult Fitness
2. Exercise Science: K-12
3. Health Promotion: K-12
4. Leisure Studies
5. Sports Administration

Minor Courses of Study:
1. Athletic Coaching
2. Recreation

Exercise Science, Health, and Leisure Studies (B.S.): Adult Fitness Concentration

This concentration is designed for any person interested in professional preparation in exercise leadership, exercise prescription, exercise test technology, and program administration for preventive and rehabilitative exercise 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.

Internship Admittance

The internship practicums in exercise science 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 required.

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 fine arts, one from humanities, and one from either fine arts or humanities (9 hours)
Category C: Psychology C101 and Psychology C241 (6 hours)
Category D: Chemistry D121 (4 hours)
Category F: 1 approved course (3 hours)
Category G: 1 approved course (3 hours)

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

Major and related courses
Theater and Speech 109
Human Ecology 135 and 335
Chemistry 122
Biology 191, 208, 209
Computer Science 102
54 hours including Exercise Science, Health and Leisure Studies 100, 201, 209, 316, 317, 318, 332, 340, 401, 404, 407, 417, 418, 436, 456, 479, 480
Recommended electives: Mathematics 210, Physics 103, Exercise Science 154, Psychology 341
2.0 average required in EHLS courses
2.0 for graduation
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

Educational Psychology 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.

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.
Typical course of study in exercise science, health and leisure studies (B.S.): adult fitness concentration

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<thead>
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<td>Human Ecology 135</td>
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<td>Psychology C241</td>
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<td>EHLS 332</td>
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<td>EHLS 401</td>
<td>EHLS 418</td>
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<td>EHLS 407</td>
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* CPR certification and liability insurance required prior to registration for internships

TOTAL HOURS 128

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 insure necessary skills for both teaching and coaching. Graduates of this concentration may seek entry into graduate studies.

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: Philosophy B201 and 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
Category F: Mathematics F120
Category G: 1 approved perspectives course (3 hours)

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

**Major and related courses**

NOTE: Current requirements for licensure/endorsement in this area for which the Board has adopted new standards remain in effect until December 1994. However, it emphasized that all students entering in the fall of 1991 and after must enter under new programs designed for licensure/endorsement as approved by the Tennessee Board of Education. These new programs are sail in a period of transition. Course titles, numbers and credit hours may be adjusted or changed as curriculum decisions are made.

Computer Science 102
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, and minimum of 12 hours in professional activities as follows:

4 hours from EHLS 203, 204, or 205
2 hours from EHLS 206 or 207
6 hours from EHLS 208, 209 or 210
31 hours from the School of Education including Curriculum and Instruction 201, 433, 438; Exercise Science, Health, and Leisure Studies 330,401,431,436

For graduation: 2.5 average in exercise science, health, and leisure studies and 2.0 average in School of Education courses

For certification: 2.5 average overall, 2.5 average in teaching fields, 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 127.

Typical course of study in exercise science, health, and leisure studies (B.S.)s exercise science K-12 concentration

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<td>University Studies 101</td>
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<td>Biology 191</td>
<td>Biology 208, 209</td>
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<tr>
<td>Mathematics Fl 20</td>
<td>Philosophy B201</td>
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<td>Psychology C101</td>
<td>Theater and Speech 109</td>
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<td>EDCurr.&amp;Instr. 201</td>
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<tbody>
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<td>EHLS 317</td>
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<td>EDCurr.&amp;Instr. 438</td>
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TOTAL HOURS 128
Exercise Science, Health, and Leisure Studies (B.S.): Health Promotion K-12 concentration

This career program prepares students who desire teacher licensure/certification and endorsement in health education instruction (K-12). Graduates of this concentration may seek entry into advanced graduate studies.

**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: Fine Arts, Humanities, Philosophy B201 (9 hours)
- Category C: Psychology C101 and Human Ecology C340 (6 hours)
- Category D: Chemistry D121 (4 hours)
- Category E: Mathematics F120
- Category F: 2 approved courses in written communication in the English language

**Major and related courses**

**NOTE:** Current requirements for licensure/endorsement in this area for which the Board has adopted new standards remain in effect until December 1994. However, it emphasized that all students entering in the fall of 1991 and after must enter under new programs designed for licensure/endorsement as approved by the Tennessee Board of Education. These new programs are still a period of transition. Course titles, numbers, and credit hours may be adjusted or changed as curriculum decisions are made.

Computer Science 102
Theatre and Speech 109
Psychology 191, 208, 209
Psychology 221 or 222
Biology 191, 208, 209
Psychology 135, 328; Exercise Science, Health, and Leisure Studies 100, 154, 250, 303, 317, 436, 450, 451, 452, 453, and 3 hours of electives selected in consultation with the advisor
31 hours from the School of Education including Curriculum and Instruction 201, 321, 433, 438; Exercise Science, Health, and Leisure Studies 302, 401, 431
For graduation: 2.5 average in Exercise Science, Health, and Leisure Studies and 2.0 average in School of Education courses
For certification: 2.5 average overall, 2.5 average in teaching fields, 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 127.

Typical course of study in exercise science, health, and leisure studies (B.S.): health promotion K-12 concentration

<table>
<thead>
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<th>First Semester</th>
<th>Second Semester</th>
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<td>Chemistry D121</td>
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**JUNIOR**
- EHLS 317
- EHLS 317
- EHLS 451
- EDCurr. &Instr. 321
- Electives (Liberal Studies)
- EHL Elective

**TOTAL HOURS 128**

Admission to 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 these 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 the 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 required.

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, total 9 hours)
Category C: Political Science C101 and Economics C102 (3 hours each, total 6 hours)
Category D: Environmental Science D150 (4 hours)
Category E: 1 approved course in mathematics (3 hours)
Category G: Human Services G300 (3 hours)

The Freshman Seminar
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, 407; 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

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<tr>
<td>Sociology 305</td>
<td>EHLS 303</td>
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<tr>
<td>EHLS 208</td>
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<tr>
<td>Elective</td>
<td>EHLS Prof. Activity (Team Sports)</td>
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<tr>
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<td>EHLS 405</td>
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<td>EHLS 453</td>
<td>EHLS 470</td>
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<td>15</td>
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</tr>
</tbody>
</table>

**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 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 required.

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, total 9 hours)
Category C: Economics C101, C102 (6 hours)
Category D: 1 approved physical or natural science course with laboratory (4 hours)
Category E: 1 approved mathematics course (3 hours)
Category G: Human Services G300 (3 hours)

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

Computer Science 102
Political Science 233
Accounting 201
Communication 201

33 hours related courses to include: Computer Science 102; Communication 101 and 200; Theatre and Speech 109; Accounting 201, 202, and either 335 or 336; BMarketing 313; BMangement 315 and 6 hours from BMangement 103, 310, 332, 410
42 hours exercise science, health, and leisure studies to include: Exercise Science, Health, and Leisure Studies 100, 154, 200, 304, 325, 401, 405, 407, 453, 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 advisor to complete 128 hours

<table>
<thead>
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<th>Major and related courses</th>
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<tr>
<td>33 hours related courses to include: Computer Science 102; Communication 101 and 200; Theatre and Speech 109; Accounting 201, 202, and either 335 or 336; BMarketing 313; BManagement 315 and 6 hours from BManagement 103, 310, 332, 410</td>
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<tr>
<td>42 hours exercise science, health, and leisure studies to include: Exercise Science, Health, and Leisure Studies 100, 154, 200, 304, 325, 401, 405, 407, 453, 470, 479, 480</td>
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<tr>
<td>2.0 average in EHLS component of major courses</td>
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<tr>
<td>Minimum of 30 hours of 300 and 400 level courses</td>
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<tr>
<td>Electives to be selected by student and assigned academic advisor to complete 128 hours</td>
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Course of study in exercise science, health, and leisure studies (B.S.): sports administration concentration

