CURRENT 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       Ray Fox, dean of Admissions & Records
                              or director of Admissions
                              Phone: (615) 755-4157

Course offerings             Department offering course

Degree requirements          Natalie Schlack, director of Records
                              Phone: (615) 755-4892
                              or faculty adviser, head of major
degree requirements         department, or dean of college/school

Fees & tuition               Jonee Daniels, bursar
                              Phone: (615) 755-4473

Financial aid                Ann Tinnon, director of Financial Aid
                              Phone: (615) 755-4677

Graduate admission
requirements         Charles M. Hyder, asso. provost for
                              Graduate & Continuing Studies
                              or Janice Rhodes, director of
                              Graduate Studies
                              Phone: (615) 755-4666

Housing                      Student Affairs
                              Phone: (615) 755-4304

Registration                 Brenda Davis, director of Registration
                              and Advisement & Orientation
                              Phone: (615) 755-4414

University operator: (615) 755-4111

University address:
The University of Tennessee at Chattanooga
615 McCallie Avenue
Chattanooga, TN 37402

EEO/TITLE IX/SECTION 504 STATEMENT
The University of Tennessee at Chattanooga does not discriminate on the basis of sex or on the basis of 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.

This policy extends to employment, admission, retention, and treatment by the University. Inquiries concerning Title IX or the Rehabilitation Act should be directed to Charles M. Temple. Charges of violation of the above policy should also be directed to Charles M. Temple, executive vice-chancellor.

The University also does not discriminate on the basis of race, color, religion, or national origin.

This catalog is published by The University of Tennessee at Chattanooga, a primary campus of The University of Tennessee.
# Academic Calendar 1983-84

## Fall Semester 1983
- **August 25-26** (Thursday-Friday)
- **August 29** (Monday)
- **September 2** (Friday)
- **September 5** (Monday)
- **September 6** (Tuesday)
- **September 6-9** (Tuesday-Friday)
- **September 12** (Monday)
- **October 26** (Wednesday)
- **November 23** (Wednesday)
- **November 28** (Monday)
- **December 8** (Thursday)
- **December 9** (Friday)
- **December 10-16** (Saturday-Friday)
- **December 21** (Wednesday, 10:00 A.M.)

## Spring Semester 1984
- **January 3-4** (Tuesday-Wednesday)
- **January 5** (Thursday)
- **January 11** (Wednesday)
- **January 12-18** (Thursday-Wednesday)
- **January 18** (Wednesday)
- **March 6** (Tuesday)
- **March 11** (Sunday)
- **March 19** (Monday)
- **April 19** (Thursday)
- **April 23** (Monday)
- **April 24** (Tuesday)
- **April 25** (Wednesday)
- **April 26-May 2** (Thursday-Wednesday)
- **May 7** (Monday, 7:30 P.M.)

## Summer Session 1984

<table>
<thead>
<tr>
<th>First 5-week Term</th>
<th>Second 5-week Term</th>
<th>First 7V2-week Term</th>
<th>Second 7Vi-week Term</th>
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<td>June 7</td>
<td>July 13</td>
<td>May 8</td>
<td>June 27</td>
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<tr>
<td>June 11</td>
<td>July 17</td>
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<td>July 4</td>
<td>August 16</td>
<td>June 25-26</td>
<td>August 15-16</td>
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<tr>
<td>July 12</td>
<td>August 20</td>
<td>August 20</td>
<td>August 27</td>
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</tbody>
</table>

NOTE: UTC has multiple registration periods. Registration and fee collection dates and times for each of the semesters and summer sessions may be found in the schedule of classes.
Glossary of Academic Terms

Adviser—a faculty member who advises the student about his or her academic program.

Audit—to take a course without credit.

Behavioral and Social Science Courses—certain courses in Anthropology, Economics, Education, Geography, History, Human Services, Political Science, Psychology and Sociology.

Classification—level of progress toward the bachelor's degree. An undergraduate student is classified as a Freshman, Sophomore, Junior, or Senior depending on the number of semester hours completed and quality points earned.

College—an organizational unit of the University, embracing several departments, divisions, or schools. UTC has one college, the College of Arts and Sciences.

Concentration—a particular emphasis within a major area.

Corequisite—a course which must be taken at the same time as another course.

Course—a specific subject of study.

Credit—the numerical value awarded upon completion of specified studies, usually based on class meeting length and frequency. At UTC credit is stated in semester hours.

Curriculum—the whole body of courses offered by the University or by one of its colleges, schools, divisions, or departments.

Department—an organizational unit representing a discipline or related disciplines, such as the Department of Foreign Languages.

Discipline—an area of study representing a branch of knowledge, such as Mathematics.

Division—an organizational unit which may include one program, or several, as in Continuing Education or Special Services.

Elective—a course not specifically required.

Fine Arts Courses—certain courses in Art, Theatre, and Music.

General Education Courses—courses designed to help the students discover the relatedness of knowledge and acquire a core of information, attitudes, and capabilities basic to their formal college education and their continuing education throughout life.

Graduate Student—a student who has received a bachelor's degree and has met all criteria for admission to the Graduate Division.

Humanities Courses—certain courses in Classics, English, History, Modern Languages, and Philosophy and Religion.

Interdisciplinary Courses—courses which deal with two or more academic subjects.

Major—the subject or subject areas on which a student chooses to place principal academic emphasis.

Non-Western Course—a course which deals with some aspect of a civilization outside of Western civilization, such as Asian, Latin American, etc.

Orientation—activities and programs designed to help the new student become acquainted with the University.

Permanent Record—the card on which the director of Records lists all of a student's courses, semester hours credit, grades, quality points, status, and certain personal information.

Post-baccalaureate Student—a student who has received a bachelor's degree and is taking additional undergraduate courses.

Prerequisite—a requirement which must be met before a particular course can be taken.

Registration Load—the total semester hours for which a student is registered in any semester or term.

Schedule of Classes—a listing of all courses offered by the University during one semester or summer session, showing fees, instructors, and time and place of meeting.

School—an organizational unit composed of related disciplines. At UTC there are five schools: the School of Business Administration, the School of Education, the School of Engineering, the School of Human Services, and the School of Nursing.

Semester—half an academic year or 15-16 weeks. Some schools operate on a quarter system, which divides the academic year into thirds. UTC uses the semester system.

Semester Hour—the unit of credit used by schools on the semester plan.
The Administration

The University of Tennessee
Board of Trustees

Legal Title: The University of Tennessee
His Excellency, The Governor of Tennessee  Ex-Officio
The Commissioner of Education  Ex-Officio
The Commissioner of Agriculture  Ex-Officio
The President of the University  Ex-Officio
The Executive Director, Tennessee Higher Education Commission  Ex-Officio

From Congressional Districts

<table>
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<tr>
<th>From Congressional Districts</th>
<th>Service Began</th>
<th>Term Expires</th>
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<tr>
<td>First—Buford Goldstein, Elizabethton</td>
<td>1975</td>
<td>June 1,1984</td>
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<tr>
<td>Second—A.B. Long Jr., Knoxville</td>
<td>1977</td>
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<td>Third—Scott L. Probasco Jr., Chattanooga</td>
<td>1979</td>
<td>June 1,1988</td>
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<td>Fourth—William M. Johnson, Sparta</td>
<td>1975</td>
<td>June 1,1987</td>
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<tr>
<td>Fifth—Marcia A. Echols, Nashville</td>
<td>1979</td>
<td>June 1,1991</td>
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<td>Sixth—Ben S. Kimbrough, Clarksville</td>
<td>1980</td>
<td>July 1,1990</td>
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<td>Seventh—Turner O. Lashlee, Humboldt</td>
<td>1979</td>
<td>July 1,1988</td>
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<td>Eighth—Tom Elam, Union City</td>
<td>1956</td>
<td>June 1,1986</td>
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<tr>
<td>Ninth—R. Lee Winchester, Memphis</td>
<td>1975</td>
<td>June 1,1984</td>
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</table>

From Anderson, Bedford, Coffee, Franklin, Lincoln, Moore, and Warren Counties
Charlotte Parish 1979 June 1,1988

From Davidson County
Elaine A. McReynolds 1975 June 1,1984

From Hamilton County
Paul J. Kinser 1969 June 1,1987

From Knox County
Ann Baker Furrow 1971 June 1,1989
James A. Haslam II 1980 June 1,1989

From Shelby County
Sam Cooper 1981 June 1,1990
Jack J. Craddock 1981 June 1,1990

From Weakley County
James F. Harrison 1981 June 1,1990

Student Member
Jan Petri 1982 July 1,1983

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Formerly the Board of Trustees for the University of Chattanooga, this Foundation presently manages the University’s private endowment. The Foundation is a unique institution dedicated to the enhancement of the quality of excellence at The University of Tennessee at Chattanooga.

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THE UNIVERSITY OF TENNESSEE AT CHATTANOOGA

New Admissions Requirements
For all freshmen under the age of 21.

MINIMUM REQUIREMENTS FOR REGULAR ADMISSION

FALL 1986
grades and test scores: —2.75 high school grade point average and 12 ACT minimum (or 700 SAT composite)
OR
—20 ACT (900 SAT composite) and a minimum 2.00 high school grade point average
unit requirements:
—4 units of English
—2 units of math (algebra I and algebra II OR algebra I and geometry)
—1 unit of laboratory science
—1 unit of American history
—1 unit of a social science OR 1 unit of a foreign language

FALL 1987
grades and test scores: —2.75 high school grade point average and 12 ACT minimum (or 700 SAT composite)
OR
—20 ACT (900 SAT composite) and a minimum 2.00 high school grade point average
unit requirements:
—4 units of English
—2 units of math (algebra I and algebra II OR algebra I and geometry)
—1 unit of laboratory science
—1 unit of American history
—2 units of a social science AND/OR 2 units of foreign language
(any combination totaling 2 units of this area meets the requirements)

FALL 1988
grades and test scores: —2.75 high school grade point average and 12 ACT minimum (or 700 SAT composite)
OR
—20 ACT (900 SAT composite) and a minimum 2.00 high school grade point average
unit requirements:
—4 units of English
—3 units of math (algebra I and algebra II, and geometry)
—2 units of laboratory science
—1 unit of American history
—1 unit of European history, world history, or world geography
—2 units of the same foreign language

CONDITIONAL ADMISSION
All Years

Students will be considered for conditional admission if they fall below the requirements listed above but have minimum requirements of a 2.0 grade point average AND a minimum composite of 12 on the ACT (700 SAT composite).

Students admitted on condition must earn at least a 1.0 GPA during their first semester or suspension will result.

The dean of Admissions and Records or the admissions committee may recommend any or all of the following conditions:
1. reduced course credit load
2. specific course requirements
3. specific academic adviser
4. specific program of developmental studies

During the transition period as these new requirements take effect, students will be considered on an individual basis by the Admissions Committee at UTC. Consequently there will be a small percentage of students admitted under exceptional circumstances. These and conditionally admitted students will be provided with enhanced developmental studies offerings.

For more information, contact the UTC Admissions Office (615) 755-4MOC Toll-free in Tennessee 1-800-UTC-MOCS

The University of Tennessee at Chattanooga is an equal opportunity/affirmative action institution.
THE UNIVERSITY

8 History
8 University Goals Statement
9 The Community
History

Near the end of the 19th century, Chattanooga was rapidly becoming the industrial center it is today. Its citizens were actively engaged in coal production, iron manufacturing, the lumber trade, and rail construction. These industrial pioneers knew the value of education and had a deep respect for learning. 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.

Retaining the disciplines of traditional liberal education, the University has expanded its degree programs in professional studies and engineering and greatly increased its initiatives in continuing education and public service.

The University's wide diversity of degree programs has attracted a current enrollment of more than 7600 students who represent 61 Tennessee counties, 35 states, and 16 foreign countries.

Accreditations

The University has been an accredited member of the Southern Association of Colleges and Schools since 1910. It is also accredited by the National Council for Accreditation of Teacher Education, the National Association of Schools of Music, the National Council on Social Work Education, the American Chemical Society, the Engineers' Council for Professional Development, the American Assembly of Collegiate Schools of Business, and the National League for Nursing. It is approved by the American Association of University Women. 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, Association of Urban Universities, American Association of State Colleges and Universities, National University Extension Association, and the Tennessee College Association.

University Goals Statement

The University of Tennessee at Chattanooga is one of the principal campuses of The University of Tennessee system. Its institutional goals statement is presented with the expectation that The University of Tennessee at Chattanooga will be an outstanding educational institution whose primary purpose is to serve the people of the state and region through commitment of its faculty, staff, programs, and resources to excellence in undergraduate education and in selected areas of graduate study. The emphasis must be on teaching and learning; however, appropriate research and public service are viewed as supporting this primary objective. With this perspective, the goals of the University are:

— To encourage the enrollment, either full or part-time, of eligible persons of all ages and of varying backgrounds in academic programs of their choice and to attract in increasing numbers students of superior ability and promise.
— To strengthen, develop, and initiate undergraduate programs in which career preparation and liberal arts based general education are seen as mutually supportive and complementary.
— To provide additional educational opportunities, including opportunities for career redirection, through selected graduate programs and continuing education programs, and to be guided in the development of these and all programs by demonstrable needs in the region served by the University and by institutional resources available for implementation.
— To maintain and develop those programs in the liberal arts, without which the University cannot be the intellectual and cultural force it should be in the lives of its constituents.
— To encourage each student to develop a life-long interest in learning and to equip each one with the methods of inquiry and the capabilities necessary for independent study.
— To provide a faculty which is competent in the disciplines required by University programs and to encourage its members through administrative cooperation and through faculty renewal and development to initiate needed new programs, to conduct research, and to contribute to public service.
— To provide the supporting staff and the physical facilities consonant with the University's commitment to excellence.
— To strive to improve the effectiveness of the University's educational endeavors by promoting excellence in teaching, by preserving and promoting a climate conducive to constructive change, and by the skillful and imaginative use of all of its resources.
— To expand the University's capability for academic advising and guidance, so that each student receives the utmost assistance in formulating and undertaking the achievement of his or her educational and career goals.
— To provide additional academic assistance for the student who is strongly motivated, but inadequately prepared to meet the academic standards of the University.
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, six public golf courses, and a 35,400 acre lake provide a variety of recreational activities.

With a population of about 160,535 in a metropolitan statistical area of over 400,000, Chattanooga is easily accessible from all parts of the nation by air and bus.
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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 37402. The Admissions Office telephone number is (615) 755-4157. Completed admissions applications and credentials should be sent to the same office. A $10 nonrefundable application fee is required of all candidates for admission. Every effort should be made to submit the completed application and supporting credentials to the director of admissions no later than four weeks prior to the beginning of the semester in which admission is desired.

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 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 two-day orientation program, held usually during the summer, includes a tour of the campus, an explanation of its facilities and academic offerings, small group discussions with faculty and students, and advising and registration for the fall semester, plus entertainment and the opportunity to get acquainted with fellow students.

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 all freshmen and all pre-majors. Results of aptitude 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, communication, environmental studies, and humanities majors, and students who have completed 29 hours, go to their major departments for advising.

To schedule an appointment with an adviser, the student should go to the Advisement and Orientation Office, located at 124 Hooper Hall, or call (615) 755-4573.

General Admission Requirements

The University has four classes of general requirements that the applicant must satisfy: character, health, admissions test, and credentials.

To meet the first requirements the applicant should show evidence of good moral character, usually by the recommendations of the high school principal or guidance counselor.

The second requirement, health, exists for the protection of the student. UTC students who reside in University housing or participate in the University health plan are required to submit a University health form completed by a physician.

An admissions test is required of all entering freshmen under 21 years of age through the American College Testing Program (ACT) or through the College Entrance Examination Board’s Scholastic Aptitude Test (SAT). Applicants are responsible for having the results of the test sent to the Admissions Office by either ACT or CEEB and should do so prior to their admission. Those who do not submit scores prior to their admission must do so early during their first semester. Information about and registration forms for either test may be obtained from a high school guidance counselor.

All pertinent academic credentials must be filed with the Undergraduate Admissions Office before the applicant may be officially admitted. These credentials include all high school credits or, in the case of students applying for advanced standing, college transcripts. The high school transcript may be sent any time after the completion of the junior year of high school; after graduation a supplementary transcript must be submitted including final senior year grades and date of graduation.

Specific Admission Requirements

UTC admits students who receive a high school diploma from state approved or regionally accredited high schools. Approved high schools are those on the approved list issued by the State Department of Education. For work done in schools outside of Tennessee, the University will usually honor credits accepted by the state university of that state.