<table>
<thead>
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<th>First Semester</th>
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<td>General Education Category B</td>
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<td>Economics C101</td>
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<td>EHLS 100</td>
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<td>EHLS 021</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
</tbody>
</table>

| **SOPHOMORE**   |                 |
| General Education Category B | 3 | Communication 101 | 3 |
| General Education Category F | 3 | B Accounting 202 | 2 |
| Computer Science 102 | 3 | Human Services G300 | 3 |
| Theatre and Speech 109 | 3 | B Management | 3 |
| B Accounting 201 | 3 | EHLS 304 | 3 |
| EHLS 200 | 2 | EHLS 325 | 3 |
| **Total** | 17 | **Total** | 17 |

| **JUNIOR** |                 |
| B Marketing 313 | 3 | B Management Elective | 3 |
| Communication 290 | 3 | EHLS 405 | 3 |
| B Accounting 335 or 336 | 3 | EHLS 407 | 3 |
| EHLS 407 | 3 | Electives | 7 |
| Electives | 4 |                 | 4 |
| **Total** | 17 | **Total** | 17 |

| **SENIOR** |                 |
| EHLS 401 | 3 | EHLS 479 | 6 |
| EHLS 453 | 3 | EHLS 480 | 6 |
| B Management Elective | 3 | Approved Electives | 2 |
| Electives | 6 |                 | 6 |
| **Total** | 15 | **Total** | 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 adjunct 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 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 semester.

**224 Movement Education (2)**
Skill development and teaching procedures in movement education, fundamental and contemporary movement patterns. Every semester.

**316 Laboratory Methods and Procedures in Exercise Science (I)**
The study of physiological functions of the human body during exercise. Fall semester. Pre or **Corequisite:** EHLS 317 or equivalent.

**317 Foundations of Exercise Physiology (3)**
Intensive study of various physiologic processes related to exercise. Fall semester. Prerequisite: CHEM 121, BIOL 191, 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: BIOL 191 or approval of instructor.

**330 Physical Education in the Elementary School (3)**
Practical aspects of planning, organizing, administering, and evaluating programs 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. Prerequisite: EHLS 201 or approval of instructor. Fall semester.

**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: BIOL 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. Prerequisite: Equivalent of EHLS 201, 322; MATH FI 20; 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.

**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. Prerequisite: EHLS 304 or 332; 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. On demand. Prerequisite: equivalent of 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: BIOL 208, 209, CHEM 122, E HLS 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: E HLS 417 and approval of instructor.

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. Prerequisite: equivalent of E HLS 302 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 E HLS 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 E HLS department head.

498r Individual Studies (1-4)
Every semester. Prerequisite: approval of E HLS department head.

499r Group Studies (1-4)
Every semester. Prerequisite: approval of E HLS department head.

E HLS: 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 learning, and psychomotor skills. Minimal competency levels may be established according to die 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, Aerobic, 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 neuro-muscular 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.

E HLS: 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 E HLS department head.

250 Introduction to Health (3)
Role of health in American education based upon the historical, social, economic, and political forces affecting health education in schools and community; philosophy and principles of profession. On demand.

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

43lr Teaching Strategies and Materials in Exercise Science and Health (3)
Curricular and media developments appropriate for the respective discipline. E HLS senior; teaching candidate. Fall semester.

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, 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.
148 — Exercise Science

452 Problems in Health: Aging, Death Education, Human Diseases (3)
Analysis of concepts and attitudes toward aging, death, bereavement, prevention and control of communicable and degenerative diseases. Spring semester. Prerequisites: equivalent of EHLS 100, 302, 303; 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.

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 semester. Prerequisite: approval of instructor or EHLS senior or graduate standing.

457 Research (1-4)
On demand. See "Departmental Honors", page 27.

495r Departmental Honors (1-3 hours per term, 4 hours the two terms)
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.

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 program leader and EHLS department head.

499r Group Studies (1-4)
Every semester. Prerequisite: approval of program leader and EHLS department head.

EHLS: SERVICE PROGRAM

Physical Recreational Activities
Courses within the service program hold contemporary attractiveness as "lifetime" activities and should appeal to the educated adult for maintaining a healthful and wholesome lifestyle.

Every undergraduate student will be expected to satisfactorily complete a minimum of two exercise science/leisure studies activities, one of which must be EHLS 021.

EHLS SERVICE PROGRAM COURSES
The second digit in the service course number indicates the level of skill required for the course. The 2 indicates beginning level, while the 3 indicates intermediate or advanced level. Students will be screened during the initial phase of the course to ascertain the course level in which they should participate. Upon learning of that recommended level, each student will be expected to adjust his or her schedule accordingly in order to derive the greatest participatory benefits from the course.

021 Concepts and Application in Physical Education (1)
Acquaints students with concepts, understandings, and physiological values of physical activity as applied to optimal living. Laboratory in motor skills required. Every semester.

022r or 032r Recreational Activities (1)
Archery, backpacking, badminton, bicycling, bowling, camping, canoeing, circuit training, fencing, golf, gymnastics, handball, ice skating, racquetball, riflery, rowing, water skiing, sculling, tennis, sailing, weight training, and physical conditioning. Every semester.

023r or 033r Team Sports (1)
Basketball, volleyball, Softball, speedball, soccer, flag football. On demand.

024r or 034r Swimming (1)
Beginning swimming; intermediate swimming, advanced scuba diving, SCUBA diving, SCUBA lifesaving and accident management, lifesaving, water safety instructor I and II certification. Every semester. Prerequisite: proficiency test to determine skill.

025r or 035r Body Mechanics (1)
Individualized program for students with disabilities who are unable to participate in regular activity classes. Every semester. Prerequisite: referral by physician and approval of EHLS department head.

026r or 036r Dance (1)
Aerobic, ballet, modern, folk and square, and contemporary jazz. Every semester.
Human Ecology

Associate Professor Tanner, 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 22-24 for list of approved courses)
Category A: 2 approved courses in written communication in the English language (6 hours)
Category B: Theatre and Speech Bl 15, History B204, and one course from either humanities or fine arts (3 hours each; approved related courses below will apply)
Category C: Political Science C101 plus one approved behavioral or social science course (3 hours; approved related courses below will apply)
Category D: Environmental Science D150
Category F: Mathematics Fl 15
Category G: Anthropology G208

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

Major and related courses
Art B11 or Art B301
Music B11 or Music B317
Philosophy 201
English 228
University Studies 340
Psychology C101 or Psychology C241
Political Science 223
University Studies 111 *
Mathematics 116
Computer Science 102
Human Ecology core: 202, 208, 340, 402
Child and Family Studies core: Human Ecology 135,301,350,440,445; Psychology 340*; Exercise Science, Health and Leisure Studies 302,330; Art 322*; Music 322*; Theatre and Speech 322*

Completion of one of the following options:
Option A: Pre K-3 (Early Childhood licensure)
33 hours including Curriculum and Instruction 201,306,320,411,412,414, 4", 410,420; Special Education 332
Option B: Child and Family Studies
27 hours including Human Ecology 304,306,332,405; Educational Psychology 101,401; B Management 332; Mathematics F210; Sociology 151
For graduation: 2.00 average in School of Education course
For certification: 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

“Courses have not yet been developed so numbers are subject to change

Typical course of study in human ecology (B.S.)
child and family studies Pre K-3 (early childhood) (option A)

First Semester
Second Semester
FRESHMAN
University Studies 101 3 Human Ecology 135 3
English 121 3 English 122 3
Psychology C101 or 241 3 Political Science 101 3
University Studies 111 3 Philosophy 201 3
EHLS 023 1 Music 111 or 317 3
Theatre and Speech 115 3 History 204 3
Total 16 Total 18

SOPHOMORE
Human Ecology 202 1 Anthropology 208 3
Human Ecology 208 3 Human Ecology 340 3
Environmental Science 150 4 Mathematics 116 3
Human Ecology 241 3 Computer Science 102 3
Political Science 233 3 EHLS 022 1
Mathematics Fl 15 3 University Studies 340 3
Total 17 Total 19

JUNIOR
Human Ecology 350 3 ED Curr. & Instr. 420 3
Art 111 or 301 3 Art 322 1
EHLS 302 3 Music 322 1
Human Ecology 440 3 Theatre and Speech 322 1
ED Curr. &Instr. 320 3 Psychology 340 3
ED Curr. &Instr. 410 3 Human Ecology 445 3
Total 18 Total 15

SENIOR
Human Ecology 402 3 ED Curr. & Instr. 4xx 12
ED Psychology 332 3
ED Curr. & Instr. 411 1
ED Curr. & Instr. 412 1
ED Curr. & Instr. 414 1
ED Curr. 6k Instr. 306 3
English 228 3
Total 15 Total 12

TOTAL HOURS 130

Typical course of study in Human Ecology: (B. S.)
child and family services (option B)

First Semester
Second Semester
FRESHMAN
University Studies 101 3 Human Ecology 135 3
English 121 3 English 122 3
Psychology C101 or 241 3 Political Science 101 3
General Science 101 3 Philosophy 201 3
English 021 1 Music 111 or 317 3
Theatre and Speech 115 3 History 204 3
Total 16 Total 15

TOTAL HOURS 130
Human Ecology (B.S.): merchandising

**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 courses below will apply)
- **Category C:** 2 approved behavioral or social science course (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)

The Freshman Seminar

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, 340, 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 Economics 101, 102, B Management 315;
  - B Marketing 313,361,364,365, B Accounting 201
- **B. Textiles:**
  - 15 hours in Human Ecology including: 313, 318, 411, 412, 415
  - 23 hours including: Economics 101, 102; B Management 315;
  - B Accounting 201; Chemistry D121,122; B Marketing 313

**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.

**First Semester**

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<th>Category D (Chemistry 121)</th>
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<td><strong>Textiles</strong> 3</td>
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<td>3</td>
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<tr>
<td>9 hours including Art 105, 214, 215</td>
<td><strong>Elective</strong> 3</td>
<td>3</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>2.00 average in all Human Ecology courses, minimum of 30 hours of 300 and 400 level courses; electives to complete 128 hours</td>
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**Second Semester**

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<th>Category C</th>
<th>Category D (Chemistry 121)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>121, 220, 223, 225, 312, 317, 320, 321, 324, 412</td>
<td><strong>Textiles</strong> 3</td>
<td>3</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>9 hours including Art 105, 214, 215</td>
<td><strong>Elective</strong> 3</td>
<td>3</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>2.00 average in all Human Ecology courses, minimum of 30 hours of 300 and 400 level courses; electives to complete 128 hours</td>
<td></td>
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</tbody>
</table>

**TOTAL HOURS 128**

* Advising sheets for each Human Ecology specialty available in the department.
Human Ecology (B.S.): interior design 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, approved related courses below will apply)
- **Category C:** 2 approved behavioral or social science course (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)

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

**Major and related courses**
- Computer Science 110; Art B214,215,314
- Human Ecology Core: Human Ecology 202, 208,340,402
56 hours form Human Ecology including: 120,121,211,220,223,225,320,321,324,326,327,329,405,412,420,421,422,424,425
- 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**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
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<tr>
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**JUNIOR**

| Human Ecology 316 | 3 | Human Ecology 312 | 3 |
| Human Ecology 315 | 3 | Human Ecology 412 | 3 |
| Human Ecology 320 | 3 | Human Ecology 321 | 3 |
| Art 214 Category B | 3 | Art 215 | 3 |
| Human Ecology 340 | 3 | Human Ecology 310 | 3 |
| Human Ecology 329 | 3 | Elective | 1 |
| Total | 18 | Total | 16 |

**SENIOR**

| Intern Block | | | |
|----------------|-----------------|-----------------| |
| Human Ecology 416 | 3 | General Education Category G | 3 |
| Human Ecology 417 | 3 | Human Ecology 402 | 2 |
| Human Ecology 419 | 6 | Electives | 10 |
| Total | 12 | Total | 15 |

**TOTAL HOURS 128**

Human Ecology (B.S.): food and nutrition 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, approved related courses below will apply)
- **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)

The Freshman Seminar
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
- Psychology C101
- Sociology C151
- Theatre and Speech 109
- Political Science C101 or 244
- Human Ecology Core: 202,208,340,402
27 hours form Human Ecology including: 135,236,237,330,332,334,335,350,430,431,432,435, and:
- a. 15 hours from Biology 191,208,209,210; Chemistry 121,122,351,352,466*
- or
- b. 15 hours from B Accounting 201,335,336; Management 315,332, Marketing 313
2.00 average in all human ecology courses
- Minimum of 30 hours of 300 and 400 level courses
- Electives to complete 128 hours

*Students desiring to complete an American Dietetic Association Approved Program in Dietetics must take all courses from option a and:
- B Management 315 or 332
- Anthropology 208
- B Accounting 201
Typical course of study in Human Ecology (B.S.): food and nutrition

First Semester

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<th>Course</th>
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<td>English 121</td>
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<td>Psychology C101</td>
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Second Semester

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<td>English 122</td>
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<td>Sociology C151</td>
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<tr>
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<tr>
<td>Mathematics F210</td>
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<td>Computer Science 110</td>
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<td>Economics 102</td>
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TOTAL HOURS 128

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. Lecture 1 hour. Studio 4 hours. Formerly Human Ecology 101. Every semester.

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. Studio 6 hours. Spring semester. Prerequisite: 120.

135 Nutrition (3)

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. Fall 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.

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. Lecture 2 hours, lab 2 hours. Spring semester and summer. 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. Fall semester. Studio 6 hours. Prerequisite 121.

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: 121. Corequisite: 220.

225 Elements of Interior Design (3)
A study of components of the interior basic to the art of interior design: wall treatments, floor coverings, window treatments, floor coverings, fabric selections, furniture selections. Formerly Human Ecology 315. Spring semester. Prerequisites: 120,220,223.

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. Formerly Human Ecology 206. Fall semester. Lecture 2 hours, laboratory 2 hours.

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. Lecture 2 hours, laboratory 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 group perspective are presented. Textiles and clothing are 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, Sociology 125, Psychology 101.
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 are taught through mathematical problems. Spring semester. Prerequisites: HECO 210, Math 210, Acct. 201

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: 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: 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. The course will focus on both interior and exterior visual presentation including signage, windows, colors, lighting, mannequins, fixtures, floor planning and promotions. Every other Fall Semester. Prerequisites: HECO 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: HECO 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 the characteristics of furnishings and interiors of the late nineteenth century and the twentieth century. Includes furniture designers, interior designers, design movements, and the effects of the Industrial Revolution and the consequent use of machinery in the production of furniture. Formerly Human Ecology 403. Spring 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. Prerequisites: 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. Formerly Human Ecology 390. On demand.

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) will be explored. Fall semester. Studio 6. Prerequisites: 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: 326.

328 The Consumer and the Market (3)

329 Codes and Specifications (3)
The study of interior subsystems and their application to architectural spaces. Emphasis will be 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, laboratory 2 hours. Prerequisites: 236, Chemistry 122, Biology 210.

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 level. Fall semester. Prerequisite: 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: IO5 or equivalent; Chemistry 121, 122 or equivalent. Formerly Human Ecology 305

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. Crisis 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. Spring semester. Prerequisite: approval of the department.

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. Prerequisite: senior status in human ecology and approval of department.