Applicants for admission as freshmen who have a high school diploma must have achieved at least a 2.00 grade point average on a 4.00 grading system in four years of high school. A person who is under 21 years of age must submit admission scores on either the American College Test or on the Scholastic Aptitude Test. The ACT is preferred and will be used primarily as an aid in advisement and academic placement. A person 21 years or older must meet the requirement of high school
High School Units Required For Specific Programs at UTC

**Bachelor Degree Programs**

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<th>Program</th>
<th>Mathematics</th>
<th>Science</th>
<th>English</th>
<th>Social Studies</th>
<th>Language</th>
<th>Foreign Language</th>
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**Certificate Programs**

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**Notes:**

a) Two units of college preparatory mathematics (two units in algebra or one unit in algebra and one unit in geometry) are recommended.
b) Two units of algebra are recommended.
c) Two units in one foreign language are recommended.
d) The three units of science should include physics.
e) Secondary Education majors who plan a teaching area in biology, chemistry, geology, math, or physics should have two units of algebra and one unit of geometry.

Two units in one foreign language (French, German or Italian) are recommended. Candidates for the degree must also have a knowledge of elementary theory sufficient for admission to the freshman theory course without condition and must pass an entrance examination in performance.

To insure adequate preparation to do college work successfully applicants are strongly urged to select as many high school units as possible from the following areas: English, mathematics, natural sciences, behavioral sciences, and others from Group A. Accepted applicants indicating an interest in nursing will be classified pre-nursing majors. Admission to the Bachelor of Science in Nursing program is a separate procedure which takes place near the end of the sophomore year.

For scientific or systems concentrations: four units of college preparatory mathematics and three units of science through physics are recommended.
Students who graduate from unapproved high schools and apply as freshmen must have a minimum high school GPA of 2.00 and a minimum test score of 18 on the ACT or 850 on the SAT. Students who do not meet both these requirements may be admitted under the criteria of Conditions I and II specified below.

UTC has a simplified admission process that allows freshmen to be admitted as a result of their performance on the ACT or SAT. Freshmen will be notified immediately of their admission status by simply having their score report sent to UTC.

Applicants who do not meet the requirements stated above and who do not have a high school grade point average of 2.00 may be admitted by the dean of Admissions and Records by meeting one of the following conditions—

**Condition I:** Present a composite score of 18 or above on ACT or 850 on SAT.

**Condition II:** Applicants with a composite score under 18 on ACT or under 850 on SAT can be considered for admission on the basis of a letter of recommendation from a high school principal or guidance counselor and a personal interview with the dean of Admissions and Records and only under the following requirements—

1. Reduced course credit load (no more than 13 hours).
2. Specific adviser assignment in the Academic Advisement Center.
3. Specific requirements which may include designation of certain courses and other requirements to be prescribed by the dean of Admissions and Records.

Since the general education requirements for all degrees at the University include college study in English, humanities, behavioral sciences, natural sciences, and mathematics, to insure adequate preparation to do college work successfully an applicant should select as many high school units as possible from these areas. The student should plan a high school course of study so that it will meet all high school prerequisites for his or her area of interest. Proper high school preparation will insure that the student will not have to take a course for no credit after enrolling. Prerequisites for the various degree programs are listed on page 13.

**American History Requirement**

Effective July 1, 1978, and afterwards, all students receiving a bachelor's degree must have completed one unit of American history on the high school level or six semester hours of college-level American history as required by the General Assembly of the state of Tennessee (Tennessee Code Annotated 549-3253).

**Admission by Examination**

Those mature students who achieve a high school equivalency diploma through the General Education Development test may be admitted to the University on the basis of the test provided that they have scored at least a 45 on the GED test. Such students are required, however, to meet high school unit prerequisites to courses required in the University's curriculum. Students under 21 years of age presenting a GED test score must also submit acceptable scores from either the ACT or SAT examination.

**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 or certificate from The University of Tennessee at Chattanooga, may be admitted as a 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 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.

**Audit Students**

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.

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% of the class sessions.

**College Opportunity Program**

The College Opportunity Program is designed to give outstanding high school seniors an opportunity to preview college through taking selected college courses. Courses are offered during the summer or during the regular academic year. Courses will be offered 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 Opportunity 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. Completion of the 11th grade of high school,
3. A grade point average of at least a 3.00 (B), and
4. Recommendation of high school principal or
   guidance counselor.

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 3.50 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.

**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 admis-
sion, accompanied by the $10 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.
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 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. 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 transfer students.

These requirements are stated in the section on
Specific Requirements: Transfer Students.

Application deadlines are August 1 for the fall semester,
December T for the spring semester. All admission
materials should be sent to the Office of Undergraduate
Admissions.

**Post-baccalaureate Admission**
See under Graduate Studies, page 34.

**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 in
the section on Specific Requirements: Transfer Students,
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 $75.00 per semester.

Persons wishing to participate in any of the above
programs should call the Continuing Education Office at
(615) 755-4346.

**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 of their college work.

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 Chattanooga’s continuation
standards (see page 23 for standards). 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.

The University will usually accept, by transfer, work
satisfactorily completed at regionally accredited colleges
and universities. Transfer students from senior institutions
must complete at least their last 30 academic semester
hours of work at The University of Tennessee at Chatta-
nooga. 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 permanent 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.

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 a transient student. 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" must be sent to the Office of Undergraduate Admissions from either the registrar or academic dean of their present institution.

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. Applicants who have taken the advanced placement examinations may submit the results to the University for consideration.

In general the University will 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 permanent record at the University but will not be computed in the grade point average.

College Level Examination Program

UTC 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 of the University 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 permanent record but will not be computed in the grade point average.

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.

Catalogs of correspondence study offered through The University of Tennessee are available for distribution 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 Continuing Education Office, (615) 755-4346.

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 $22.00 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 permanent committee on special examinations established by the department under which the course is described in the catalog. The departmental committee will grant or deny the request pursuant to the standards stated 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 transcript 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 transcript. Neither 5 nor NC grades will be used in computing the grade point average.

Limitations on Nontraditional Credit: Advanced Placement CLEP, IEP, Military Service, Special Examinations (Proficiency or Challenge Examinations), Competency Based Programs.

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 1978 Guide to the Evaluation of Education Experiences in the Armed Services or by the Commission on the Accreditation of Service Experiences evaluation service. Any veteran requesting military service credit should submit a copy of his or her DD Form 214 to the Records Office for evaluation.

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 assistance 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 ability to pay that cost. To assist in determining the student’s need for financial aid, the University uses the needs analysis system of the American College Testing Service (ACT). Through the use of the ACT Family Financial Statement 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 met with financial 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 only on academic achievement. Unless otherwise stated, to compete for merit scholarships only, a student must submit a UTC Application for Student Financial Aid. 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.
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. Annual scholarship stipends range from $200 to $2,000.

Each year 25 outstanding entering freshmen are selected to participate in the William E. Brock Scholars Program. These scholars receive four-year stipends of $1,000 or $2,700. 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, fifteen prestigious merit scholarships are awarded each year to incoming freshmen: five Andy Holt Scholarships (sponsored by the UT National Alumni Association) for $1,200 each and renewable for four years; five Chancellor’s and five Leadership scholarships (sponsored by the UC Foundation) of $1,200 each and renewable for four years.

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 10 Tennessee community colleges. These one-year $850 awards are available at all campuses of The University of Tennessee.

The University also offers a Transfer Achievement Scholarship program for students transferring from junior and community colleges. This scholarship recognizes the student’s outstanding achievement for academic work in the two-year program. Each year four entering juniors are selected for these $850 two-year awards.

Approximately 600 scholarships are available for UTC students. Most scholarships are awarded for one year; however, although students compete for scholarships each year, priority is given to renewal applicants who meet the priority date. The UTC Application for Student Financial Aid is a general application and 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.

Grants

Pell Grants (formerly BEOG)

All undergraduate students applying for institutional assistance based on a financial need are to 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 Family Financial Statement to the American College Testing Service. Approximately six weeks after the Family Financial Statement is mailed, the student should receive the Basic Grant Student Aid Report. Because the Student Aid Report indicates eligibility, it should be sent to the Financial Aid Office for award processing.

Maximum grants are $1,800 or not more than one-half the cost of education. The above regulations and provisions of the Pell Grant Program are subject to change by federal legislative action.

Supplemental Educational Opportunity Grants

This is a program of direct grants available to entering freshmen, transfer, and enrolled undergraduate students with financial need. A Supplemental Educational Opportunity Grant may not be less than $200 or more than $2,000. The above regulations and provisions of the Supplemental Educational Opportunity Grant are subject to change by federal legislative action.

Nursing Scholarship Program

This program assists students of exceptional financial need who are enrolled in a course of study leading to a baccalaureate degree or a graduate degree in nursing.

The amount of the scholarship depends upon financial need. The maximum amount available for any student in a 12-month period is $2,000. The above regulations and provisions of the nursing scholarship program are subject to change by federal legislative action.

Student Loans

National Direct Student Loans

Long term loans, at six percent interest, are available primarily through the National Direct Student Loan Program. Proven need for financial assistance determines eligibility.

Loan repayment and interest payments on National Direct Student Loans are deferred until after graduation or as long as the individual remains in half-time attendance at an accredited institution of higher education in the United States. Repayment may also be deferred for up to three years for special circumstances as outlined in the Higher Education Act of 1980. 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 non-profit 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.

An undergraduate may be extended a maximum annual loan of $1,500 to an accumulated loan total of $6,000 for an undergraduate and $12,000 for a graduate student. The above regulations and provisions of the National Direct Student Loan Program are subject to change by federal legislative action.
The University of Tennessee at Chattanooga Loan Fund, the Underwood Loan Fund, and the Ansbach Loan Fund

Student loans from University sources are available to currently enrolled students with a 2.0 or above cumulative grade point average. A loan of up to $750 a year can be extended. One surety or cosigner is required for each promissory note. Repayment of principal, together with any unpaid accrued interest thereon, 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 the normal full-time academic workload as defined by the University. Repayment of principal, together with interest thereon, is made in monthly or quarterly installments (as agreed to between the principal and the University) at the rate of not less than $30.00 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.

Nursing Student Loans

The Nursing Student Loan is available to students who are enrolled or admitted as students in a course of study leading to a baccalaureate or graduate degree in nursing and who show need of assistance in order to pursue their course of study. The program provides a long-term loan at a six percent interest rate with repayment beginning nine months following termination of half-time study at an accredited school of nursing. Repayment may also be deferred for a period up to three years while the borrower is serving in the Armed Forces or Peace Corps or up to five years for a full-time course of study leading to advanced professional training.

The above regulations and provisions of the nursing loan program are subject to change by legislative action.

Student Employment

The University participates in the College Work-Study Program administered by the United States Office of Education. To be eligible for the College 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 may also be available. The UTC Application for Student Financial Aid and the ACT Family Financial Statement are required.

Employment opportunities provided under the institutional work-study program are offered to students who indicate a desire to work and who do not meet the financial need requirements for the College Work-Study Program. Part-time employment, handled by 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.

Other Assistance

Georgia Tuition Equalization Grant

Grants are made by the Georgia Finance Authority for $350 a semester to Georgia residents who are juniors or seniors at UTC.

Students must live within 50 miles of UTC and more than 50 miles from a four-year Georgia educational institution. Full-time enrollment at UTC is required. Applications are available in the UTC Financial Aid Office.

Guaranteed Student Loans

These loans may be available to help meet educational expenses through the federal government or a state guaranteeing agency. Students should contact their local bank, credit union, or savings and loan to determine their participation in the program. If the student is unable to find a lender, he or she should check with the Financial Aid Office. To receive the loan, a student must be admitted to or in regular attendance (normally full time) and in good standing at the University. Interest on such loans is paid by the federal government while the student is in school. During the repayment period, which begins no less than six months after graduation or withdrawal from the University, the student pays up to nine percent simple interest. The maximum amount of a loan to an undergraduate in a 12-month period is $2,500.

Total loans outstanding may not exceed $15,000 for the undergraduate or $25,000 for the graduate student.

Complete information is available at most banks and credit unions. If you are unable to secure a guaranteed student loan through your hometown bank or credit union, get a letter of loan denial from this bank or credit union and contact the UTC Financial Aid Office for further instructions.

Tennessee Student Assistance Corporation Grant Program

Grants are made by the Tennessee Student Assistance Corporation to residents of the state of Tennessee who show a financial need as supported by a financial statement. Applications for these awards, which normally cover one-half of tuition costs, are available in the UTC Financial Aid Office, a high school counselor’s office, or from TSAC, Nashville, Tennessee. Students should apply before May.

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 financial aid.

1. Although applications will be processed throughout the year, to receive maximum consideration for all available funds students should complete and submit the Student Financial Aid application on or
before the following priority deadline dates:

- **Academic year**—March 1-entering freshmen
  April 1-transfer and currently enrolled students
- **Spring only**—November T-all students
- **Summer only**—March 15-all students

2. Students should complete and submit a *Family Financial Statement* to the American College Testing Service approximately six weeks prior to the priority deadlines. If applying only for academic merit scholarships a financial statement is not required.

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. Federal regulations require that UTC 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 Office notice of award is the UTC financial aid award letter. Students who accept their awards by July 31 (fall) and November 30 (spring) should have funds available at fee payment.

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

   For applications and further information on financial aid write the Financial Aid Office, 215 Race Hall, The University of Tennessee at Chattanooga, 615 McCallie Avenue, Chattanooga, Tennessee 37402.

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**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 guardianships, 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 with this information in order that a reappraisal of residence status may be made.

UTC honors Visa and MasterCard for certain student expenses.

**Tuition and Maintenance Fees**

**Maintenance Fee**

<table>
<thead>
<tr>
<th>Undergraduate</th>
<th>per semester $393.00*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$38.00 per semester hour or fraction thereof; minimum charge $76.00</td>
</tr>
<tr>
<td>Graduate</td>
<td>per semester $512.00*</td>
</tr>
<tr>
<td></td>
<td>$64.00 per semester hour or fraction thereof; minimum charge $128.00</td>
</tr>
</tbody>
</table>

**Tuition and Maintenance Fee**

(Out-of-state students only)

<table>
<thead>
<tr>
<th>Undergraduate</th>
<th>per semester $1,272.00*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$106.00 per semester hour or fraction thereof; minimum charge $212.00</td>
</tr>
<tr>
<td>Graduate</td>
<td>per semester $1,391.00*</td>
</tr>
<tr>
<td></td>
<td>$155.00 per semester hour or fraction thereof; minimum charge $310.00</td>
</tr>
</tbody>
</table>

*Thirty dollars of the fee is allotted to the bond obligation of the University Center.

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

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 $75.00 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 more information call the Continuing Education Division at (615) 755-4346.

**Listener’s Fee**

Individuals considering entering or returning to the University may listen in academic courses for a fee of $10.00 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 Continuing Education Division at (615) 755-4364.

**Post-baccalaureate Fees**

Post-baccalaureate students pay fees at the undergraduate rate.

**Senior Citizens**

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 $75.00 per semester.

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

For more information call the Continuing Education Division at (615) 755-4346.

**Summer Terms**

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

**Other Expenses**

**Application Fee**

A non-refundable 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 $10.00. In addition to the $10.00 charge, a check written to cover tuition 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: $10.00
- Master’s Degree: $16.00

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 $375.00 to $600.00 per semester according to the accommodations available. A $25.00 reservation/damage deposit is required from students applying for housing. In addition a $75.00 advance payment is required for fall semester.

**Meals**

Meals in the University cafeteria are served a la carte. Meal tickets may be purchased at the University cafeteria.

**Orientation**

A $35.00 fee for the two-day sessions includes one dinner, one lunch, and a breakfast, as well as an overnight dormitory stay. The fee also covers cost of booklets and orientation materials.

**Parking**

- Reserved parking decal: $48.00 per semester
- General parking decal: $30.00 per year

**Special Examination Fees**

Payable for each proficiency or validation examination.

- Undergraduate: $22.00 per credit hour
- Graduate: $44.00 per credit hour

**Fee Payment**

**General**

A student will not be allowed to register with a debt due the University.

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.

All students, including those who have their fees paid by scholarship or other sources, must obtain a validated fee receipt from the Business Office or be charged the late fee. Any student who submits registration materials will be obligated for a percentage of the account even if the student does not attend classes unless the Registration Office is notified in writing, prior to the first day of classes, that the student wishes to cancel the registration.

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.

**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 graduated late service fee of $2.00 per regular business day will be charged during the next ensuing five regular business days ($2.00 the first day, $4.00 the second day, $6.00 the third day, $8.00 the fourth day, and $10.00 the fifth day). After the fifth day, students will be charged an additional $10.00 late service fee (total of $20.00). This $10.00 service fee is also applicable to room charges that are not paid within the five regular business days following the last designated fee payment day.

Students who have not completed registration and paid their appropriate charges within the 10 ensuing regular business days after the last regular fee payment day will be withdrawn from the University and will not be allowed to reenter the University or receive an official transcript until the debt is paid. A student in this category may be permitted to continue enrollment after a $10.00 reinstatement service fee, in addition to the other late service fees, is paid (total $30.00).

Summer Terms

For summer terms a graduated late service fee of $2.00 per regular business day will be charged during the five regular business days following the last regular fee payment day ($2.00 the first day, $4.00 the second day, $6.00 the third day, $8.00 the fourth day, and $10.00 the fifth day). Students who have not completed registration and paid their appropriate charges within five ensuing regular business days after the last regular fee payment day, will be withdrawn from the University, and will not be allowed to reenter the University or receive an official transcript until the debt is paid. A student in this category, either before or after withdrawal, may be permitted to continue enrollment but will be charged a $10.00 reinstatement fee in addition to the other late service fees (maximum $20.00).

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. Students not responding to such statements will be withdrawn from the University. The withdrawal does not relieve the financial responsibility. If withdrawn a $10.00 fee must be paid to be reinstated.

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

Refunds for withdrawal from all classes during a fall or spring semester are as follows.

<table>
<thead>
<tr>
<th>Number of calendar days*</th>
<th>Percentage of refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>80%</td>
</tr>
<tr>
<td>11-20</td>
<td>60%</td>
</tr>
<tr>
<td>21-30</td>
<td>40%</td>
</tr>
<tr>
<td>31-40</td>
<td>20%</td>
</tr>
<tr>
<td>41 &amp; after</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Counted from the first official day of classes.

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

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<thead>
<tr>
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<tr>
<td>1-10</td>
<td>100%</td>
</tr>
<tr>
<td>11-20</td>
<td>60%</td>
</tr>
<tr>
<td>21-30</td>
<td>40%</td>
</tr>
<tr>
<td>31 &amp; after</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Counted from the first official day of classes.

Summer Terms

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

<table>
<thead>
<tr>
<th>Number of calendar days*</th>
<th>Percentage of refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>80%</td>
</tr>
<tr>
<td>4-6</td>
<td>60%</td>
</tr>
<tr>
<td>7-9</td>
<td>40%</td>
</tr>
<tr>
<td>10-12</td>
<td>20%</td>
</tr>
<tr>
<td>13 &amp; after</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Counted from the first official day of classes.

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

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<th>Number of calendar days*</th>
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<tr>
<td>4-6</td>
<td>60%</td>
</tr>
<tr>
<td>7-9</td>
<td>40%</td>
</tr>
<tr>
<td>10 &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 ten years. Students, however, may also elect the current catalog at the time of reentry, the catalog in effect when a new major is selected, or a catalog reflecting a revised curriculum. Transfer students may use the catalog in effect at the time of their entry to the community or senior college from which transfer is made, provided that the transfer to this campus occurs within five years of initial entry to college.

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 term of summer is 7 hours; any combination of terms is 10 hours, and the maximum registration is 16 hours for the entire summer session. Any exceptions must receive advance approval by the Petitions Committee.

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. For any undergraduate degree, students must complete a minimum of 30 hours of courses at the 300 level or above.

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>000-099</td>
<td>Activity, service, or non-credit courses. A maximum of eight</td>
</tr>
</tbody>
</table>
3. Students will be placed on probation when they return after the period of suspension. They must either achieve a 2.00 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 immediate 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 appeal for reentry to the term that immediately follows the summer term.

Students who wish to appeal for reentry to any term other than described above must complete their appeal through the Office of Admissions. These appeals must be submitted before the first day of classes of the term in which reentry is sought.

Academic action is recorded on the permanent record card.

Academic Warning

Academic warning is a cautionary notice to the student that his or her semester grade point average is below 1.00 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. Unlike these latter actions, academic warnings do not appear on the student's permanent academic record.

Grading Policies

Grades

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>represents superior performance in the course.</td>
</tr>
<tr>
<td>B</td>
<td>represents commendable performance in the essentials of the course.</td>
</tr>
<tr>
<td>C</td>
<td>represents acceptable performance in the essentials of the course.</td>
</tr>
<tr>
<td>D</td>
<td>represents marginal performance below the acceptable standards of university work.</td>
</tr>
<tr>
<td>S</td>
<td>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 Health and Physical Education 039, Varsity Sports, may be applied toward the 128 hours required for a degree.</td>
</tr>
</tbody>
</table>

NC represents failure to complete the requirements in satisfactory/no credit courses. The attempted hours are not computed in the grade point average.

/ 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.

IP is used as an interim grade for departmental honors courses numbered 495r and indicates work in progress. It must be removed by the end of the next regular semester, or the In Progress becomes an F. 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 classes after the first two weeks of classes, and up to the last six class weeks before the 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:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>S</td>
<td>—not included</td>
</tr>
<tr>
<td>NC</td>
<td>—not included</td>
</tr>
<tr>
<td>W</td>
<td>—not included</td>
</tr>
</tbody>
</table>

Grade Point Average

Continuation in the University, rank in class, and eligibility for honorary organizations or fraternities and sororities and for scholarships are based on the grade point average. This average is computed by dividing the total number of quality points earned by the total number of semester hours attempted, including hours of F. Hours are excluded in which grades of S, NC, I, and W have been earned.

Repeated Courses

Courses may be repeated to raise a student's grade point average. The first grade will be deducted from the attempted and earned totals but will not physically be removed from the permanent record. For all repeated courses, the last grade only will be computed in the cumulative totals and the grade point average. Students are responsible for indicating at the time of registration that they are repeating courses.
Withdrawals

Once a student has submitted registration materials for a semester or summer term the student is considered to be enrolled and is liable for fee payment, unless he or she notifies the Registration Office in writing before the first day of classes of his or her intent to withdraw. 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. They should never stop attending unless they officially withdraw. Failure to withdraw officially from any course will result in a grade of F.

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 of Registration.

Undergraduate Degrees

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, and Bachelor of Social Work. Majors offered with 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, Business-Economics, Philosophy and Religion, Political Science, Sociology-Anthropology

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

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

Art Education (B.F.A.)

Biology (B.A.)

Business Administration (B.S.)
Concentrations: Accounting, Finance, General Management, Industrial Management, Marketing, Office Management, Secretarial Science

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

Communications (B.A.)
Concentrations: Advertising, Broadcasting and Electronic Media, Broadcast Journalism, Journalism, Public Relations

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

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

Early Childhood Education (B.S.)

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

Education, Secondary School Programs (B.S.)

Elementary Education (B.S.)

Engineering (B.S.E.)
Concentrations: Electrical Engineering, Industrial Engineering, Mechanical Engineering, Chemical Engineering, Civil Engineering

Engineering Management (B.S.)

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

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

Foreign Languages: French, Greek and Latin, Latin, and Spanish (B.A.)

Geology (B.S.)
Concentrations: General Geology, Coal Geology

Health and Physical Education:
Recreation Specialist (B.S.)

History (B.A.)

Home Economics (B.S.)
Concentrations: General (Child and Family Development, Foods and Nutrition, Management and Consumer Science);
Business (Fashion Merchandising, Food Systems Administration, Interior Design, Consumer Affairs)

Humanities (B.A.)
Includes concentration in International Studies

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

Mathematics (B.A.)

Medical Technology (B.S.)

Music (B.A.)
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

Political Science (B.S.)
Concentrations: Pre-Professional, Public Administration

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

Social Work (B.S.W.)

Sociology and Anthropology (B.A. and B.S.)
Concentrations: General (B.A. only). Anthropology, Sociology, Urban Studies

Special Education: General (B.S.)

Theatre and Speech (B.A.)

Minors are currently available in the following areas: anthropology; art; studio art or graphic design or history of art; biology; chemistry; communications; economics; English; environmental studies; French; geography; geology; Greek; history; American history or world history; Latin; mathematics; music; philosophy; physics; political science; psychology; religious studies; social work; social work services for the aged; sociology; Spanish; and theatre. 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 205r.

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 requirement 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 advisers 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) and Category F (Mathematics) at their earliest opportunity.

General education requirements for transfer students may be adapted to individual circumstances. Transfer students should request this information at the time of admission.

Students enrolled prior to fall 1982 should consult earlier catalogs or schedules of classes for courses certified for general education.

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 101, 102; University Honors 101, 102.

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. Majors in education may not use history in this category. The following courses satisfy this requirement.

Humanities: Classics 310, 396; English 103, 111, 203, 207; History 101, 102, 203, 204, 310; Philosophy 106, 201, 221; Political Science 212; Religion 103, 221, 222, 236; University Honors 101, 102.

Fine Arts: Art 111, 211; Music 111; Theatre and Speech 111, 115.

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; Economics 101, 102; Human Services 101; Political Science 101, 202; Psychology 101, 241; Social Work 210; Sociology 151, 215, 220.

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; Biology 121; Chemistry 121, 125; Environmental Studies 150; General Science 111; Geology 111; Physics 103.

Category F

Mathematics (3 hours)
Courses approved for this category are intended to help students acquire some appreciation for mathematics as a creative activity of the human mind and some understanding of its usefulness in comprehending the physical universe. These objectives are supported by appropriate emphasis on computational skills and on the ability to work with mathematical symbols. The following courses satisfy this requirement.


Category G

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

Anthropology 208, 333; Engineering 211; English 233, 257; History 114, 208, 211; Modern Languages 201; Music 214; Political Science 102, 244, 314; Religion 211, 232; Social Work 250.

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.

III. Physical Education

Health and Physical Education 021, required in the first year, plus one additional physical education 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 Health and Physical Education 025. Guidance, participation, and evaluation are structured on an individual basis.)
3. Veterans with at least one year of military service.

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

IV. Foreign Language

For BA and B.M. degrees: completion of second college year of study in one foreign language. 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, 101, and 102.

V. Major

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

VI. 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 137 semester hours and co-op Engineering graduates will need 147 semester hours. 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 page 15 for further information.

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 2.00 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 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 shall 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.

*See pages 23-25 for additional information on academic regulations.

**Subject to the approval of the Board of Trustees

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Degree Regulations

Academic Residency Requirements

The final 30 semester hours must be completed in residence on this campus, and a 2.00 average must be earned on these hours. Special arrangements to allow work taken at other University of Tennessee campuses to be counted as part of this requirement must be approved by the Petitions Committee. Students who attend junior or community college at any time in their academic career must complete the last 60 semester hours at a senior college with the last 30 of those 60 completed at The University of Tennessee at Chattanooga. Before entering professional school, students in combined programs must complete at The University of Tennessee at Chattanooga the last 30 of the 98 semester hours of undergraduate study.

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 $10 for undergraduates and $16 for graduate students and must be paid before the diploma will be released.

Limitations for B.A. Degree

Not more than 42 hours in any one department may be applied toward a Bachelor of Arts degree.

Not more than six hours in certain subjects (all office administration courses; all home economics courses except 105; Engineering 102) may be applied toward a Bachelor of Arts degree.

Second Bachelor's Degree

A student who has received one bachelor's degree 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 (with a 2.00 average) not offered for the first degree, and that an additional year is spent in academic residence.
Preprofessional Programs

Combined Programs
The University of Tennessee at Chattanooga offers both three- and four-year programs leading to the bachelor's degree for students preparing for study in certain professional areas. In the four-year program the degree is granted upon completion of 128 semester hours, which include both the general education requirements and a major. Under the combined programs a student may receive the bachelor's degree from 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 forestry, medicine, dentistry, or medical technology. A Dual Degree Program for combined undergraduate and graduate study in political science or public administration is offered in conjunction with The University of Tennessee, Knoxville.

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 $10.

Forestry (B.A.)
The student completes three years or a minimum of 98 semester hours of undergraduate study at UTC. The undergraduate program should include one year each of biology, including botany; chemistry; economics, including macroeconomics; mathematics, including analytical geometry and calculus; physics; and a major in a behavioral or natural science.

At the beginning of the student's senior year, he or she transfers to the School of Forestry of Duke University and takes the first year of the professional program in forestry. At the completion of that year, the student may receive the Bachelor of Arts degree from UTC. At the end of the second professional school year at Duke, the student may receive the Master of Forestry degree from Duke University.

Preprofessional—29

Cooperative Education Program
The cooperative education program provides the student with the opportunity to gain practical work experience in a chosen major. Students will be placed on a system which requires that the student be employed full-time for one semester and then attend classes at The University of Tennessee at Chattanooga on a full-time basis the following semester.

A limited number of co-op positions are available each year in selected majors. Students interested in engineering co-op positions should contact the School of Engineering. Students majoring in fields other than engineering should contact the Division of Continuing Education. A co-op student placed on the alternate system in a non-engineering position should register with a major department for course 001 at the beginning of each semester that he or she is employed. Only students who have advance approval of the Division of Continuing Education and of their major department will be enrolled in this course.

Preparation for Health Professions
Students wishing to enter dentistry, medicine, nursing, or one of the other health fields such as cytotechnology, dental hygiene, medical technology, pharmacy, physical therapy, 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 166. 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 Center for Health Sciences at Memphis and include the specific requirements for admission to the respective colleges of the medical 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 Center for Health Sciences should consult the catalogs of these 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 Center for Health Sciences with a minimum of 90 semester hours in academic subjects, preference is given to those who have already completed a baccalaureate degree. Admissions requirements include 16 hours of chemistry (8 hours of general and analytical and 8 hours of organic), 8 hours of physics (mechanics, heat, light, sound, magnetism, and
preprofessional  

30—Preprofessional  

electricity), 16 hours of biology including a complete course in biology or zoology and 8 hours of upper level courses (genetics, cellular biology, and human anatomy recommended), 12 hours of English composition and literature, and 3 hours of speech. Advanced science courses are recommended in biology (cellular biology, genetics, comparative anatomy, physiology, embryology, microbiology, and histology) and in chemistry (qualitative analysis and biochemistry). For general electives, courses in mathematics (particularly calculus), foreign language, literature, philosophy, and social and behavioral sciences are recommended.

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 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.)

Admission to an approved professional school of medical technology normally requires a minimum of 90 semester hours at an undergraduate institution. The University of Tennessee Center for Health Sciences, however, requires two years of prerequisite course work (60 semester hours) and two years of professional work at the center in Memphis to obtain the B.S. in medical technology. Prerequisite courses required for admission to the center are 12 hours of biology including human physiology, 16 hours of chemistry including 8 hours of organic chemistry, one course in college algebra, and 6 hours of English. Courses in communications skills (interpersonal communication, public speaking, group communications), psychology, and sociology are strongly recommended. A year of American history in either high school or college is required.

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 with the program outlined on page 50, together with 30 hours from an approved school of medical technology other than The University of Tennessee Center for Health Sciences.

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 Center for Health Sciences 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 (comparative anatomy, embryology, animal physiology, cellular 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.

**Preprofessional—31**

### Preprofessional—31

**Preprofessional**

Students wishing to prepare for the Bachelor of Science in Nursing program available at The University of Tennessee Center for Health Sciences at Memphis should complete the following courses or their equivalents to satisfy the minimum admission requirements there.

- Bachelor of Science in Nursing from The University of Tennessee at Chattanooga: see School of Nursing section of catalog-

**Courses**

<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, 192, 193,</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 101, 102,</td>
<td>8</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>Elective*</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>84</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.

### Cytotechnology

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

**Courses**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</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 326 and 336,</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>Social science,</td>
<td>12</td>
</tr>
</tbody>
</table>

### Allied Health Fields

Students planning to enter one of the other health fields can satisfy the minimum admission requirements for the respective units of The University of Tennessee Center for Health Sciences 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.

**Courses**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science 126</td>
<td>3</td>
</tr>
<tr>
<td>Three courses from two humanities fields: art and music appreciation, foreign language, history, literature, philosophy, and religion</td>
<td>9</td>
</tr>
<tr>
<td>Three courses from two behavioral or social science fields: anthropology, economics, geography, political science, psychology, and sociology</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics 135, 136 or 150, 160</td>
<td>9-8</td>
</tr>
<tr>
<td>Biology 121, 122,</td>
<td>8</td>
</tr>
<tr>
<td>Biology 311</td>
<td>4</td>
</tr>
<tr>
<td>Biology 325, 336,</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 121, 122,</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 351, 352,</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 367,</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 466,</td>
<td>3</td>
</tr>
<tr>
<td>Physics 103, 104,</td>
<td>8</td>
</tr>
<tr>
<td>Additional courses not available at UTC: Animal Nutrition, Feeds and Ration Formulation, Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>86-88</td>
</tr>
</tbody>
</table>

- Students may be admitted to the Physical Therapy School of The University of Tennessee Center for Health Sciences upon completion of 60 semester hours, excluding physical education or military science, which include the following courses or their equivalents:

**Courses**

<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,</td>
<td>8</td>
</tr>
<tr>
<td>English 101, 102,</td>
<td>8</td>
</tr>
<tr>
<td>Psychology 101,</td>
<td>6</td>
</tr>
<tr>
<td>Sociology 151, 215,</td>
<td>6</td>
</tr>
<tr>
<td>Home Economics 106,</td>
<td>3</td>
</tr>
<tr>
<td>Elective*</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>80</td>
</tr>
</tbody>
</table>

- Mathematics strongly recommended. A year of American history in either high school or college is required for the degree program.