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. Prerequisite: HECO 2 J1, CHEM 121. Corequisite CHEM 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. Includes conservation and display techniques appropriate for historic textiles. Spring semester. Prerequisite: 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, stock turn, stock-sales ratio, and pricing formulas. Fall semester. Prerequisite: 313.
415 Textiles and Apparel Economics (3)
Examination of the textile and apparel complex as a significant economic sector. Also 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. Prerequisite: Human Ecology 210, Economics 101, 102.

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 the fall semester only. Prerequisite: All required merchandising courses. Corequisite: 417, 419. Must be taken the last or next to the last semester before graduation.

417 Internship Concepts and Preparation (3)
This course fully prepares students for their required field internship including assigning each student to their intern business. First half of the fall semester only. Prerequisite: All required merchandising courses. Corequisite: 416, 419. Must be taken the last or next to the last semester before graduation. An approved internship application one year prior to anticipated internship.

419 Merchandising Field Internship (6)
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. Prerequisite: All required merchandising courses. Must be taken the last or next to the last semester before graduation. An approved internship application one year prior to anticipated internship.

420 Management Procedures for Interior Design (3)
General characteristics of management terminology and procedures in the interior field with a major emphasis placed on the ability to systematize and control the flow of operations, money, materials and commitments. Spring semester. Prerequisites: successful completion of a juried portfolio review.

421 Advanced Design Synthesis (2)
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. Prerequisites: successful completion of juried portfolio review.

422 Contract Interiors (3)
Development of creative ideas in commercial design projects which integrate interior design elements to achieve predetermined goals. Fall semester. Studio 6 hours. Prerequisites: successful completion of juried portfolio review.

424 Computer Aided Design for the Built Environment (3)
Project application management of interactive computer graphic systems. Spring semester. Studio 6 hours. Prerequisites: successful completion of juried portfolio review.

425 Interior Textile Design (3)
A study of the process of the design of textiles for interior use. The course will focus on the designs, construction, and specification of textiles as related to wall, window, and flooring needs. Computer aided techniques will be applied where appropriate. Spring semester. Studio 6 hours.

430 Food Systems Administration I (3)
Management, organization, and administration of food service in institutions. Fall semester.

431 Quantity Food Service (3)
Principles, methods, and techniques in planning, purchasing, production, and service of food in quantity; selection and use of equipment; and quality standards. Laboratory experiences in approved local institutions. Fall semester. Pre- or corequisite: 430.

432 Food Systems Administration II (3)
A continuation of 430 with emphasis on production, manpower, facility, and financial planning in food service and hospitality systems. Spring semester. Prerequisites: 430, 431.

435 Diet Therapy (4)
Application of diet designed for die prevention and treatment of diseases which are influenced by food intake. Laboratory experiences in diet calculations, nutritional assessment techniques, and patient charting skills. Lecture 3 hours, lab 2 hours. Spring semester alternate years. Prerequisite: Human Ecology 335 or Biology 208, 209. Formerly Human Ecology 401.

440 Infant Development and Observation (3)
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, laboratory 2 hours.

445 Parenting (3)
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 is 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, laboratory 2 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.
School of Engineering

Professor Ronald B. Cox, Dean

The School of Engineering is the organizational unit of the University which is responsible for engineering, engineering management and computer science programs. Programs are offered which lead to the Bachelor of Science in Engineering degree, the Bachelor of Science degree with a major in engineering management, the Master of Science degree with a major 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. Engineering management and computer science programs are described under separate heading immediately following the engineering descriptions.

Programs and Administrative Heads
Professor Edwin Foster, Director
Civil Engineering (Structured)
Professor Jack Thompson, Head
Computer Science (Information Systems, Scientific Applications, Systems Architecture, Topical)
Electrical Engineering (Instrumentation and Control, Power)
Professor Williams Gurley, Director
Chemical Engineering, Environmental Engineering, Mechanical Engineering (Mechanics, Thermal Science)
UC Foundation Assistant Professor Gregory Sedrick, Director
Engineering Management, Industrial Engineering, Manufacturing Engineering (Management, System)

The full-time faculty providing instruction for the above programs have extensive experience in the combined areas of engineering practice and higher education. In addition, the school draws on the talents of adjunct faculty who are employed in professional capacities in a variety of industrial and governmental settings.

Additionally, 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.

Transfer Credit
Credits received by transfer for required engineering courses in either engineering or engineering management programs must be 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 analytical tools, and an appreciation of total quality management principles. These skills 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 a combination of the application of engineering principles, economics, communications, safety, and ethics.

Following three years of building-block experiences, senior students work collectively in a year-long design project. This project is a capstone experience which 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, first-hand, 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 utilization is integrated throughout the curriculum. The study of 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 communicational 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)

**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)

**Category D:** 1 approved physical or natural science course with laboratory (4 hours; approved related course below will apply)

**Category E:** 1 approved mathematics course (3 hours; approved related course below will apply)

**Category G:** 1 approved perspectives course other than engineering (3 hours)

The Freshman Seminar (approved related course below will apply)

Health and Physical Education 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 (46 to 56 hours)
- Speciality Courses: 24 hours minimum (including senior design)
- Electives depend on program selected
- Minimum degree requirements: 135 hours (145 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 three years. Specialization courses are taken during the 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
- Physics 231
- Speciality Engineering Courses: 27 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
- Speciality Engineering Courses: 27 hours including 452, 460, 462, 465, 468, 493, 494* plus approved elective
- 2.0 average in all engineering courses
- Total hours: 138 (148 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
(see above)

**Major and related courses**
- Mathematics F150, 160, 212, 245, 255
- Chemistry D121
- Physics 231, 232
- 2.0 average in all engineering courses
- Total hours: 142 (152 for co-op graduates)

*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
Speciality Engineering Courses: 20 hours including 331, 430, 433, 435, 437, 493,494* 2.0 average in all engineering courses
Total hours: 143 (153 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
Speciality Engineering Courses: 25 hours including 354, 450, 452, 457, 493, 494* plus approved electives
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.

Manufacturing Engineering

(Two tracks: Management or Systems)

General Education requirements (see above)
Major and related courses
Mathematics F150,160, 212, 245, 255
Chemistry D121
Economics 0 0 1 , 0 0 2
Physics 231
Speciality Engineering and Related Courses (Management): 37 hours including Engineering 358,452,453,456,457,458,493,494* Accounting 201,202, 305 or 306; Psychology 406
Total hours (Management): 140 (150 for co-op students)
Total hours (Systems): 138 (148 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
Speciality Engineering Courses (Mechanics): 24 hours including 348,405,406, 442,493,494*, plus two courses selected from 444,445,446 or 468.
Speciality Engineering Courses (Thermal Science): 24 hours including 331, 405,406,436,493,494*, either 438 or 439 plus approved elective.
2.0 average in all engineering courses
Total hours: 135 (145 for co-op graduates)

*For qualified students, Engineering 495 (Honors) may be substituted for 4 of the 7 hours required in Engineering 493,494.

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 and Manufacturing Engineering differ from this sequence; see under Areas of Specialization.