### Prephysical Therapy

Students may be admitted to the Physical Therapy School of The University of Tennessee Center for Health Sciences upon completion of 60 semester hours, excluding physical education or military science, which include the following courses or their equivalents:

**Courses**

<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,</td>
<td>8</td>
</tr>
<tr>
<td>English 101, 102 and literature course</td>
<td>9</td>
</tr>
<tr>
<td>Psychology 101,</td>
<td>3</td>
</tr>
<tr>
<td>One course from Theatre and Speech 107, 108, 109, 309</td>
<td>8</td>
</tr>
<tr>
<td>Business Administration: Accounting 201</td>
<td>3</td>
</tr>
<tr>
<td>Social Science,</td>
<td>8</td>
</tr>
<tr>
<td>Elective*</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>80</td>
</tr>
</tbody>
</table>

- Mathematics strongly recommended. A year of American history in either high school or college is required for the degree program.
Honors and Honor Societies

Courses | Semester Hours
--- | ---
Biology 121,122 | 8
Advanced Biology | 8
Chemistry 121,122 | 8
Physics 103,104 | 8
English 101,102 and 2 additional courses from art, English, languages, music, speech | 12
Psychology 101 and 1 additional psychology course | 6
Social Science | 6
Electives* | 38-39
Total | 90

*Mathematics 135, 145; social sciences; organic chemistry; and advanced biology such as genetics, embryology, or cell biology strongly recommended. A year of American history in either high school or college is required for the degree program.

General University Honors

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 3.25. With an average of 3.50 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 3.75. These honors will be inscribed on the diplomas.

William E. Brock Scholars Program

Brock Scholars are those students who have been awarded membership in one of the University’s most prestigious honors programs. This program attempts to create an atmosphere, both academic and social, in which its members may develop their capacities for intellectual, moral, and social leadership. The program’s goal is a community of scholars, at various levels, benefiting from each other’s work and providing the University and the community with ideas and new ways to excellence.

In order to achieve this goal, the program provides scholars with a general education curriculum tailored to their talents and needs (see page 106); an integrated program of co-curricular activities; an advisement system that enables each scholar to derive the greatest benefits from the University’s resources; membership in a highly visible and respected group; and a four-year financial scholarship award. In addition, Brock Scholars are recognized as such at graduation and at other official University functions.

Each year the program admits to membership some twenty freshman students. Applicants are expected to have demonstrated outstanding achievement and promise in high school. Continuance is reviewed each year and is contingent upon the scholar’s academic performance, upon the recommendation of the director, and upon the approval of the University’s Scholarship Board.

For further information or application form, write Dr. Robert C. Fulton III, Director, William E. Brock Scholars Program, The University of Tennessee at Chattanooga, Chattanooga, Tennessee 37402.

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 permanent 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 include an approximately two-page abstract in language intended for the intelligent and educated non-specialist. 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 will sit as a nonvoting member on the oral examination concerning the thesis.

Interested students shall consult with their advisers or departmental 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 by the first school day in March for students working in summer and fall or fall and spring terms and by 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. After the director of Records has certified the candidate’s academic standing and grade point averages, the application is submitted to the head of the department by which honors is to be granted.

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 department or from the secretary or chair of the Departmental Honors Committee.

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 approved 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, and continuance in, the program requires an overall grade point average of 3.20 and a grade point average of 3.50 in the major field. 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, normally 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 3.50 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 of at least 3.20 with a registration of 12 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 3.50 average on at least 12 graded hours in the first semester or a cumulative average of 3.50 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 3.30 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 3.00 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 3.50 average on at least 12 graded hours in the first
Honor societies in specific areas include:

- Beta Beta Beta (biology)
- Beta Sigma Nu (nursing)
- Delta Omicron (music)
- Delta Tau Omega (geology)
- Gamma Sigma Epsilon (chemistry)
- Kappa Omicron Phi (home economics)
- Kappa Delta Pi (education)
- Lambda Iota Tau (literature)
- Omicron Delta Epsilon (economics)
- Phi Alpha Theta (history)
- Phi 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)

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

<table>
<thead>
<tr>
<th>Degree</th>
<th>Major</th>
<th>Admission Test</th>
<th>Other Admission Requirements</th>
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</thead>
<tbody>
<tr>
<td>M.B.A.</td>
<td>Business Administration</td>
<td>GMAT</td>
<td>Business administration major or equivalent</td>
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<tr>
<td></td>
<td>Accounting</td>
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<td>Economics</td>
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<td>Finance</td>
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<td>Marketing</td>
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<td>Operations/Production management</td>
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<tr>
<td>M.Ed.</td>
<td>Administration &amp; Supervision</td>
<td>MAT*</td>
<td>Professional teacher certification; teaching experience recommended</td>
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<tr>
<td></td>
<td>Elementary</td>
<td></td>
<td>Professional teacher certification.</td>
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<td></td>
<td>Secondary</td>
<td></td>
<td>Professional teacher certification.</td>
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<tr>
<td></td>
<td>Elementary Education</td>
<td>MAT*</td>
<td>Twenty undergraduate hours in psychology and letters of recommendation for counseling option. Professional teacher certification for school option.</td>
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<tr>
<td></td>
<td>Reading</td>
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<td>Professional teacher certification; major in listed area.</td>
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<td>Guidance and Counseling</td>
<td>MAT*</td>
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<td>Community</td>
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<td>Elementary</td>
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<td>Secondary</td>
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<tr>
<td></td>
<td>Art</td>
<td>MAT*</td>
<td>Professional teacher certification; major in listed area.</td>
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<td>Business</td>
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<td></td>
<td>English</td>
<td>MAT*</td>
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<td>Health</td>
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<td>History</td>
<td>MAT*</td>
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<td></td>
<td>Math</td>
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<td></td>
<td>Natural Sciences</td>
<td>MAT*</td>
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<td>Physical Education</td>
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<td></td>
<td>Social Science</td>
<td>MAT*</td>
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<td>Special Education</td>
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<td>Diagnostic &amp; Prescriptive</td>
<td>MAT*</td>
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<td>Gifted</td>
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<td>Severely Mentally Retarded</td>
<td>MAT*</td>
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<tr>
<td>M.Sc.J.</td>
<td>Criminal Justice</td>
<td>MAT**</td>
<td>Employment history form</td>
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<td>Correctional Psychology</td>
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<td>Education</td>
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<td>Planning &amp; Evaluation</td>
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<td>System Application</td>
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<tr>
<td>M.M.</td>
<td>Music</td>
<td>MAT*</td>
<td>Audition; professional teacher certification for education option.</td>
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<td></td>
<td>Education</td>
<td></td>
<td>GRE may be required.</td>
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<tr>
<td></td>
<td>Performance</td>
<td></td>
<td>GRE may be required.</td>
</tr>
<tr>
<td>M.S.</td>
<td>Computer Science</td>
<td>MAT*</td>
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<td>Engineering</td>
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<td></td>
<td>Chemical Sciences</td>
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</tbody>
</table>
Electric Engineering Management B.S. in engineering
Industrial Mechanical Psychology MAT Letters of recommendation, supplemental form.
Clinical Industrial/Organizational Research

*GRE may be substituted on approval
**GRE or LSAT may be substituted on approval.

The University of Tennessee at Chattanooga graduate offerings are designed to provide opportunities for both part-time and full-time graduate students. Classes for full-time graduate students in business administration, criminal justice, computer science, education, and music are predominantly evening offerings; classes for psychology are predominantly day classes.

During the summer semester, education students can plan on full-time study in day classes. Graduate courses in business administration and criminal justice are offered primarily during evening hours in the summer.

For more information concerning a specific degree program, please refer to the appropriate department or school section of the UTC Graduate Bulletin.

For application material, write

Director of Graduate Studies
114 Race Hall, UTC
615 McCallie Avenue
Chattanooga, Tennessee 37402

Admission Procedures

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.

To insure adequate consideration, the completed application and supporting credentials should be received by the Graduate Office no later than one month prior to the beginning of the semester for which admission is desired. In addition, some departments and schools have established application deadlines. Please refer to the appropriate school or department for this information. Those filing applications after the established submission dates cannot be assured that it will be possible to complete and process credentials in sufficient time to secure admission for that term. An applicant for admission must furnish the following materials to the Graduate Office:

1. A completed, signed application on the form provided by UTC.
2. Payment of the $10, non-refundable, application fee.
3. Two official transcripts from each college or university previously attended sent directly from the institution to the Graduate Office.
4. An official report of the applicant's score on the prescribed test for admission.
5. Supplemental application materials as required by the school or department.

No action will be taken until the applicant's file is complete.

If an applicant does not enter UTC in the semester or summer term for which application was made, the applicant's file will be destroyed after one year unless he or she requests and is granted permission to enter at a future date.

All application credentials become the property of the University and are not refundable nor forwardable to other institutions.

International Students

The University wishes to encourage qualified graduate applicants from other countries; however, applicants should be aware that UTC presently has few graduate programs at the master's level and no doctoral degree programs. In addition, the University has few fellowships, assistantships, or other financial aids for graduate students. The international applicant must submit the following materials to the Graduate Office:

1. A preliminary application form.
2. An application for admission on the form provided by the University.
3. A draft or money order for the $10, non-refundable, application fee.
4. Copies of authorized school or university records with certified translations if the records are in a language other than English. Translations must include descriptive titles of courses studied and grades gained in final examinations.
5. Official scores on the Test of English as a Foreign Language (TOEFL).
6. Official scores on the admission test required by the major department.
7. Evidence of financial resources sufficient to provide adequate support during the applicant's period of residence as a student.

All materials must be received by the Graduate Office approximately six months in advance of the fall semester in which the applicant hopes to enroll. An accepted applicant will receive a certificate of acceptance and an I-20 form which must be shown to the consular officer of the United States to whom the student applies for a student visa.

Graduate Admission Requirements

An applicant for admission to the Graduate Division must hold a baccalaureate degree from a regionally accredited college or university and (1) have a minimum grade point average of 2.50 (based on a 4.00 scale) on all undergraduate work taken prior to receiving the baccalaureate degree or (2) a 3.00 in the senior year or (3) qualify for graduate admission by earning a 3.0 average on 9-12 hours of 300 or 400 level courses since graduation.
Scores must be submitted on the appropriate admissions test if the applicant is seeking admission to a degree program.

An applicant for admission to a degree program should refer to the appropriate school or department for specific admission requirements since some degree programs require a higher academic average, additional admission requirements, or utilize a formula for determining admission.

**International Students**

In addition to the above requirements, international students must have earned a minimum score of 500 on the Test of English as a Foreign Language and submit evidence of financial resources sufficient to provide adequate support during the applicant's period of residence as a student.

International students may be required to take an English proficiency examination after arriving at the University or be required to enroll in a special English course for international students.

**UTC Seniors**

A senior who is within 30 semester hours of completing requirements for the bachelor's degree at The University of Tennessee at Chattanooga may apply for admission to graduate courses if the applicant has an overall grade point average of 3.00(8) and is recommended by the head of his or her major department. Subject to the approval of the director of Graduate Studies, a student may earn up to six semester hours graduate credit prior to completing the bachelor's degree. Such approval must be obtained each semester by completing the special application form which is available in the Graduate Office. The approved application must be submitted to the Registration Office at the time of registration.

**Admission Classifications**

Several admission classifications are used by the Graduate Division. The applicant should apply for admission according to the one classification which applies to his or her educational objective. International students, however, must apply for admission as degree students only.

**Auditor**

Applicants with a bachelor's degree who wish to attend classes without earning credit or receiving grades may be admitted as auditors. A graduate application and transcripts are required. Individuals may register as auditors provided space is available in the class desired and if the instructor accepts auditors. The extent to which an auditor may participate in classroom activities is within the jurisdiction of the instructor. Fees for audit are the same as for credit registration.

**Degree Graduate**

Admission to a degree student is by departmental approval only. Thus, an applicant who wishes to be admitted as a degree graduate must file an application, transcripts, MAT, GRE, or GMAT scores and supplemental application materials far enough in advance to allow for evaluation by the department or school. The evaluation will include a review of the applicant's undergraduate program and the specification of any prerequisite courses needed to insure adequate background for the graduate program. In addition to the above requirements, international students must submit a TOEFL score.

**Nondegree Graduate**

An applicant who meets admission requirements and wishes to enroll in graduate and undergraduate courses and earn credit without reference to a degree program will be admitted as a nondegree graduate student.

A student classified as nondegree who wishes to be admitted to a degree program must file a formal request for this change with the director of Graduate Studies. In addition, the student must submit supplemental application materials as required for the proposed degree program. A maximum of 9 semester hours earned as a nondegree student will be accepted toward degree requirements. The Graduate Division cannot assure a student classified as nondegree that all or any work completed in this status will apply toward a degree.

**Post-master’s Graduate**

An applicant who has a master’s or terminal degree from an accredited institution and who is not working toward a degree may be admitted as a post-master’s graduate student. A graduate application, application fee, and transcripts from the university which awarded the master’s or terminal degree are required.

**Provisional Graduate**

An applicant who meets the admission requirements but whose file is incomplete may be admitted as a provisional graduate student. This type of admission is valid for one semester and may not be renewed. Further, the provisional graduate must have his or her file completed by the fifth week of the semester or second week of the summer term he or she enrolls. In the event the student fails to complete the graduate file on the specified date, the student will not be permitted to register for a future term.

**Transient Graduate**

An applicant who has been admitted to a graduate program at another institution and wishes to take courses for transfer to that institution may be admitted as a transient student. A graduate application, application fee, and letter of good standing or certificate of transient admission are required. The letter of good standing or certificate of transient admission must be signed by the graduate dean or major adviser at the institution where the student is pursuing his or her graduate degree.

Upon completion of approved courses, the student should request that the UTC Office of Records forward a copy of his or her transcript to the appropriate institution.

**Post-baccalaureate Admission**

Post-baccalaureate is an undergraduate admission
classification which indicates that the applicant has a baccalaureate degree.

1. A student who does not qualify for graduate admission because of an inadequate grade point average may use post-baccalaureate status to demonstrate that he or she can do acceptable work. The attainment of a 3.0 average (an average greater than 3.0 on a 4.0 scale) on nine to twelve hours of 300-level or 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.

2. A student who has received one bachelor's degree 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 (with a 2.00 average) not offered for the first degree, and that an additional year is spent in residence.

3. A student who wishes to take only undergraduate courses for education certification or other purposes may also be admitted in post-baccalaureate status.

Readmission

Any student whose attendance has been interrupted one or more semesters (excluding the summer session) must apply for readmission to the University. A new graduate application must be submitted prior to the beginning of the semester or summer term in which admission is desired.

Due to the competitive nature of some degree programs, readmission as a degree graduate may require departmental approval. In addition, students who have not been admitted to candidacy must follow the regulations in effect at the time of registration.

Graduate Admission Tests

All applicants who request application to a specific degree program must submit a report of scores on the appropriate admission test. The scores must be no more than five years old. The admission tests (except for TOEFL) are administered several times each year by the UTC Counseling Center, 216 Race Hall. Applicants should schedule all examinations well in advance of the date on which they wish to enter graduate study.

The Miller Analogies Test (MAT) is required for applicants to master’s programs in criminal justice, education, music, and psychology. Students may schedule this test by group or individual appointment with the Counseling Center.

The Graduate Management Admissions Test (GMAT) is required of applicants for graduate study in business administration. Information about this test and application forms are available upon request from the Counseling Center or Educational Testing Service, Box 966, Princeton, New Jersey 08540. A score of 450 is required for all prospective international students.

The Test of English as a Foreign Language (TOEFL) is required of all applicants whose native language is not English. A score of 500 must be submitted before action can be taken on the application. Information about this test and application forms are available upon request from Educational Testing Service, Box 899, Princeton, New Jersey, 08540, USA.

All applicants should note that Educational Testing Service reports GRE, GMAT, and TOEFL scores to institutions named by the applicant at the time he or she applies for the test. A fee is charged for later requests.

Each applicant is individually responsible for requesting an official copy of the scores from Educational Testing Service. Requests for additional reports of MAT scores should be directed to The Psychological Corporation, 304 East 45th Street, New York, NY 10017.
STUDENT LIFE

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Student Activities

Athletics
As a member of the Southern Conference, the University maintains a vigorous intercollegiate athletic program with varsity teams in basketball, cross-country, tennis, football, rifle, soccer, wrestling, and golf. The University also has women’s intercollegiate athletic programs in basketball, volleyball, golf, and tennis.

Facilities for support of these programs are excellent. Chamberlain Field is adapted to various forms of outdoor athletics. The stadium and permanent bleachers have a seating capacity of 12,000. Scrappy Moore Field is a regulation football practice field.

The DeSales Harrison Racquet Center, which is located adjacent to the Student Village, houses two indoor tennis courts and seven racquetball/handball courts.

The Manker Patten Tennis Center, located at the north end of Douglas Street along the Tennessee River, features eight Teneco courts and two indoor courts that are available throughout the year. The courts are used for local and regional tournaments.

Maclellan Gymnasium, constructed in 1965, provides facilities needed for the University’s physical education program and various varsity sports. The new UTC Arena seats 12,000 and provides modern facilities for both athletic and entertainment events.

Cultural Opportunities
The University’s departments and organizations sponsor many musical and artistic activities for the University community and the Chattanooga area. Conversely, its urban location makes available to the student the cultural resources of the city: the symphony, opera, art gallery, community concerts, and theater.

Both classical and modern plays are presented each year by the University Theatre, an organization open to students, faculty, and staff. Facilities are open for recreational use when not otherwise scheduled for class or departmental use.

Students interested in musical activities may choose from a variety of organizations. Vocalists may perform in the Chattanooga Singers, Chamber Singers, Singing Mocs, Choral Union, and Opera Workshop. Instrumentalists can play in the Marching Band, Concert Band, UTC Orchestra, Jazz Band, Brass Ensemble, Wind Ensemble, Percussion Ensemble, and chamber music groups. Students may also audition to perform in the Chattanooga Symphony or the Chattanooga Opera Association.

Under various auspices, outstanding speakers are brought to the campus each year. Prominent among these programs is the Keese Lectureship, established by W.S. Keese Jr. in memory of his mother and father. Each year the Keese Lecture is delivered by a distinguished figure in the field of the humanities and the fine arts. Seminars and discussion groups explore the nature of society, law and government, questions of national and international policy, and the responsibilities of the individual.

Fraternities and Sororities
The University has chapters of eight national fraternities and seven national sororities that individually and collectively, through the Interfraternity Council and Panhellenic, contribute to the social and cultural life of the campus. Many traditional events—All-Sing, Blue Key Follies, and Creek Week—are supported by these groups.

The sororities Alpha Delta Pi, Alpha Kappa Alpha, Chi Omega, Delta Sigma Theta, Pi Beta Phi, Phi Sigma Sigma, and Zeta Phi Beta have chapters on the UTC campus.

Fraternities at UTC include Alpha Phi Alpha, Alpha Tau Omega, Kappa Alpha Psi, Kappa Sigma, Lambda Chi Alpha, Omega Psi Phi, Pi Kappa Alpha, and Sigma Chi.

Intramurals
The University has an outstanding program available to all students. The program includes flag football, tennis, handball, water basketball, swimming, volleyball, basketball, racquetball, badminton, wrestling, softball, and golf.

Facilities for tennis, swimming, wrestling, handball, racquetball, and water basketball are excellent. A lighted intramural field is also available.

Publications
All of the varied and active life on the campus of the University is reported and recorded by campus publications. The University Echo, the campus newspaper, provides a continual flow of news and opinion concerning campus activities. The Moccasin is the student yearbook, which presents in text and photograph a record of the academic year. The Sequoya Review, published semiannually, provides a selection of poetry, prose, art, and photography from the University community. Under the general direction of the Publications Board, the University Echo, the Moccasin, and the Sequoya Review are staffed and managed by students.

Religious Life
The interest of the University in the religious life of the community is expressed in the existence of denominational centers and groups on campus, occasional religious services, and lectures by representatives of different faiths. Both Patten Chapel and the small Danforth Chapel offer appropriate settings for worship services.

The Baptist Student Union, United Methodist Student Center, Catholic Center, Presbyterian Campus Ministry, and Christian Student Center (Church of Christ) are
centers on campus staffed by persons trained in theology and counseling who seek to minister to the religious needs and interests of the students and the community. Other religious groups are "Bahai," B'nai B'rith Hillel, the Christian Science Organization, the Moccasin Christian Fellowship, Seventh Day Adventists, Lutheran, Episcopal, and Christian Church.

Student Government Association

The student's single campus-wide representative organization is the SGA, which works to protect student rights, promote progressive change in University policies, and provide services for students. Meeting weekly, the Senate acts as the legislative arm of the students, with its elected membership constantly concerned with any and all actions of the University which affect the lives of students. Entertainment and educational programs are also provided for the students by the SGA.

The University Center Association for Campus Entertainment

The University Center Association for Campus Entertainment (ACE) in its advisory role to the center staff assists in the development of a broad range of activities for the campus. It is the intention of the staff and the association to serve the campus community by providing entertainment activities. Students are encouraged to become members of ACE as all entertainment activities are planned by program committees.

Involvement with ACE provides a student with the opportunities to develop leadership skills and to develop campus life. Interested students should contact the University Center director or the president of ACE. Student recruitment takes place during fall semester; however, new members may be added as spaces are available.

Student Services

Bookstore

Located in the Guerry Center, the University Bookstore is a service-oriented function of the University. Textbooks, both used and new, are supplied for all courses. Paperbacks, art and engineering supplies, campus wear, and health and beauty aids are among the many kinds of merchandise stocked by the store. Students may purchase gift items, magazines, greeting cards, school supplies, and many other items at this location.

Check Cashing Service

The bookstore provides a check cashing service and also honors MasterCard and Visa.

Counseling and Career Planning

The services of the Counseling Center are available to all students and their dependents without charge. Professionally trained staff members provide assistance in resolving personal, emotional, and marital problems, and in helping students explore curricular and career alternatives. The Counseling Center also sponsors developmental and educational programs such as assertion training, values clarification, career exploration, human sexuality, interpersonal communication skills, and many others. All services are confidential.

Food Service Facilities

The University-operated Food Services provide meals and snacks in the University Center cafeteria and grill. Food Service credit cards are available; otherwise, all purchases are cash.

Health Services

Emergency first aid service under the supervision of a registered nurse is available to all members of the University community during regular business hours. For those on the voluntary University Health Plan (which includes all dormitory residents) a physician makes on-campus sick calls three days a week. In addition, the voluntary health plan covers the cost of the physician's services for the first visit only in those emergency cases referred to Medical Center, which is adjacent to the campus. The student is responsible for other expenses, such as surgery, laboratory, and medicine.

Additional services or hospitalization are not covered by the voluntary University Health Plan. The University recommends that the student obtain separate hospitalization and medical insurance. A voluntary student insurance
plan is available through the University that covers a schedule of expenses for surgery and hospitalization in case of accident or illness. The insurance plan should be requested at the time of registration. Information is available at the insurance desk as the student pays fees, and also in the Student Health and Student Affairs Offices. This plan is particularly useful for parents whose family policy does not cover the dependent child after the 19th birthday. The University Health Services Office is located at 628 Vine Street.

Housing
The University feels that a valuable part of college life is living for a period of time in close association with others following academic pursuits. Accommodations are designed and maintained to assure the safety and comfort of the residents at a cost that is within the reach of today's student. Programs and personnel are selected to enhance the academic achievement and personal development of the persons who live in these units.

Applications for both men's and women's residence halls 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.

On-campus housing includes the Student Village and the Oak Street Apartments, both single-student apartment complexes; Pfeiffer Hall; Stagmaier Hall; and the Vine Street Dorm.

The Village houses 412 men and women students in apartments of four people each. It is carpeted, air conditioned, and surrounded by parking and recreation areas. Each apartment contains four single bedrooms, a living room, and a kitchen area.

UTC's newest facility (1982), the Oak Street Apartments, has accommodations for 192 men and women students. Each apartment has two double-occupancy bedrooms, a living room/kitchen area, and a bath. Upper floors have access to balconies.

Pfeiffer Hall houses approximately 42 students; Stagmaier Hall provides housing for 150 students. Most of the rooms in Pfeiffer Hall are for two students. Stagmaier Hall features four-person suites containing two sitting rooms, two bedrooms, and a bath.

The Vine Street Dorm is a traditional facility with double rooms off a common hall.

Lounge and reception areas are available for recreation and visiting. All halls are air-conditioned. Laundry facilities with ticket-operated automatic washers and dryers are available for use by the students. Each student is normally furnished a bed, desk, chair, and dresser. Residents are expected to bring their own linens, blankets, towels, and pillows. All rooms provide lighting, but frequently additional desk lamps are furnished by the student to suit particular needs.

Students may use small electrical appliances such as radios, hair dryers, and clocks in their rooms but are not permitted to use hot plates, percolators, popcorn poppers, immersion heaters, or other cooking equipment.

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.

I.D. Cards
The University provides each full-time student with an official University I.D. card. This card is used 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.

I.D. cards for new, full-time students are made at registration and distributed free of charge. Replacement cards cost $2.00. Lost I.D. cards should be reported to the Student Affairs Office immediately. Validation stickers are issued each semester and are placed on the back of the I.D. card. One card is intended to last throughout a student's entire stay at the University.

Part-time students use their fee payment receipt as their I.D., or they may pay $2.00 and receive a plastic I.D. card.

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

Degree and nondegree job orders are placed on the bulletin board in the Placement Center for students to peruse at their convenience. Part-time jobs—as well as typing, tutoring, and baby-sitting jobs—are posted.

Students should register with the center early in their final year to take advantage of the employment recruiting season, the center's Job Opportunities bulletin, and various seminars and workshops. Individual employment counseling is also available.

Student Handbooks
Distributed at the beginning of each academic year, the Student Handbook provides detailed information on student services. It also contains the constitution of 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
Full-time students: Students paying the full maintenance fee are entitled to a programs card and a student I.D.

These two cards should be presented at the University Center Ticket Office to claim a free student ticket to each major athletic event (football and basketball). A limited number of student tickets are available and are issued on a first-come basis during a specified period prior to each game.

The programs card also entitles a student to admission to certain activities; however, some campus programs are not covered by the card and an additional subscription or special ticket is sold. These activities include the yearbook and tickets to some concerts and dances.

Part-time students: Part-time students may voluntarily purchase a programs card and student I.D. each semester for the difference between the amount they paid and the...
full maintenance fee, or $15.00, whichever is less. The fee receipt should be presented with payment at the Athletic Department Office to receive a programs card.

General Regulations

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.

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.

A more thorough explanation of records maintained on students and copies of records may be obtained from the Office of Records. The director of Records or the dean of Admissions and Records will further explain and clarify the Family Educational Rights and Privacy Act to students, parents, or interested parties upon request.

Records
The Office of Records maintains a permanent 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, $1.00 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.

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

Vehicle Operation and Parking
Each person—student, faculty, or staff member—who operates a motor vehicle while at the University must register that vehicle with the Business Office. A University parking authority determines the parking policy, traffic regulations, and fees. This information is published each year in the University Traffic and Parking Regulations.

The large volume of vehicles operated on campus requires strict adherence to the traffic and parking regulations. Therefore, a system of fees for violations of these regulations is enforced by the University. Copies of the Regulations are available each semester at the time students, faculty, and staff apply for parking permits.

Alumni Association

When the University of Chattanooga became a major campus of The University of Tennessee on July 1, 1969, all former students and graduates of UC automatically became members of the UT National Alumni Association, which encompasses alumni from all campuses of The University of Tennessee.

The UT National Alumni Association is administered by a Board of Governors drawn from alumni of all campuses. The Chattanooga campus is represented on this governing body by the UTC chancellor, three UTC alumni, and the president of the UTC Student Government Association.

The UTC Alumni Council, whose membership is limited to those who attended the Chattanooga campus, exists to establish a mutually beneficial relationship between the Chattanooga campus and its alumni. The council sponsors all alumni activities on the Chattanooga campus. The UTC Alumni Council maintains its offices at 605 Oak Street on campus.

UTC alumni are represented on the University of Chattanooga Foundation Board by three alumni trustees, one elected each year by the council to serve three years on the board.

In an effort to acquaint students with the activities, goals and purpose of the Alumni Council, the Association sponsors the Undergraduate Alumni Council. This group is comprised of thirty students who work with the Offices of the Chancellor, Development, and Alumni to promote the University to the community and to act as a liaison between the alumni and UTC students. Application for membership in the Undergraduate Alumni Council may be made in the Alumni Office.

Records on file in the Alumni Office include the current addresses of graduates and, upon request, former students who have completed 24 hours of credit. When available, information about later achievements is added to the records and is included in UTC alumni publications, which are mailed to UTC alumni throughout the nation and many foreign countries.

UTC Alumni Council
Albert W. Pitner '68 .................................. President
Carolyn Owen Schaerer '61 .......................... President-Elect
Sarah Holt Hipp '38 ................................. Secretary
Patrick A. Christnacht '68 .......................... Treasurer
James L. Walden 78 ................................. Past-President
ACADEMIC PROGRAMS

45 Academic Organization
46 College of Arts and Sciences
106 School of Business Administration
119 School of Education
144 School of Engineering
155 School of Human Services
166 School of Nursing
169 Other Units
Academic Organization and Departments

College of Arts and Sciences
John E. Trimpey, Dean

Art, .................................................. George Cress, Head Biological Sciences, .................................. Charles Nelson, Head Chemistry, ............................................ Benjamin H. Gross, Head English, .................................................... Thomas C. Ware, Head Foreign Languages & Literatures, ............ Ronald G. Bohrer, Head —Classical Civilization, French, German, Greek, Italian, Latin, Modern Languages, Spanish Geosciences, ......................................... John E. Trimpey, Acting Head —Geology, Geography History, .................................................... Ronald O. Moore, Head Interdisciplinary Studies, .......................... John E. Trimpey, Acting Head —American Studies, ............................... John E. Trimpey, Coordinator —Communications, ................................. Peter Pringle, Coordinator —Humanities, .......................................... Robert C. Fulton, Coordinator —University Studies, ............................... John E. Trimpey, Acting Head Mathematics, ................................................ James G. Ware, Head Music, Cadek Department of, .................... Peter E. Gerschefski, Head —Graduate Programs, ................................. Peter M. Temko, Director Philosophy & Religion, ................................. Herbert Burhenn, Head —Philosophy, Religion Physics & Astronomy, ................................. Grayson Walker, Head —Astronomy, General Science, Physics —Environmental Studies, ............................. Patricia Perfetti, Coordinator Political Science, .......................................... Robert H. Swansbrough, Head Psychology, .................................................. Edward J. Green, Head —Graduate Programs, ................................. George Helton, Director Sociology & Anthropology, ......................... Edward E. Cahill, Head —Sociology, Anthropology Theatre & Speech, ....................................... Fred D. Behringer, Head William E. Brock Scholars, .......................... Robert C. Fulton, Director

School of Business Administration
Kermit Cudd, Dean

Accounting & Finance, ................................. James Moon, Head Economics, ............................................. Ziad Keilany, Head Management, ............................................. Lawrence Ettkin, Head Marketing, ................................................ Irvin D. Reid, Head Office Administration/Business Education, .... Kermit Cudd, Head Graduate Program, ................................. John Fulmer, Director

School of Education
Roy Stinnett, Dean

Curriculum & Instruction, ............................. Eugene Bartoo, Head Educational Administration & Supervision ... Colbert Whitaker, Head Health, Physical Education and Recreation .... Robert Norred, Head Special Education and Counseling, .......... Earl Davis, Head Graduate Programs, ............................... Eugene Bartoo, Director

School of Engineering
Ronald B. Cox, Dean


School of Human Services
Kenneth Venters, Dean


School of Nursing
Patricia Haase, Dean

Other Educational and Public Service Units

Academic Computing Services, ...................... Lloyd D. Davis, Director Cadek Conservatory of Music, ........................ Marc H. Peretz, Director Center for Economic Education, ...................... William H. Peterson, Director Division of Continuing Education, .................. Jerry Weeks, Dean —Conferences & Non-Credit Programs .... William Sutton, Director —Individualized Education Program .. Kitty Kirby-Miller, Director Division of Special Services/Upward Bound .. Paul Beasley, Director Library, ..................................................... Joseph Jackson, Director Youth Educational Assessment Center ....... Janice Davis, Coordinator

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 205r.