First Semester  
Second Semester
FRESHMAN  
Engineering 102  
3  
Engineering 104  
3  
Engineering 103  
3  
Engineering 114  
1  
Engineering 113  
1  
Mathematics 160  
4  
Engineering 112  
1  
Mathematics 212  
3  
Engineering 124  
3  
Chemistry D1 21  
4  
Mathematics 150*  
4  
General Education Category A  
3  
General Education Category A  
3  
Physical Education 021  
1  
Total  
18  
Total  
19

**SOPHOMORE**  
Engineering 225  
3  
Engineering 248  
3  
Engineering 246  
3  
Engineering 271  
1  
Engineering 247  
1  
Engineering 272  
3  
Mathematics 245  
3  
Mathematics 255  
3  
Physics 231  
4  
Physics 232  
4  
General Education Category C  
3  
General Education Category C  
3  
Physical Education Activity  
1  
Total  
18  
Total  
17

*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 usually taken in lieu of engineering and physics. Thus 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  
Second Semester
FRESHMAN  
Engineering 102  
3  
Engineering 104  
3  
Engineering 103  
3  
Engineering 114  
1  
Engineering 113  
1  
Mathematics 160  
4  
Engineering 112  
1  
Mathematics 212  
3  
Engineering 124  
3  
Chemistry D122  
4  
Mathematics 150  
4  
General Education Category A  
3  
Chemistry D121  
4  
Physical Education 021  
1  
Total  
19  
Total  
19

**SOPHOMORE**  
Engineering 225  
3  
Engineering 248  
3  
Engineering 246  
3  
Engineering 271  
1  
Engineering 247  
1  
Engineering 272  
3  
Mathematics 245  
3  
Mathematics 255  
3  
Physics 231  
4  
Physics 232  
4  
General Education Category C  
3  
General Education Category C  
3  
Physical Education Activity  
1  
Total  
18  
Total  
17

**JUNIOR**

Engineering 303  
4  
Engineering 307,308  
4  
Engineering 328  
3  
Engineering 331  
3  
Engineering 329  
1  
Engineering 380  
1  
Engineering 340  
3  
Engineering 381  
1  
Chemistry 371  
4  
Chemistry 372  
4  
Physics 231  
4  
General Education Category B  
3  
Total  
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Total  
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### 158 — Engineering

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**TOTAL HOURS 144**

### Environmental Engineering—

Students in this area generally vary form 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 usually taken in lieu of engineering and physics courses. Thus these students must consult their advisers at the beginning of their freshman year in order to give consideration to prerequisites and programs integration.

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**TOTAL HOURS 138**

### Civil Engineering (Structural)—

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**TOTAL HOURS 138**

### Electrical Engineering (Instrumentation and Control)—

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**TOTAL HOURS 142**

### Electrical Engineering (Power)—

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**TOTAL HOURS 142**

### Industrial Engineering—

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**TOTAL HOURS 143**
### Manufacturing Engineering (Management)—

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**TOTAL HOURS 136**

### Manufacturing Engineering (Systems)—

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**TOTAL HOURS 140**

### Mechanical Engineering (Mechanics)—

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**TOTAL HOURS 135**

*Two courses selected from 444,445,446, and 468.*

### Mechanical Engineering (Thermal Science)—

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</table>

**TOTAL HOURS 135**

**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 School of Engineering in order that an appropriate course of study can be developed.
Engineering Management Program

Assistant Professor G. Sedrick, Director

The engineering management program is an interdisciplinary program leading to a Bachelor of Science (B.S.) degree.

The purpose of the program is to provide an opportunity for students to develop quantitative and qualitative skills in areas which bridge the gap between engineering and business programs. This preparation qualifies the graduate for broad-based assignments in industry and government as well as providing a solid background for advanced study. The management title does not imply that graduates will automatically manage engineers or other professionals. It does suggest that the program of study is useful in developing skills and techniques appropriate to those who are either in management positions or who expect to be in management positions in the future.

Engineering 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)

The Freshman Seminar (approved related course below will apply)
Exercise Science, Health and Leisure Studies 021 plus one additional semester exercise science activity

Major and related courses
Math F145, F150, 160, 212, 245
Chemistry D121
Physics 231, 303
Engineering 102, 103, 104, 112, 113, 114, 124, 225, 246, 247, 303, 354, 410, 411, 452, 457
Economics C101, C102
Accounting 201, 202, 305
Management 211, 212, 311
Finance 302
Marketing 313
Psychology 406 (Industrial/Organizational Behavior)
Free electives (10 hours)
2.0 average in all engineering, accounting, finance, management, and marketing courses
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 engineering management (B.S.)

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TOTAL HOURS 128

Cooperative Engineering Program

B. Hull, Coordinator; Professor Michael Jones, Advisor

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** Students participating 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**
Introduction to the nature of university education including engineering education. Designed to help freshmen adjust to the University, to develop a better understanding of the learning process and processes of critical thinking, and to enrich their appreciation for the University’s commitment to development of the intellect. Every semester. Formally Engineering 110, 111 Lecture 1 hour.

113 **Freshman Engineering Laboratory (1) CORE**
Laboratory experiments to support and enhance the topics listed form 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.

199 **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)  
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, and optimization. Fall semester and summer. Lecture 3 hours. Prerequisite: Engineering 124 with grade of C or better. Corequisite: Mathematics 245.

246 Mechanics of Materials (3)  
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 C or better. Corequisites: 247, Mathematics 245.

247 Mechanics Laboratory (1)  
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)  
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: 104 with grades of C or better. Corequisite: Mathematics 245.

271 Electrical Circuits Laboratory (1)  
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 (4)  
Classical thermodynamics with emphasis on first and second laws of thermodynamics. Property relationships, chemical equilibrium, and cycle analysis. Fall semester and summer. Lecture 4 hours. Prerequisites: 104 with grade of C or better. Corequisite: Mathematics 245.

307 Fluid Mechanics (3)  
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. Prerequisites: 104 with grade of C or better; Mathematics 255; Corequisite 308.

308 Fluid Mechanics Laboratory (1)  
Laboratories that include pressure, quantity and property measurements: impulse, momentum 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)  
Introduction to probability and statistical methods with application to engineering problems. Basic statistical distributions. Simulation of stochastic processes. Elementary sampling, testing, and estimation. Spring semester and summer. Lecture 3 hours. Prerequisites: 124 with grade of C or better, Mathematics 255.

325 Signals and Systems (3)  

328 Control Systems (3)  
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, 272 with grades of C or better. Corequisite: 329.

329 Control Systems Laboratory (1)  
Digital computer techniques for analysis, design and simulation of linear continuous time systems. Design project included. Fall semester. Laboratory 3 hours. Corequisite: 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 C or better, Chemistry 121.

340 Engineering Materials Science (3)  
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 C or better, Mathematics 255.

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 man-machine interfaces (ergonomics) and productivity improvements. Computer applications and design project included. Spring semester. Lecture 2 hours, laboratory 3 hours. Prerequisite 322 with a grade of C or better or BMGT 211.

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. Prerequisite: 340 with grade of C or better.

371 Electronic and Machinery Laboratory (1)  

372 Electronics and Machinery (3)  
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 C or 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. Formerly 475. 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. Problem definition and concept generation. Characterization of design as a decision process with objectives, constraints, a model, and appropriate optimization technique. Economic and managerial considerations. Every semester. Lecture 3 hours. Prerequisites: completion of 36 hours in Engineering CORE, including 225 with grades of C or better. Corequisite: 381.

381 Introduction to Engineering Design Laboratory (1) CORE
Personal computer applications laboratory in project planning, engineering economy, optimization, and decision making. Application to design project. Every semester. Laboratory 3 hours. Prerequisites: completion of 36 hours in Engineering CORE, including 225 with grade of Cor better. Corequisite: 380.

90r 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/0’ Credit basis.

405 Heat and Mass Transfer (4)
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 4 hours. Prerequisite: 307, 308 with grades of Cor better.

406 Thermal Science Laboratory (1)
Laboratory experiments involving heat conduction, convection, radiation, and thermal devices such as internal combustion engines, heat pumps, and heat exchangers. Design experience included. Fall semester. Laboratory 3 hours. Prerequisite: 307, 308 with grades of Cor better. Corequisite: 405.

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 a satisfactory/no credit basis. Normally taken as corequisite with 497, 498.

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, 433 with grades of C or Cor better. Corequiring: 433, 434.