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 requirement 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.
College of Arts and Sciences

American Studies
See Interdisciplinary Studies, page 72.

Anthropology
See Sociology and Anthropology, page 99.

Art
Professor Cress/Head
Professor Collins
Associate Professors Wallace, White
Assistant Professors Gallagher, LeWinter, Lindsey, Lizza

The Art Department reserves the right to keep one example of the work of each student in each course.

Art (B.F.A.)

General Education (see pages 26-27 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)

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

9 hours from science-mathematics, humanities, behavioral-social sciences

Major
66 hours art including 101, 105, 106, 205r, 206r, 207, 208, 305r or 306r, 333, 334, 498r; 12 hours from 211, 212, 213, 414, 431, 432.

Student must complete one area of concentration as follows:
  Painting: 205r or 206r, 307r, 308r
  Graphic Design: 209, 281r, 305r or 306r (whichever course not taken above), 309
  Sculpture: 227, 343, 344r, 433r (six hours)

Remaining hours in art to total 66

Maximum 12 hours in any one "r" course

2.5 GPA minimum in art courses

Participation in senior art show.

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

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 101 Visual Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Art 105 Drawing</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category C</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 106 Drawing</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category F</td>
<td>3</td>
</tr>
</tbody>
</table>

Art (B.F.A.): painting

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 101 Visual Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Art 105 Drawing</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
</tr>
<tr>
<td>General Education Category C</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 106 Drawing</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education Activity</td>
<td>1</td>
</tr>
<tr>
<td>General Education Category F</td>
<td>3</td>
</tr>
</tbody>
</table>
### Art (B.A.)

**General Education** (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category A</th>
<th>2 approved courses in written communication in the English language (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category B</td>
<td>3 approved courses other than art: one from humanities, one from fine arts, and one from either (3 hours each)</td>
</tr>
<tr>
<td>Category C</td>
<td>2 approved behavioral or social science courses (6 hours)</td>
</tr>
<tr>
<td>Category D</td>
<td>1 approved physical or natural science course with laboratory (4 hours)</td>
</tr>
<tr>
<td>Category F</td>
<td>1 approved mathematics course (3 hours)</td>
</tr>
<tr>
<td>Category G</td>
<td>1 approved perspectives course (3 hours)</td>
</tr>
<tr>
<td>Category H</td>
<td>Health and Physical Education 021 plus one additional semester physical education activity</td>
</tr>
</tbody>
</table>

Required language through second college year

| Major | 40 hours art including 101,105,106,205r or 206r, 207,208,305r or 306r, 333 or 334,498r; 9 hours from 211,212,213,414,431,432; 3 additional hours from 227,333,334,343,433r; 3 additional hours from 209,281,305r,306r Participation in senior art show. 2.00 average in all art courses Minimum of 30 hours of 300 and 400 level courses Electives to complete 128 hours |

### Art Education (B.F.A.)

**General Education** (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category A</th>
<th>2 approved courses in written communication in the English language (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category B</td>
<td>3 approved courses other than art: one from humanities, one from fine arts, and one from either (3 hours each), plus courses in humanities/fine arts to total 12 hours in three fields other than history and art</td>
</tr>
<tr>
<td>Category C</td>
<td>2 approved behavioral or social science courses (6 hours) plus one course to total 9 hours behavioral or social science in two fields other than Education; for certification purposes, 3 of the hours may be in history</td>
</tr>
<tr>
<td>Category D</td>
<td>2 approved natural science courses to total 8 hours in natural science (one course must be laboratory science)</td>
</tr>
<tr>
<td>Category F</td>
<td>Mathematics F120</td>
</tr>
<tr>
<td>Category G</td>
<td>1 approved perspectives course (3 hours)</td>
</tr>
</tbody>
</table>

1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

### Major and related courses

51 hours art including 101,103,105,106,205r or 206r; 207,208,227,305r, 323, 324, 333, 343, 490r; 6 hours from 211, 212,431,432; 3 hours from 213, 414

### Art Electives

1 approved perspectives course (3 hours)

2 approved natural science courses to total 8 hours in natural science

2 approved behavioral or social science courses (6 hours) plus one course to total 9 hours behavioral or social science in two fields other than Education; for certification purposes, 3 of the hours may be in history

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

2 approved courses in written communication in the English language (6 hours)
Participation in senior art show
30 hours from the School of Education including EDCl 200, 201 204, 205, 431, 433, 438r, 437, 438; Special Education 333.
2.25 average both in teaching field and in School of Education courses

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

Typical course in art education (B.F.A.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics F120</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category D</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>Art 103 Intro, to Art Education</td>
<td>3</td>
</tr>
<tr>
<td>Art 105 Drawing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

| Sophomore      |                 |
| General Education Category B | 3 | General Education Category B | 3 |
| ED Curr. & Instr. 205 | 3 | ED Curr. & Instr. 201 | 3 |
| Art 205r or 206r Advanced Drawing | 3 | Art 208 Beginning Painting | 3 |
| Art 207 Beginning Painting | 3 | Art History | 3 |
| Art 227 Introduction to Crafts | 3 | General Education Category C | 3 |
|                 | 16              |                | 15 |

| Junior         |                 |
| Apply for Student Teaching | 3 | Art 324 Mat. & Proced. in Art Education | 3 |
| General Education Category G | 3 | General Education Category C | 3 |
| ED Special Education 333 | 3 | General Education Category B | 3 |
| General Education Category B | 3 | Art History | 3 |
| Art 323 Mat. & Proced. in Art Education | 3 | ED Curr. & Instr. 431 | 2 |
| Art 333 3-D Design | 3 | ED Curr. & Instr. 433 | 4 |
| Art 305r Printmaking | 3 |                | 18 |
|                 | 18              |               | 18 |

| Senior         |                 |
| ED Curr. & Instr. 436 | 3 | Art History | 3 |
| ED Curr. & Instr. 437 | 3 | Art 493 Intro, to Ceramics | 3 |
| ED Curr. & Instr. 438 | 3 | Art 490 Seminar in Art Ed. | 3 |
| Elective        | 4               | Senior Art Show | 3 |
|                | 13              |                 | 13 |

TOTAL 128

Minors

| Studio Art (21 hours): |                 |
| Art 101, 105, 106, 207, 305, 333; 3 hours from Art 227, 343 |                 |

Graphic Design (21 hours):
Art 101,105,106, 209; Communications 110; 6 hours from Art 281,305r, 306r, 309,310r, 381 r; Communications 367,465 (Communications majors may not use courses required in their concentration; other courses may be elected from the above group to total 21 hours.)

History of Art (21 hours):
Art 211, 212, 213; 6 hours from Art 414,431,432; 6 hours from American Studies 200; Classics 396; English 203, 204; History 318, 319, 337, 338; Music 315, 316; Theatre & Speech 211, 212; Philosophy 336

Art Courses

101 Visual Fundamentals (3)
Studio experience with visual and tactile components of two and three dimensional composition. Consideration of line, shape, value, texture, and color as design elements. Studio hours three.

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.

105, 106 First Year Drawing (3.3)
Introductory work in drawing and pictorial composition using basic drawing media. Primary emphasis on observation, analysis, and interpretation through use of line, value, and spatial determinants. Studio hours six. Courses are sequential: 705 prerequisite to 706.

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.

199r Special Projects (1-4)

205r, 206r Advanced Drawing (3.3)
Figure, landscape, and still-life subjects approached from the standpoint of their compositional and expressive possibilities. Experimentation with various media. Study of art anatomy. Studio hours six. Prerequisites: 101, 105, 706.

207, 208 Painting and Composition (3.3)
Painting of still-life, landscape, and abstract compositions in oil emphasizing color relationships and composition as essential means of pictorial expression. Studio hours six. Prerequisites for art majors: 101, 105, 706. Courses are sequential for art majors; 207 prerequisite to 208.

209 Typographic Design and Layout (3)

211 Prehistoric through Medieval (3)
The arts of the prehistoric, ancient Near Eastern, Egyptian, Greek, Roman, Early Christian, Byzantine, Romanesque, and Gothic periods.

212 Renaissance through Romanticism (3)
Renaissance, Baroque, Rococo, Neo-Classicism, and Romanticism.

213 Realism to the Present (3)
Realism, Impressionism, Post-Impressionism, Expressionism, Fauvism, Cubism, Dada, Surrealism, Abstract Expressionism, and various other post-World War II styles.

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.

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. Corequisite: Art 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. Studio hours six.

228 Advanced Crafts (3)
A continuation of Art 227, allowing for more advanced work in selected craft materials and techniques. Studio hours six. Prerequisite: 227.

281 Basic Photography (3)
Introduction to black and white photography as an art form with emphasis on composition. Basic camera operation, film processing, and darkroom printing. Prerequisites: Art 101 for Art and Communications majors. Adjustable lens camera required.
301 Art Structure
Slides, demonstrations, and studio experience in drawing, painting, sculpture, and other visual arts. Exposure to basic techniques and approaches designed to increase the student's understanding of art, particularly of contemporary styles. For the non-art major. Course graded on satisfactory/no credit basis.

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

306r Printmaking: Lithography and Serigraphy (3)
Work in single and multi-color lithography, considering the various techniques of stone and metal-plate printing. Work in single and multi-color serigraphy, including various stencil methods of silk-screen printing. Studio hours six. Prerequisites: 101, 105, 106 or approval of department head.

307r, 308r Advanced Painting (3)
Figure, still-life, and landscape composition in oil, watercolor, acrylic, and mixed media. Problems in analytical study and creative interpretation. Studio hours six. Prerequisites: 207, 208.

309 Graphic Design (3)
Advanced typographic design, layout, and media production. Techniques of illustration for graphic arts field and development of concepts used in visual communications. Prerequisites: Art 105, 106, 209.

310r Advanced Graphic Design (3)
Illustration for the visual communications market, preparation of portfolio, and exploration in photographic layout and design. Prerequisites: Art 105, 106, 209.

323, 324 Materials and Procedures in Art Education (3,3)
Exploratory activities designed to acquaint the prospective teacher of art with a representative range of appropriate art materials and the procedures which promote their effective use in grades one through twelve. First semester: elementary, grades one through six. Second semester: secondary, grades seven through twelve. Two-dimensional and three-dimensional studio projects, lectures, and discussion included in both courses. Prerequisite to student teaching.

333 Three-Dimensional Design (3)
Basic problems involving mass and space relationships. Experimentation with foundry techniques. Lectures on the historical development of sculpture.

334 Three-Dimensional Design
Constructions dealing with the manipulation of volumes and surfaces using a variety of materials. Continued development of foundry techniques.

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

344r Advanced Ceramics (3)
Development of student's individual style through use of design elements and technical skill. Kiln use and general laboratory techniques. Studio hours six. Prerequisite: 343.

381 Advanced Photography (3)
Development of personal concepts and aesthetic expression in photography. Introduction to color printing and film development and advanced technical problems in photography. Prerequisite: 281 or approval of department head.

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. Cumulates with the first American style to achieve international significance, the New York School, and the resultant dominance of American art in the world today.
### Major and related courses

<table>
<thead>
<tr>
<th>Mathematics 135, F136 or F145, F150; F145, F150 recommended for prospective graduate students</th>
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<tbody>
<tr>
<td>Chemistry D121, 122, 351 and one other course</td>
</tr>
<tr>
<td>Physics D103, 104, or Geology D11, 112</td>
</tr>
<tr>
<td>Biology-32 hours including 121, 122: 11 hours at 300 level or above, at least 3 hours of which must be at the 400 level, and one course from each of the following areas:</td>
</tr>
<tr>
<td>Physiology: 304, 328, 423</td>
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<tr>
<td>Genetics and Development: 303, 315, 325, 425</td>
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Recommended electives: Mathematics 210 and Computer Science 118

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

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

#### First Semester

<table>
<thead>
<tr>
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<td>General Education Category A</td>
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<td>Biology 121</td>
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#### Second Semester

<table>
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#### Sophomore

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<tr>
<td>Organismic Biology</td>
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#### Junior

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<tr>
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#### Senior

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

### Medical Technology (B.S.)

#### General Education (see pages 26-27 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 course below will apply)

#### Category C

1 approved perspectives course (3 hours)

Health and Physical Education Activity

Foreign language through second college year

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

#### First Semester

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#### Junior

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<td>Physics 104 or Geology 112</td>
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<td>Population Interaction</td>
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#### Senior

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<td>Physics 104</td>
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### Minor

The Biology Department offers a minor requiring 20 hours of biology including Biology 121, 122 plus any 4 courses chosen from the organismic, physiological, population, and developmental requirements for the biology major (see major). Two of the 4 courses must be at the 300 level or above.

### 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. *Lecture three hours, laboratory two 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. *Lecture three hours, laboratory two hours.*

**191 Functional Human Anatomy (4)**

The structure of the human body as seen in its various levels of organization: cellular, tissue, organ, and system. *Lecture three hours, laboratory two hours.*

**192 Human Physiology (3)**

Lecture studies of the physiological functions of the human body. *Lecture three hours. Corequisite: 193; Chemistry 121.*

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

Laboratory studies of the physiological functions of the human body. *Laboratory two hours. Pre- or corequisite: 192.*

**194 Human Physiology: Human Sexuality (3)**

Examination of many biological and behavioral aspects of human sexuality. *Lecture three hours.*

**199r Special Projects (1-4)**

Maximum credit four 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. *Lecture three hours, laboratory two hours. Prerequisite: 122 or equivalent.*

**210 Microbiology and Health (4)**

Microorganisms as related to disease, immunity, food preservation, and sanitation. *Lecture three hours, laboratory two hours. Credit not allowed toward a biology or medical technology major. Prerequisites: 122, Chemistry 121 or equivalent.*

**225 Invertebrate Zoology (4)**

A survey of the invertebrate phyla up to the chordates with an emphasis on their evolution, morphology, and physiological adaptations. *Lecture three hours, laboratory two hours. Prerequisite: 122 or equivalent.*

**226 Chordate Zoology (4)**

The biology of the invertebrate chordates and vertebrate classes with an emphasis on their evolution, morphology, physiology, and behavior. *Lecture three hours, laboratory two hours. Prerequisite: 122 or equivalent.*

**232 Field Biology (4)**

Investigation of regional plants and animals based on observations in their natural habitats. Laboratory studies on classification, conservation, and museum preservation for biological study. *Lecture two hours, laboratory and field work 3 hours, plus required weekend field trips. Prerequisite: 8 hours biology.*

**302 Comparative Anatomy of Vertebrates (4)**

Structure and evolution of vertebrates. Dissection of dogfish, amphibian, and cat. *Lecture two hours, laboratory four hours. Prerequisite: 122 or equivalent.*

**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. *Lecture two hours, laboratory four hours. Prerequisite: 122, 226 or 302 recommended.*

**304 Plant Physiology (4)**

Vascular plant structure and function emphasizing physiological activities, such as photosynthesis, water relations, mineral nutrition, and hormonal action. *Lecture three hours, laboratory two 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 analyses of the factors involved. *Lecture three hours. Prerequisite: 122 or equivalent, or approval of instructor.*

**307 Ecology Laboratory (1)**

Field application of ecological principles. *Laboratory two hours. Field trips. Prerequisite: 122 or equivalent. Corequisite: 306.*

**308 Parasites of Man (4)**

Life cycles, ecology, and physiology of the parasites of human beings including the diseases caused by these parasites. *Lecture two hours, laboratory four hours. Prerequisite: 122 or equivalent, or approval of instructor.*

**311 Principles of Microbiology (4)**

Morphology and physiology of microorganisms. *Lecture two hours, laboratory four hours. Credit not allowed in both Biology 210 and 311. Prerequisites: 122, Chemistry 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. *Lecture three hours. Prerequisite: 122 or equivalent.*

**325 Genetics (3)**

The structure and function of the gene and chromosome; control of protein synthesis; mutation; genetic regulation; genetic transfer and recombination. Viruses, bacteria, and higher organisms will be discussed. *Lecture three hours. Prerequisites: 122, Chemistry 122 or equivalent.*

**326 Genetics Laboratory (1)**

Genetics investigations utilizing a variety of organisms. *Laboratory two hours. Prerequisite: 122 or equivalent. Pre- or corequisite: 325.*

**328 Cellular Biology (4)**

Morphological and chemical organization of the cell; cellular metabolism; metabolic energy relationships; nature of enzymes; fermentative and oxidative metabolism; photosynthesis. *Lecture three hours, laboratory two hours. Prerequisites: 122, Chemistry 122 or equivalent. Pre- or corequisite: Chemistry 351.*
52—Biology

330 Histology (4)
Structure of animal tissues and organ levels with emphasis on recognition, origin, and function of mammalian tissues. Lecture two hours, laboratory four 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. Lecture three hours, laboratory two hours. Prerequisite: 122 or equivalent.