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: 331, 405 with grades of Cor 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, backmix, tubular, and fluidized bed reactors. Individual or group design project. Spring semester. Lecture 3 hours. Prerequisites: 331, 405 with grades of Cor better. Chemistry 371.

435 Chemical Processes Laboratory (1)
Laboratory exercises in chemical operations, 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.

436 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 Cor better.

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 field 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 Cor better.

439 Internal Combustion Engines (4)
Thermochemical phenomena in internal combustion engines. Topics include testing techniques, combustion, detonation, carburetion, equilibrium, and dissociation. 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.

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 Cor better.

444 Applied Elasticity (3)

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 Cor 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 Cor better; Mathematics 245, 255.

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.
452 Engineering Economy (3)
Economic decisionmaking for engineering systems. Choice of alternatives by equivalent annual cost, rate-of-return, present worth, and benefit-cost methods. Tax influences, statistical decision-making, replacement policy. Fall semester. Lecture 3 hours. Prerequisites: 380 with grade of C or better or consent of instructor; Mathematics 136 or 160.

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: 358, 380, 381 with grades of C or 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 C or better, Mathematics 160 or equivalent.

457 Quality Control (3)
Detailed study of theory and methods for the design and analysis of quality systems. Product specifications, process control, acceptance inspection, other means of assurance. Spring semester. Lecture 3 hours; laboratory work and design experience included. Prerequisite: 322 with grade of C or better or Management 211.

458 Industrial Plant Layout (3)
Types and techniques of plant layout; process flow charts in routing operations. Design and selection of equipment, materials handling, and plant service facilities. Each student develops a scaled layout of equipment and services of a specific product as a major project. On demand. Lecture 3 hours.

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 C or better; Mathematics 245, 255. Corequisite: 380.

462 Soil Mechanics, Foundations and Substructures (4)
Physical properties of soil, foundation explorations, and principles of design of dry and subaqueous foundations. Fall semester. Lecture 4 hours. Laboratory experience included. Prerequisites: 246, 307, 308 with grade of C or 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: 460 with grade of C or 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: 444 or 445 or 460 with grade of C or 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 C or better, and either 377, 378, with a grade of C or better or CPSC 252.

471 Electrical Machinery (3)

472 Electrical Energy Systems (4)
Power systems 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 C or 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 and 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 C or better.

477 Electronic Instrumentation (4)
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 4 hours. Prerequisites: 377, 378 with grade of C or 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 C or better.

479 Electrical Machinery Laboratory (1)
Experimental study of transformer and machine behavior. Design project included. Fall semester. Laboratory 3 hours. Corequisite: 471.

491r 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. Formerly 490r. Every semester. Prerequisites: 380 with grade of C or 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 project initiated in 493, including a model. To be completed in sequence. Oral and written presentation of progress and results. Formerly 490r. Every semester. Prerequisites: 493 with grade of C or 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

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## Engineering (B.S.E.) Group B Cooperative Schedule

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The Departments of Computer Science and Electrical Engineering offer a B.S. degree in computer science and a B.S.E. degree with a specialization in Electrical Engineering. Computer science majors take at least 45-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. Four concentrations are available: information systems, scientific applications, systems architecture, and topical. The electrical engineering program offering is described earlier under the engineering heading.


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 F: 1 approved mathematics course (3 hours; approved related course below will apply)
Category G: 1 approved perspectives course (3 hours)

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

Major and related courses
Computer Science core courses: Computer Science 102, 121, 122, 201, 251, 252, 280, 301, 312, 320, 335, 350, 460, 490
6 hours of upper division (300 or 400 level) computer science electives
English 277 or 278

Additional course requirements for each concentration are:
1. Information Systems
   Mathematics F150, 160, 303, 307; Accounting 201, 202, 305; Management 311, 356; Computer Science 280
   Economics C101 and C102
2. Scientific Applications
   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 D112 and 122 or Geology D11 and 112, Chemistry D121 and 122, Physics D103 and 104 or D230 and D231
3. 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
4. Topical
   Mathematics 150, 160, 303, 307; 15 hours of approved courses in an area chosen by the student with the advice and consent of a standing committee made up of faculty in computer science and faculty in the chosen area. Enrollment in this program is limited to students who have demonstrated exceptional ability or accomplishment. Programs developed under this option must be substantially different from the other listed concentrations. The approved program should be filed with the Records Office no later than the first semester of the student's junior year and cannot be changed without the written approval of the student's standing committee.

All majors must attain a minimum grade of C in all computer science core courses as a condition for graduation.

2.0 average required in all computer science courses excluding 110 and 111

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

Typical courses of study in computer science

Computer science (B.S.): information systems concentration

First Semester

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TOTAL HOURS 128

Computer science (B.S.): scientific applications concentration

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### Computer science (B.S.): systems architecture concentration

**First Semester**
- Computer Science 102  
- Computer Science 121  
- Mathematics F150  
- English A1  
- University Studies 101  
- EHLS021  
- **Total** 17

**Second Semester**
- Computer Science 122  
- Mathematics 160  
- Engineering 271  
- Computer Science 460  
- Computer Science 490r  
- **Total** 17

**TOTAL HOURS 128**

### Computer science (B.S.): topical concentration

**First Semester**
- Computer Science 102  
- Computer Science 121  
- Mathematics F150  
- English A121  
- University Studies 101  
- EHLS021  
- **Total** 17

**Second Semester**
- Computer Science 122  
- Mathematics 160  
- English A122  
- General Education Category B  
- General Education Category C  
- EHLS Activity  
- **Total** 17

**TOTAL HOURS 128**

### 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. Prerequisites: 2 years of high school algebra or Mathematics 106.

**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. Prerequisites: Placement Level 20 or Math 106 with a grade of C or better. Formerly 210.

**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. Formerly 211.

**118 Computer Programming with FORTRAN (3)**
An introduction to the concepts and techniques of computer science. Emphasis is placed on the design and implementation of efficient algorithms using the FORTRAN language. Every semester. Prerequisite: Mathematics 135 or 145.

**121 Computer Programming I (3)**
An introduction to digital computing techniques using a higher level language such as Pascal or PL/I. 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. Every semester. Prerequisite: 4 years of college preparatory mathematics; Math Placement Score of 30 or better or Math 135 or Math 145.
122 Computer Programming II (3)
Continued development of programming style using abstract data structures and
top down design. Debugging and testing of large programs. Emphasis on
algorithm development. Strings, stacks, queues and list processing. Recursion.
Discussion of compilation techniques. Every semester. Prerequisite: 121 with a
grade of C or better.

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

201 Assembly Language Programming (3)
Introduction to machine language, symbolic coding and assemblers; debugging,
reading dumps, macros, internal and external subroutines; input and output
operations; program design and documentation. Fall semester. Prerequisite: 122
with a grade of C or better.

231 Computer Problems in the Sciences (3)
Computer algorithms, and the complete preparation and solution of selected
mathematics and science problems. Solutions of equations; interpolation and
approximations; sequences and series; numerical differentiation and integra-
tion; numerical solution of initial value problems in differential equations. On
demand. Pre-or Corequisite: Mathematics 245.

251 Command and Job Control Languages (3)
Introduction to operating systems. The compiler, link edit, and execute process.
IBM job control language. Interactive command languages. Cataloged proce-
dures. Load modules and libraries. Linking object modules. Principally, a study
of the IBM environment with comparisons to and limited discussion of other
mainframe and small computer operating systems. Fall semesters. Prerequisite:
122 or 280 with grade of C or better.

252 Introduction to Computer Organization (3)
Number representation and arithmetic, basic digital devices and their Boolean
representations; introduction to logical circuit design and simplification using
Boolean algebra and Karnaugh maps; architecture and programming of a simple
microprocessor; survey of 8-, 16- and 32 bit microprocessor architectures. Spring
semester. Prerequisite: 201 with a grade of C or better.