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

406 Population Biology (3)
Major aspects of population genetics, population ecology, and evolutionary theory including: mutations, natural selection, genetic drift, genetic load, population growth, K-selection, r-selection, competition, species equilibrium theory, and principles of modern systematics. Lecture 3 hours. Prerequisite: 122 or Environmental Studies 150.

410 Animal Behavior (3)
Behavior of animals as related to their physiology, ecology, and evolution. Lecture two hours, laboratory and field work two hours. Prerequisites: 8 hours biology, 2 hours psychology.

412 Immunology and Virology (3)
Reactions of the mammals, including the human body, to foreign substances. A study of viruses using in part immunological and serological procedures. Lecture three hours. Prerequisite: 210 or 311.

416 Biogeography (3)
A study of the distribution of plants and animals from a climatic and historical perspective. Lecture three hours. Prerequisite: 122.

423 Animal Physiology (4)
A detailed analysis of selected aspects of animal physiology. For students whose primary interest is biological science. Lecture three hours, laboratory three 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. Lecture two hours, laboratory three hours. Prerequisites: 122, Chemistry 122 or equivalents, and 8 additional semester hours of biology. Pre- or corequisite: Chemistry 351.

430 Plant Pathology (3)
A study of plant diseases caused by physical, chemical, and biological agents. Lecture 3 hours. Prerequisite: 311 or 210.

443 Aquatic Insects (4)
Aquatic insects including their general morphology; collecting, sampling, and rearing methods; ecology and distribution; phylogenetic relationships and evolutionary adaptation; and a taxonomic survey of the orders of aquatic and semiaquatic insects. Lecture two hours, laboratory three hours. Prerequisites: Environmental Studies 150, Biology 225 or 342.

444 Psychobiology (4)
Bioelectrical theory. Integrative activities, receptor, and effector processes in relation to nerve and muscle structure and function. Experimental and theoretical treatment of the brain as a biological entity. Surgery and various drugs used as tools to investigate behavior processes such as aggression, hunger, learning, and motivation. Lecture three hours, laboratory two hours. Prerequisites: 122, Psychology 101 or equivalents.

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. Lecture three hours. Prerequisites: 122 or equivalent.

453r Field Studies in Zoology (1-4)
Collection and identification of animals.

454r Field Studies in Botany (1-4)
Collection, identification, and analysis of plants in a geographical area approved by student and instructor. Prerequisite: 352.

463 Endocrinology (3)
The hormones of animals with emphasis on those of mammals, Lecture three hours. Prerequisites: 122, Chemistry 122.

494r Biology Seminar (1)
Presentation of programs of current biological interest by students, faculty, and outside speakers. Prerequisite: 76 semester hours biology. Maximum credit: two hours.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 32.

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

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

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

499r Group Studies (1-4)

Courses Available at Gulf Coast Research Laboratory, Ocean Springs, Mississippi

141 Introduction to Marine Zoology (4)
General introduction to the marine environment with emphasis on local fauna. (Same as GCRL Z0141.) Prerequisite: 122.

341 Marine Botany (4)
Survey based upon local examples of the principal groups of marine algae and maritime flowering plants, treating structure, reproduction, distribution, identification, and ecology. (Same as GCRL BOT 341.) Prerequisite: 122.

361 Marine Invertebrate Zoology (6)
Study of marine invertebrates, especially those of the Mississippi Sound region. Emphasis placed on the structure, classification, phylogenetic relationships, and functional processes. (Same as GCRL Z0361.) Prerequisite: 15 semester hours of biology. Credit not allowed for 361 and 225.

362 Marine Vertebrate Zoology and Ichthyology (6)
A general study of the marine Chordata, including lower groups and the mammals and birds, with most emphasis on the fishes. (Same as GCRL Z0362.) Prerequisite: 226 or 302.

431 Basic Techniques in Marine Science for Teachers (3)
A course designed to introduce the students, particularly in-service teachers, to the study of marine science and to promote the teaching of marine biology at all grade levels. (Same as GCRL MSE431.) Prerequisite: 122 or consent of instructor.

441 Salt Marsh Ecology (4)
A study with emphasis on the botanical aspects of local marshes; includes plant identification, composition, structure, distribution, and development of coastal marshes. (Same as GCRL BOT 441.) Prerequisites: 122, 306.

442 Marine Fisheries Management (4)
A general course in fisheries management designed to acquaint students with the philosophy, objectives, problems, and principles involved in management decisions. Lecturers will include specialists in biology, fisheries statistics, sanitation, and marine law. (Same as GCRL Z0442.) Prerequisite: 122.
452 Marine Microbiology (6)
Role of microorganisms in ecology of oceans and estuaries. Includes sampling procedures, taxonomy and marine bacteria, mineralization, microbial fouling, pollution, and diseases of marine animals. (Same as GCRL MIC452.) Prerequisite: 311 or consent of instructor.

460 Marine Ecology (5)
Relationship of marine organisms to their environment. Includes effects of temperature, salinity, light nutrient concentration, currents, and food on the abundance and distribution of marine organisms. (Same as GCRL Z0452.) Prerequisites: 207, 225, 306; Chemistry 342.

464 Aquaculture (6)
Introduction to history, principles, problems, and procedures relating to culture of commercially important Gulf Coast crustaceans, fish, and mollusks. (Same as GCRL Z0464.) Prerequisite: 122.

Brock Scholars Program
See William E. Brock Scholars, page 106.

Business Administration
See School of Business Administration, page 106.

Chemistry

Professor Gross, Head
Professors McNeely, Waddell
Associate Professor Lynch
Assistant Professors Grant, Kutz, Rybolt
Instructor Meyer

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 forestry, dentistry, medical technology, medicine, cytotechnology, dental hygiene, nursing, prepharmacy, preveterinary medicine, and physical therapy are described in the Preprofessional Programs section of the Bulletin.

Chemistry (B.A.)

General Education (see pages 26-27 for list of approved courses)

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

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

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

Category D
1 approved physical or natural science course other than chemistry with laboratory (4 hours; approved related course below will apply)

Category F
1 approved mathematics course (3 hours; approved related courses below will apply)

Category C
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

Major and related courses
Mathematics F145, F150,160
Physics D103,104
32 hours chemistry including 121,122,341,351,352,371,386,443; 1 hour of seminar (486r) or research (Chemistry 495r, 496r, 497r, 498r)
2.00 average in all chemistry courses (excluding Chemistry 211)

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

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

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<th>Second Semester</th>
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Chemistry (B.S.)

General Education (see pages 26-27 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)
Chemistry Courses

111 Chemistry and the Environment (3)
Basic concepts and methods of investigation with applications of chemical principles to the environment. Lecture three hours. 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. Lecture three hours, laboratory three hours. Prerequisite: two years of high school algebra or Mathematics 107. 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. Lecture three hours, laboratory three hours. Prerequisite: 121.

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. Lecture three hours, laboratory three hours.
Prerequisites: approval of instructor and either nomination by high school chemistry teacher or a minimum score of 24 on the composite ACT.
Chemistry 125 may be substituted for Chemistry 121 in meeting all requirements.

199r Special Projects (1-4)
Individual or group projects. Maximum credit four 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. Lecture three hours. 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. Lecture three hours, laboratory three hours. Prerequisite: 122.

342 Analytical Methods (4)
Advanced theory and practice of analytical chemistry including instrumental approaches to separation and analysis. Lecture three hours, laboratory three 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 352. Lecture three hours, laboratory three hours.
Prerequisites: 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. Lecture three hours. Prerequisite: 352.

371, 372 Physical Chemistry (4,4)
Thermodynamic, kinetic, and other descriptions of laws governing physical and chemical change. Lecture three hours, laboratory four hours. Prerequisites: Chemistry 341, Physics 104, Mathematics 160; 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. Lecture one hour. Prerequisite: 16 semester hours of chemistry.

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. Lecture two hours. Prerequisite: 24 semester hours of chemistry.

436 Advanced Inorganic Chemistry (4)
Advanced concepts in theoretical and descriptive inorganic chemistry with emphasis on valence bond, molecular orbital, and crystal field theories. Lecture three hours, laboratory three hours. Prerequisites: 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. *Lecture three hours, laboratory three hours. Prerequisites: 341 and 351.*

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. *Lecture three hours, laboratory three 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, lecture three hours. *Prerequisite: 352.*

475 Polymer Chemistry (2)
Chemistry of synthetic polymers including mechanisms of polymerization and relation of properties to structure. *Lecture two hours. Prerequisites: 352 and 371 or equivalent knowledge.*

486r Seminar (1)
Participation seminar based on student papers, invited speakers, and other activities. *Prerequisite: 24 semester hours of chemistry. Maximum credit two hours.*

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

496r Industrial Research (1)
Group participation in research project sponsored jointly by the Chemistry Department and a local industry. Written report required. *Laboratory three hours. Prerequisite: 20 semester hours of chemistry.*

497r Research (1)
Laboratory or library research on individual chemical problem under staff supervision. Seminar presentation of results. *Student should confer with instructor prior to registration. Maximum credit two 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. *Maximum credit four 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.*

**English and American Language and Literature (B.A.)**

**General Education** (see pages 26-27 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 F
1 approved mathematics course (3 hours)

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

Health and Physical Education 021 plus one semester physical education activity

**Major and related courses**
Foreign language through second college year
39 hours English in addition to general education requirements including: English 203; 207or442r; 211 and 212; 213 or 214; 350 or 351; 360 or 361

Senior seminar: English 400
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 chosen in conjunction with the academic adviser

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**Engineering**

See School of Engineering, page 144.

**Classical Civilization**
See Foreign Languages and Literatures, page 61.

**Communications**
See Interdisciplinary Studies, page 74.

**Computer Science**
See School of Engineering, page 152.

**Criminal Justice**
See School of Human Services, page 155.

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

Freshman

English 101-102 6
Behavioral Science 6
Humanities, Fine Arts 6
Mathematics, Natural Science 7
Foreign Language 8
Physical Education 2
Support course (chosen with adviser) 35

Sophomore

English 203
English 211, 212
English 213 or 214
Humanities, Fine Arts
Foreign Language
Support course (chosen with adviser)
Electives

Junior

English 207 or 442r 3
English 350 or 351 3
English Electives 6
Support courses (chosen with adviser) 6
Perspectives 3
Electives

Senior

English 360 or 361
English 400
English Electives (300-400 level)
Support course (chosen with adviser)
Electives
to total 128 hours

Minor

The English Department offers a minor in English, a program of study composed of the following set of courses:

English 103; English 203 or English 204; English 211 or English 212; English 213 or English 214; English 207 or English 442. At least two courses at the 300 or 400 level to be chosen in conjunction with an academic adviser. A total of 21 hours.

English Courses

100 Special Skills in Basic English (3)
A review of basic reading skills, language concepts, sentence types and structures. Requires extensive practice in the writing of sentences and paragraphs as well as in the practice of editing for proper punctuation and accurate grammatical construction. Graded on a satisfactory/no credit basis.
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.

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.

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

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.

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.

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 opportunities for the student to focus on his or her academic field.

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.

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

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

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

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

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

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

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

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

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

320 Modern British Literature (3)
Representative works from 20th-century England.

322 Southern American Literature (3)
Emphasis on 20th-century authors.

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

334 King James Bible as Literature (3)
Study of selected portions of the Old and New Testaments as literary masterpieces. Focus on study of the Bible as a central book in Western thought and as background for English and American literature.

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.

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

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.

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. Prerequisite: 102.

370 Persuasion and Propaganda (3)
A study of the powers and abuses of persuasion, using historical and contemporary examples.

375 Creative Writing: Poetry (3)
Instruction and practice in the understanding and writing of poetry.

376 Creative Writing: Fiction (3)
Instruction and practice in the understanding and writing of fiction.

392 Religion and Literature (3)
A critical examination of the possible relationships between religion and literature; reading and discussion of selected literature from both disciplines.

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

400 Seminar for Majors (3)
A seminar in the senior year designed to integrate the student's understanding of literature. Required of all English majors.

408 Approach to Literature (3)
Focus on the relationship between the subject matter learned as an English major and the subject matter to be used as a teacher of secondary English; emphasis on the difference between "content" specialist and high school teacher.

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.

412 Approach to Critical Reading (3)
Designed to increase the student's knowledge of the techniques involved in a close reading of literary texts, with special attention to the applicability of these techniques to teaching.

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.

421 Later English Drama, 1600-1800 (3)
Study of English drama from the Restoration through the 18th and 19th centuries.

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

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.
Environmental Studies

Professor Perfetti, Coordinator
Associate Professor Litchford

The environmental studies 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, geosciences, mathematics, physics, or sociology/anthropology. Environmental studies courses are described below; all other required courses are described in the listings of other departments named.

Environmental Studies (B.S.)

General Education (see pages 26-27 for list of approved courses)

Category A
2 approved courses in written communication in the English language (6 hours)
these additional courses at 300-400 level); 1 two semester sequence from biology, chemistry, geology, or physics.

2.00 average in all environmental studies courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

"Majors in the biology or sociology-anthropology concentration may substitute Mathematics 135, F136

This requirement may be satisfied by a concentration-related statistics course if one is available.

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

Environmental studies (B.S.): biology concentration

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<td>Mathematics F136 or F150 3-4</td>
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Environmental studies (B.S.): chemistry concentration

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Environmental studies (B.S.): engineering concentration

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Environmental studies (B.S.): geosciences concentration

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60—Environmental Studies

Junior

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Senior

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<tr>
<td>Geography/Geology elective*</td>
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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. **Lecture three hours, laboratory two hours.**

155 Laboratory Skill Development (1)
The study of laboratory instrumentation and procedures. **Laboratory three hours.**

19r Special Projects (1-4)
**Max/imum credit four hours.**

250 Resources for Societal Development (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. **Lecture three hours.**

253 Practicum in Resource Spatial Relations (1)
Compilation of maps, graphs, and charts to illustrate the relationships among production, utilization, and consumption of resources. An introduction to remote sensing and computer generated data. **Laboratory two hours.**

Environmental Studies Courses

150 Concepts of Environmental Science (4)
An introduction to current environmental problems at the global, national and local levels. Topics to be covered include: ecosystems, geochemical cycles, domestic and industrial wastes, pest control, resources, energy sources, land use, and population dynamics. The

200 Environmental Science (3)
Survey of systems, processes, and policies that affect environmental health and quality. Focus on environmental quality law and policy, energy use, water quality and quantity, effects of nutrients on aquatic ecosystems, pollutants of aquatic ecosystems, introduction to environmental quality management. **Lecture two hours, laboratory three hours.**

220 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. **Prerequisite: senior standing. Previously 401.**

256 Survey of Environmental Law and Administration (3)
Survey of federal and state environmental law, focusing on the National Environmental Policy Act (NEPA). **Environmental Studies 410 recommended.**

257 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. **Prerequisite: senior standing. Previously 401.**

258 Environmental Impact Statements (1)
Overview of the National Environmental Policy Act (NEPA) and of the Council on Environmental Quality (CEQ). Implementing regulations, case examples, preparation of environmental impact statements.

260 Environmental Impact Statements (1)
Overview of the National Environmental Policy Act (NEPA) and of the Council on Environmental Quality (CEQ). Implementing regulations, case examples, preparation of environmental impact statements.

265 Environmental Communications (3)
Practical approaches to communication methods, techniques, and style relative to environmental issues. **Prerequisite: English 102 or 300.**

421 Environmental Impact Statements (1)
Overview of the National Environmental Policy Act (NEPA) and of the Council on Environmental Quality (CEQ). Implementing regulations, case examples, preparation of environmental impact statements.

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. Previously 402.

431 Aquatic Resource Management (3)
A general course to introduce the concepts of aquatic resource management in relation to environmental problems and business and industrial applications. Lecture three hours plus required field trips. Prerequisite: general biology.

432 Terrestrial Resource Management (3)
A course designed to introduce the student to terrestrial resource management as practiced in relation to environmental problems and business and industrial applications. Lecture three hours plus required field trips. Prerequisite: general biology.

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.

460 Water Quality Analysis (3)
Monitoring methods for water quality; to include sample-taking, analytical testing, and observation of procedures practiced in established community laboratories. Lecture two hours, laboratory two hours. Prerequisites: general chemistry and Environmental Studies 155.

470 Air Pollution Control and Analysis (3)
The study of the origin, monitoring, and control of air pollutants and their effects on the environment; to include off-campus visits to pollutant source and control locations. Lecture two hours, laboratory two hours. Prerequisites: general chemistry, Environmental Studies 155, and Mathematics 150.