280 Accelerated COBOL (3)
A study of standard and advanced methods of computer programming in busi-
ness applications; emphasis on the organization and processing of direct access
storage device files using COBOL. Spring semester. Prerequisite: 122 with grade
of C or better.

301 Systems Programming (3)
Structure and design of programs whose inputs are programs. Assemblers, inter-
preters, compilers, loaders and supervisors. Introduction to formal programming
languages, syntactic descriptions, symbolic functions and manipulations. Fall
semester and summer. Prerequisite: 201 and 312 with grades of C or better.

320 Operating Systems (3)
Familiarization with the major concepts of operating system principles; procedure
activation, storage allocation, system structure, performance evaluation, memory
management, process management, security, and recovery procedures. Fall semester
and summer. Prerequisite: 251, 252 and 312 with grades of C or better.

335 File Processing (3)
A study of disk and tape file organizations. Creation of sequential, direct, and
indexed sequential files. Hashing techniques and address overflow. Primary and
secondary key usage. Inverted and linked list files. Binary trees, B-trees, B+-
trees, and AVL trees. Spring semester. Prerequisite: 312 with grade of Cor better.

350 Software Engineering I (3)
A study of systems analysis and design aspects of software engineering to in-
clude information systems and the systems analyst, tools and techniques of
systems analysis, and the life cycle concept of system development. Spring
semester. Prerequisites: 122 or 280; English 277 or 278; with grades of Cor better.

410 Programming Language Structures (3)
The study of a major computer language with a structure different from FOR-
TRAN or Pascal, or a study of advanced features such as extensibility, concur-
rence, or multitasking. On demand. Prerequisites: 312 with grade of C or better.

420 Computer Graphics Applications and Algorithms (3)
Computer graphics systems, system software, data structures for graphics de-
vices 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 such as GPSS and GASP;
comparison of 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; physi-
cal and logical data base design; the relational model; programming in a data
base environment; topics in data base security, integrity, recovery and concor-
dence. Fall semester. Prerequisite: 251 and 312 with grades of C or better.

445 Automata, Complexity, and Computability (3)
An introduction to the classical and contemporary theory of computation in-
cluding automata, formal languages, Turing machines, recursive functions,
computability and uncomputability, complexity, and the classes of P and NP.
Spring semester. Prerequisites: 121 with grade of Cor 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 struc-
tured programming approaches; different levels of test thoroughness; test ap-
proaches; 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 sys-
tems, I/O operations, memory hierarchies, cache and virtual memory mecha-
nisms, basic principles of multiprocessing, microprogramming, serial and
pipelined arithmetic processors, and RISC architecture. Spring semester and
summer. Prerequisite: 320 with grade of Cor 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.

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.
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.

Tutoring, through Student Support Services, is available in the Adult Services Center in the evenings during the spring and fall terms.

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.

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. 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 (615) 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 major-related internship opportunities.

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. Only students who have advance approval of the Office of Cooperative Education will be enrolled in this course.

Students interested in exploring the opportunities offered by the Cooperative Education Program should come by 233 University Center or call 615/755-4735 to make an appointment to see one of the Co-op coordinators.

College Access Program
Patricia Snowden, Director
The College Access Program (CAP) provides support services for college-level, learning disabled students at UTC, which includes academic advisement, tutoring, career and life planning, career advisement, individual and group counseling, social skills development, word processing skills, untimed tests, college survival skills, psychological/academic testing, and university orientation.
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 act 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, (615) 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.

Subject to the approval of the academic deans and department head, participation in many noncredit courses is recognized by the awarding of individual continuing education units (CEUs). One CEU corresponds to ten hours of participation in an approved program and is particularly valuable to persons desiring professional development and in-service training. Individual transcripts recording CEUs are maintained in the UTC Division of Continuing Education and Public Service.

The professional staff of the Division of Continuing Education and Public Service welcomes suggestions for new and different noncredit courses. Special emphasis is placed on designing programs that meet the expressed needs of the greater Chattanooga area population and on delivering these courses at times and locations most convenient for those who indicate an interest.

Conferences and Professional Services

As part of the division’s community service and professional development activities, the staff provides assistance to business, industry, government, social service agencies, and professional organizations which focus on topics of concern to the particular group. Groups as small as ten or those numbering five hundred or more can be accommodated in the University’s varied facilities. If requested, CEUs (as discussed above) may be awarded to conference or institute participants.

In-plant Service

The Division of Continuing Education and Public Service draws on the wide and diverse resources of UTC’s professional faculty to offer both credit and noncredit programs to business, industry, and government in Chattanooga and the surrounding areas. Most of these programs are tailored to the specific needs of the sponsoring company and are carried out in the company’s facilities. The division also assists in making arrangements for faculty members to act as consultants whose task is to define problem areas and design courses which respond to particular technical or training needs.

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 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 Division of Continuing Education and Public Service assists the senior citizen or disabled individual by providing orientation to the campus, completing admission forms, and registering the individual for the course(s) selected. Persons interested in participating should contact the Division of Continuing Education and Public Service rather than applying for admission at the UTC Admissions Office.

Continuing Education and Public Service

Marilyn Willis, Dean

The Division of Continuing Education and Public Service develops, coordinates, and supervises continuing education, public service programs, and conferences offered by The University of Tennessee at Chattanooga.

Off-campus Credit Courses

The division works with the academic deans, directors, and department heads of the University to provide a balanced schedule of credit course offerings to meet the needs of individuals who wish to complete degree programs at an off-campus location.

Off-campus UTC credit courses have been offered at numerous locations including Cleveland, Athens and downtown Chattanooga. Persons interested in having UTC credit courses taught at an off-campus location should contact the Division of Continuing Education and Public Service for further information.

Noncredit Courses

Noncredit courses dealing with a wide variety of topics and interests are offered through the Division of Continuing Education and Public Service and are open to the general public. These noncredit courses are divided into four major categories: professional development, arts and sciences, personal interest, and youth development. Programs on management development, music, art, literature, foreign languages, recreation, engineering, home economics, and consumer education are offered throughout the year. Noncredit course formats range from one-day workshops or seminars to courses conducted during the day or evening at a variety of campus and off-campus locations.

Subject to the approval of the academic deans and department head, participation in many noncredit courses is recognized by the awarding of individual continuing education units (CEUs). One CEU corresponds to ten hours of participation in an approved program and is particularly valuable to persons desiring professional development and in-service training. Individual transcripts recording CEUs are maintained in the UTC Division of Continuing Education and Public Service.

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**Other Services**

Additional services provided by the Division of Continuing Education and Public service include: 1) representing The University of Tennessee Statewide Division of Continuing Education in providing correspondence instruction; 2) arranging for courses offered by other UT campuses to be taught at UTC; 3) providing faculty and facilities for programs conducted by The University of Tennessee's Institute for Public Service; 4) coordinating the admission and advisement of local high school students who are participating in UTC's College Challenge Program.

**Student Support Services/Upward Bound**

*Booker Scruggs, II, Director*

The Division of Student Support Services, located in 212 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.

- **Reading Improvement** — Lab classes assist students in improving reading strategies and rate, vocabulary usage, and spelling ability.

- **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.

**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**

*Joseph A. Jackson, Dean*

The Lupton Library’s holdings include approximately 1,400,000 items, of which more than 417,000 are books and periodicals. Audiovisual equipment and materials (including videorecordings, microforms, and films), curriculum resources, and UTC archives are also located in the library. The Lupton Library’s on-line catalog enables users to locate any item in the library’s collections. The catalog may be accessed via terminals in the library, terminals or microcomputers on campus which are connected to the UTC computer network, or from microcomputers off-campus which have a modem and appropriate communications software.

Along with the collections of UTC’s Lupton Library, UTC students, staff, and faculty may also use the collections and services of all libraries of the University of Tennessee system.

To borrow circulating materials from the Lupton Library, each eligible borrower must show a currently validated and barcoded identification card. The standard loan period for undergraduate students is 21 days.

Instructions on the use of the library and the on-line catalog, as well as more details on the services and policies of the Lupton Library, are available near the Reference Counter on the first floor.

**Library Fines**

Books borrowed from the library’s regular collections are subject to an overdue fine of 20 cents per day up to a limit of $5 for each book. For lost books borrowers are assessed the replacement cost for each book, which includes the list purchase price of the book plus a processing charge of $15.

Reserve items are subject to an overdue fine of 20 cents per hour up to a limit of $5 for each item.

If fines for overdue books and charges for lost books are not paid as required, the borrowers will be blocked from use of the library and not permitted by the business office and registrar (on this or other campuses of the University) either to register or to receive course credits and transcripts until the outstanding obligations are fully cleared.

**WUTC**

*John McCormack, Station Manager*

WUTC is a 50,000 watt public radio station originating its programming from the Earl Winger Broadcast Studio located in Cadek Hall. Included are jazz, news and other public radio programming.

WUTC, FM 88.1, provides a 24-hour-a-day broadcasting service. It is an affiliate of the National Public Radio Network and of the American Public Radio Network.
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Through the years many people have made generous gifts to establish endowed funds for various purposes. The University would like to recognize and thank them once again by publishing their names here.

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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.

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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.

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 the name of the Sigma Chi fraternity brother who died in 1983, this scholarship was established with the contributions of friends and family and is available to any Sigma Chi fraternity member who holds a 3.0 GPA and who gives sufficient service to the local fraternity.

Buster Brown Apparel Scholarships: Established in 1990 by Buster Brown Apparel Inc. in order to provide scholarship assistance for employees of Buster Brown and Weather Tamer Inc. and their children.

Dr. Jeffrey L. Brown Memorial Scholarship: Established in 1981 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 Fund: 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.

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. Mr. 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.

Morton Neel Center Athletic Scholarship: Established in 1978 by Center, business and civic leader, to be awarded to a qualified and deserving student athlete.

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.

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.

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."

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 Endowment Fund: Established in 1984 by AI 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 Firdey Scholarship Endowment Fund: 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 administration, and students from Hamilton County and the greater Chattanooga area, including Georgia and northeast Alabama.


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.

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.

Nita T. and Irvine W. Grote Scholarships: Established in 1976 by the Chemistry Department in memory of Dr. and Mrs. Irvine W. Grote. Dr. 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 the late 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 at UTC as a major in graphic design.

UTC History Department Scholarship Endowment Fund: 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 Hodges 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.

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.

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.

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.

John Earlon 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.
Established in 1976 by Dr. R. Gary Joyce Litchford Scholarships: Established in 1986 by Paul J. Kinser, University of Tennessee trustee, for juniors or seniors in the business management program with a 3.0 G.P.A. or better and financial need.

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 Kobcutz Memorial Scholarship: Established in 1990 through a bequest from Abe J. Koblenzt 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 of 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 Scholarship Endowment Fund: 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.

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.

Joyce Litchford Scholarships: Established in 1976 by Dr. R. Gary Litchford, a member of 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.

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.

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 a 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 Endowment Fund: 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 Endowment Fund: 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 Endowment: Established in the 1986 Centennial year of the University by Mrs. Helen F. Moore, widow of A.C. Moore, this scholarship is available to intercollegiate athletes in memory of the long-time University of Chattanooga football coach and popular local sports figure.

Scappy 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 father of an alumnus.

Dorothea Woods Obeai Scholarship: Established in 1990 by Chancellor Frederick Obeai 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.
V.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. Carter Patten in honor of his wife, active civic, welfare, and religious leader of her community.

Sarah Key Patten Scholarship: Established in 1955 by Z. Carter 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, OK., 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.

ROTC Scholarship Endowment Fund: 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 Endowment Fund: Established in 1989 by W.R. Grace and Company in memory of Murray Raney, who died in 1966 and was a distinguished Chattanoogan who gained worldwide fame among chemists for his invention of metal catalysts, the basis for the continuing activity of W.R. Grace and Company. To stimulate creative endeavors, this award goes to a chemistry major.

Dr. E.E. Reismanjr. Memorial Nursing Scholarship: Established in 1981 under the terms of the will of Dr. Reisman, well-known 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 Endowment Fund 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 Scholarships 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 Fund: 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.

Colvm 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.

DeForest Spencer Scholarship Endowment: 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 Endowment Fund: 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.

Iphigene Ochs Sulzberger Scholarship Endowment Fund 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 premedicine.

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 Jill Wheeler 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. Warren/els 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.

JIU 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.

Chairs of Excellence

American National Bank and Trust Company Chair of Excellence in the Humanities: Administered through the College of Arts and Sciences, the ANB chair 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 in 1986 helps meet UTC’s commitment as a cultural center for the region.

Walter M. Cline Jr. Chair of Excellence in Rehabilitation Technology: In cooperation with UTC’s College of Health and Human Services and the School of Engineering, 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 UTC 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 Entrepreneurship: 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. Mr. Harris, class of 1964, is the president and chairman of the board of Carriage Industries Inc., Calhoun, Ga.

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 in Tennessee, and oversee the center's programs, including three constituent institutes for teachers in the visual arts, theatre, and music.

Burkett Miller Chair of Excellence in Management and Technology: A cross-disciplinary chair of excellence that bridges the resources between the Schools of Business Administration and Engineering at UTC. Funded 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.

Provident Life and Accident Insurance Company Chair of Excellence in Applied Mathematics: This chair of excellence, funded 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-at-large.

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 are 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 School of Education at UTC.

Chattanooga Manufacturer's Association Professorship in Engineering: Established in 1980 to provide support for the School of Engineering that enables the University to reward a member of the engineering faculty for excellence in teaching, public service, and research.


George C. Connor Professorship in American Literature: Named for Guerry Professor of English emeritus George C. Connor, this professorship was established in the spring of 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.

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.

Nita T. and Irvine W. Grote Professorships in Chemistry: Established in the fall of 1986 and awarded to the first recipients in 1988 for outstanding teaching, these were established through a generous gift from the estate of Dr. and Mrs. Grote. An inventor of note, Professor 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 Business Administration.

Bricel. 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.

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. Macellon Centennial Professorship in Insurance: Robert L. Macellon, 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 is supported by the UC Foundation in memory of the last ordained Methodist minister to serve as president of the University of Chattanooga, 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 Masingitt 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 Entrepreneurship: 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.

Adolph S. Ochs Centennial Chair of Government: Established in 1925 by Mr. Ochs, owner and publisher of The Chattanooga Times and The New York Times, friend of the University, father and grandfather of trustees. It was upgraded to a Centennial title in 1986 by members of the family.

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.

Katharine Pryor Professorship of English: Established in 1991 by Rodney L. Grandy and other friends and former students in honor of Katharine Pryor, a long-time teacher of English and assistant principal at Chattanooga High School, and a 1936 graduate of the University of Chattanooga.

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.

DC Foundation Professorships were established in 1976 to recognize outstanding younger faculty and to provide an incentive for their remaining at UTC.

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 generous gift from the Hartsell, Alabama, 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 alumnas, 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 Taylor 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 for 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.

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 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 UTNAAA and other friends in honor of the retiring UT president and his wife, for the purchase of library books.

H. Clay 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 directors of the Bonny Oaks School, to bring to die campus each year an outstanding speaker.

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 fund art instruction in the UTC Children’s Center.

Cranston B. Pearce Center for Applied Engineering and Technology: Complementing UTC’s Center of Excellence for Computer Applications, the Pearce Center in the School of Engineering 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 vital 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 its 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 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.

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.
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