480 Seminar on the Environment (1)
Seminar and discussion of topics of current environmental interest. Student presentation required. 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.

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.

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.

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.

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

491r Environmental Studies 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. Prerequisite: junior or senior standing and consent of environmental studies coordinator.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

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

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

499r Group Studies (1-4)

Foreign Languages and Literatures

Associate Professor Bohrer, Head
Professors Seay, Sumberg
Associate Professor Campa
Assistant Professors Denzler, T. Jones, Phillips, Sturzer

The department offers the BA degree in French, Greek and Latin, Latin, and Spanish. A student may also pursue a BA 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 a minor program in Latin, Greek, 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.

Classical Civilization

199r Special Projects (1-4)
Individual or group projects. 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.

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.

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.
Foreign Languages

**310 The Greco-Roman World (3)**
The history, culture, and lifestyles of the ancient Greeks and Romans. May be registered as History 310.

**395 Greek and Roman Tragedy in Translation (3)**
A study of the origin of tragedy and its dramatic and philosophical development in the works of Aeschylus, Sophocles, Euripides, and Seneca. May be registered as English 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.

**397 Greek and Roman Comedy in Translation (3)**
A study of the origins, development, and changes in comedy as seen in the works of Aristophanes, Menander, Plautus, and Terence.

**495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)**
See "Departmental Honors," page 32.

**497r Research (1-4)**

**498r Individual Studies (1-4)**

**499r Group Studies (1-4)**

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**French**

**Foreign Languages: French (B.A.)**

**General Education** (see pages 26-27 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 F**
1 approved mathematics course (3 hours)

**Category G**
1 approved perspectives course other than Modern Languages (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

**Major**
22 hours French beyond second college year
2.00 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)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td></td>
</tr>
<tr>
<td>English 101</td>
<td>3</td>
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<tr>
<td>General Education Category B</td>
<td>3</td>
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<tr>
<td>French 211</td>
<td>3</td>
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<td>3</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>3</td>
</tr>
<tr>
<td>French 212</td>
<td>3</td>
</tr>
</tbody>
</table>

**French Courses**

**101, 102 Elementary French (4,4)**
Basic grammar, elementary reading, and conversation.

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

**211, 212 Intermediate French for Conversation (3,3)**
Grammar review, intensive oral practice in French, limited readings.
Prerequisites: 101, 102 or two years high school French.

**213, 214 Intermediate French for Reading (3,3)**
Grammar review, extensive reading in French with discussion in English.
Prerequisites: 101, 102 or two 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.
Prerequisites: 211, 212 or approval of the department.

**321 Advanced French Grammar (3)**
Special problems in syntax, illustrative reading, composition.
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.
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.
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. By 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, the moralist tradition, and various critical approaches to works within a century.
Foreign Languages—63

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

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

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

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

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See “Departmental Honors,” page 32.

497r Research (1-4)

498 Individual Studies (1-4)

499r Group Studies (1-4)

German

101, 102 Elementary German (4,4)
Basic grammar, elementary reading, and conversation.

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

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

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Greek

Foreign Languages: Greek and Latin (B.A.)

General Education (see pages 26-27 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 Modern Languages (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Major
18 hours Latin beyond 101, 102
12 hours Greek
2.00 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

Freshman
English 101 3
General Education Category B 3
Latin 101 3
Physical Education 021 1
General Education Category C 3
Elective 3
16

Sophomore
Latin 201 3
General Education Category B 3
General Education Category D 4
Electives 9
16

Junior
Advanced Latin 3
Greek 101 3
General Education Category G 3
Electives 7
16

Senior
Advanced Latin 3
Advanced Greek 3
Electives 10
16

Minor in Greek
21 hours of Greek with at least 9 hours at the 300 level or above.

Greek Courses

101, 102 Elementary Greek (3,3)
Elements of the Greek language. Reading of Greek prose.

199r Special Projects (1-4)

203 Greek Epic (3)
Readings from the iliad and the Odyssey of Homer.

310 Readings of Greek Literature (3)
A study of the development of Greek literature with selections from representative authors.

312 Advanced Greek Grammar and Composition (3)

350r Greek Prose (3)
Greek historians, Attic orators, and Greek philosophers considered in different semesters. Maximum credit nine hours.

351r Greek Poetry (3)
Greek tragedy, comedy, and lyric poetry considered in different semesters. Maximum credit nine hours.

425r Special Topics in Greek Literature (2)
Readings in a specific author, genre, or period.
Italian

101, 102 Elementary Italian (4,4)
Basic grammar, elementary reading, and conversation.

211, 212 Intermediate Italian for Conversation (3,3)
Grammar review, intensive oral practice in Italian, limited readings.
Prerequisites: 101, 102 or two years high school Italian.

Latin

Foreign Languages: Latin (B.A.)

General Education (see pages 26-27 for list of approved courses)

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

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

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

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

Category F
1 approved mathematics course (3 hours)

Category G
1 approved perspectives course other than Modern Languages (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Major
21 hours Latin beyond 101, 102; 9 hours from Classics 310, 395, 396, 397. 2.00 average in all Latin courses

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

Typical course of study for foreign languages: Latin (B.A.)

First Semester  Second Semester
Freshman
English 101  3  General Education Category A  3
General Education Category B  3  General Education Category B  3
Latin 101  3  Latin 102  3
Physical Education 021  1  Physical Education Activity  1
General Education Category C  3  General Education Category C  3
Elective  3  Elective  3
  16  16

Sophomore
Latin 201  3  Latin 202  3
General Education Category B  3  General Education Category D  4

Modern Languages

100 A Profile of French Culture (3)
A humanistic view of the patterns of living and total life-style of the
French people with special attention to their art, music, and literature (in translation). Geographical, historical, and linguistic backgrounds included. No foreign language credit.

110 A Profile of German Culture (3)
A humanistic view of the patterns of living and total life-style of the German people with special attention to their art, music, and literature (in translation). Geographical, historical, and linguistic backgrounds included. No foreign language credit.

120 A Profile of Hispanic Culture (3)
A humanistic view of the patterns of living and total life-style of the Hispanic people with special attention to their art, music, and literature (in translation). Geographical, historical, and linguistic backgrounds included. No foreign language credit.

199r Special Projects (1-4)
Individual or group projects. Maximum credit four hours. No foreign language credit.

201 Modern French and 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. 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. 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. 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. 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. 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. No foreign language credit.

497r Research (1-4)
498r Individual Studies (1-4)
499 Group Studies (1-4)

**Spanish**

**Foreign Languages: Spanish (B.A.)**

**General Education** (see pages 26-27 for list of approved courses)

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

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

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

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

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

**Category G**
1 approved perspectives course other than Modern Languages (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

**Major**
22 hours Spanish beyond second college year
2.00 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**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>General Education Category A</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>General Education Category B</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Spanish 211</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>General Education Category C</td>
<td>3</td>
<td></td>
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<tr>
<td>Electives</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
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</tr>
</tbody>
</table>

**Sophomore**

| Advanced Spanish | 3 |
| General Education Category B | 3 |
| General Education Category F | 3 |
| Electives | 7 |
| 16 |

**Junior**

| 2 Advanced Spanish Courses | 6 |
| General Education Category G | 3 |
| Electives | 7 |
| 16 |

**Senior**

| 2 Advanced Spanish Courses | 6 |
| Electives | 10 |
| 16 |

**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.

**Spanish Courses**

101, 102 Elementary Spanish (4,4)
Basic grammar, elementary reading, and conversation.

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

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

213, 214 Intermediate Spanish for Reading (3,3)
Grammar review, extensive reading in Spanish with discussion in English. Prerequisites: 101, 102 or two 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. Prerequisites: 211, 212 or approval of the department.

321 Advanced Spanish Grammar (3)
Special problems in syntax, illustrative reading, and composition. 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. 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. 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. 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 Spanish Literature, The Generation of 1898, and Contemporary Spanish Literature. 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. 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. Prerequisites: 211, 212 or approval of the department.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Geosciences

Professor John E. Trimpey, Acting Head
Professors Wilson, Bergenback
Associate Professor McDowell
Assistant Professors Churnet, D. Kuehn, K. Kuehn

The Geosciences Department offers the Bachelor of Science degree with a general concentration in geology as well as a special concentration in coal geology, and participates in programs leading to the Bachelor of Science degree in education and environmental studies. The department also offers a minor in either geology or geography.

Geology (B.S.): General Geology, Coal Geology Concentrations

General Education (see pages 26-27 for list of approved courses)
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.)

Geology (B.S.): general geology concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>Geology 111</td>
<td>Geology 112</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Chemistry D121</td>
<td>Mathematics F150*</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>Elective</td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Geology 341</td>
<td>Geology 342</td>
</tr>
<tr>
<td>Biology D121</td>
<td>Biology 122</td>
</tr>
<tr>
<td>Physics D103 or 230</td>
<td>Physics 104 or 231</td>
</tr>
<tr>
<td>Mathematics F150*</td>
<td>Mathematics 160</td>
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<tr>
<td><strong>Junior</strong></td>
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<tr>
<td>Geology 321</td>
<td>Geology 330</td>
</tr>
<tr>
<td>English 278</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Computer Science 117 or 118</td>
<td>General Education Category B</td>
</tr>
<tr>
<td>Geology 361</td>
<td>Elective</td>
</tr>
<tr>
<td>General Education Category C</td>
<td></td>
</tr>
<tr>
<td>Physical Education 021</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td><strong>Senior</strong></td>
<td></td>
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<tr>
<td>Geology 351</td>
<td>Geology 352</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Geology 405</td>
<td>Mathematics F150*</td>
</tr>
<tr>
<td>Emphasis or elective</td>
<td>Physical Education Activity</td>
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<tr>
<td></td>
<td>Elective</td>
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</tbody>
</table>

•Mathematics 107, 135, and F145 may be recommended to precede Mathematics F150, depending on preparation of the individual student.

Geology (B.S.): coal concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>Second Semester</strong></td>
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<tr>
<td>Geology 111</td>
<td>Geology 112</td>
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<tr>
<td>General Education Category A</td>
<td>General Education Category C</td>
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<tr>
<td>Chemistry D121</td>
<td>Mathematics F150*</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>Physical Education Activity</td>
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<tr>
<td>Physical Education 021</td>
<td>Elective</td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Geology 341</td>
<td>Geology 342</td>
</tr>
<tr>
<td>Biology D121</td>
<td>Biology 122</td>
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<tr>
<td>Physics D103 or 230</td>
<td>Physics 104 or 231</td>
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<tr>
<td>Mathematics 160</td>
<td>Mathematics 160</td>
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<tr>
<td><strong>Junior</strong></td>
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<tr>
<td>Geology 321</td>
<td>Geology 322</td>
</tr>
<tr>
<td>English 278</td>
<td>Geology 330</td>
</tr>
<tr>
<td>Computer Science 117 or 118</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Geology 351</td>
<td>Mathematics F150*</td>
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<td>General Education Category C</td>
<td>Physical Education Activity</td>
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<td>Elective</td>
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</table>

| **Senior**                           |                                        |
| Geology 351                          | Geology 352                            |
| General Education Category B         | General Education Category C           |
| Geology 405                          | Mathematics F150*                      |
| Emphasis or elective                 | Physical Education Activity            |
|                                      | Elective                               |

Minors

Geology:
18 hours of geology beyond the 100 level. At least 9 hours 300 level or above. Minors in geology must be approved by the head of the Geosciences Department.

Geography:
18 hours of geography beyond the 100 level. At least 9 hours 300 level or above. Minors in geography must be approved by the head of the Geosciences Department.

Geology Courses

111 Physical Geology (4)
Introduction to geology; age and origin of the earth; earth materials, processes, and resultant structures. Field trips. Lecture three hours, laboratory two hours. Prerequisite: two years of high school algebra or Mathematics 107.

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

115 Geological Field Methods (1)
A laboratory course to utilize the instruments and methods of geologic field mapping. A portion of the three hour laboratory will be a class project. Open to any science major. Prerequisite: 111.

199r Special Projects (1-4)
Individual or group projects. Prerequisites: consent of instructor, receipt of an acceptable proposal, and permission of the department head. Craded on a satisfactory/no credit basis. 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. Lecture three hours.

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. Lecture three hours, laboratory three hours. Field trips. Prerequisite: 112.

307 Geology of Tennessee (3)
Geologic resources, structure, and history of Tennessee and adjacent areas. Lecture and field trips. 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 biostatigraphy. Laboratory work centers on the morphology and time range of the major fossil groups. Lecture three hours, laboratory three hours. Field trips. Prerequisite: 112.

330 Sedimentation (3)
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 loss to interpret environments of deposition. Extensive field work. Lecture two hours, laboratory three hours. Prerequisite: 303.
341 Mineralogy and Petrology I (4)
Crystalllography, physical properties, and geochemistry of minerals and their occurrence and classification in natural rocks. Lecture three hours, laboratory three hours. Field trips on weekends. Prerequisite: Geology 111 or corequisite: Chemistry 121.

342 Mineralogy and Petrology II (4)
Continuation of 341. Lecture three hours, laboratory three hours. Field trips on weekends. Prerequisite: 341.

351 Field Methods and Structural Geology I (4)
Preparation of topographic and geologic maps coupled with interpretation and distribution of deformed igneous, sedimentary, and metamorphic rocks. Variable lecture and laboratory time dependent on topic. Field trips on weekends. Prerequisites: 115 and 342.

352 Field Methods and Structural Geology II (4)
Continuation of 351. Variable lecture and laboratory time dependent on topic. Field trips on weekends. Prerequisite: 351.

361 Earth Physics (4)
An introduction to geophysics. Consideration of elementary geophysical techniques. Laboratory is oriented toward a group field project. Lecture three hours, laboratory three hours. Prerequisites: Geology 111 and Physics 104 or 230.

402 Paleocology (3)
Methods of reconstruction of relationships between ancient organisms and their physical and organic environments. Prerequisite: Geology 321 or Biology 225.

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. 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. Lecture three hours, laboratory and recitation three hours. Prerequisites: Geology 342 and one year of college chemistry.

406 Low Temperature Geochemistry (4)
Consideration of the special physical properties and characteristics of the near-surface and surface aqueous environment as it relates to the formation or dissolution of solids. Lecture and laboratory variable according to topic. Prerequisite: 405.

410 Optical Petrography (3)
Study of transmitted optical properties of minerals in grain mounts and thin sections and the application of petrography to igneous and metamorphic rocks. Lecture and laboratory six hours. Prerequisite: 342.

421 Vertebrate Paleontology (3)
Characteristics of the vertebrate fossil record, development and evolution of vertebrate morphology, interpretation of faunal assemblages and biostratigraphy. Range of major groups. Lecture three hours, laboratory three hours. Prerequisite: 321.

422 Micropaleontology (4)
Characteristics, development, and evolution of microfauna in the fossil record; interpretation of range and biostratigraphy of faunal assemblages. Lecture and laboratory. Prerequisite: 321.

423 Palynology (4)
Development of characteristics of spores and pollen of fossil plants. Recognition of characteristic types, their range and evolution, especially with regard to those characteristic of coals. Lecture three hours, laboratory three hours. Field trips on weekends. Prerequisite: 321.

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

433 Coal Geology (2)
Stratigraphic and sedimentological study of coal environments, especially of the Cumberland Plateau. Topics include coal sedimentation and stratigraphy of Tennessee and adjacent areas, coal characterization, reserve evaluation, extraction methods. Extensive field trips. Prerequisite: 330.

435 Coal Petrology (4)
Techniques in microscopic analysis of coal as a heterogenous solid. Lecture three hours, laboratory three hours. Prerequisite: 303 or permission of instructor.

441 Applied Geophysics (4)
Use of modern geophysical techniques in exploration and engineering applications. Computer data reduction techniques. Laboratory emphasis on extended field problems. Variable lecture and laboratory time dependent on topic. Prerequisites: 111, 361, and permission of the instructor.

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. Lecture three hours, laboratory three hours. Prerequisites: 115,342, and Chemistry 122.

460 Environmental and Urban Geology (4)
Weathering. Origin and evolution of soils. Erosional and depositional processes. Landslides and subsidence. Rock structures which influenceaction of surficial geologic processes. Mechanical characteristics of geologic materials exposed at the earth's surface. Mapping of surficial deposits. Recognition of hazardous conditions from maps and aerial photographs and in the field. Lecture three hours, laboratory three hours. Prerequisite: 111.

470 Engineering Geology (4)

490 Senior Seminar (2)
A culminating senior experience giving students an opportunity to exercise judgment in solving geological problems. Consent of instructor.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
Graded on a satisfactory/no credit basis. See “Departmental Honors,” page 32.

497r Research (1-4)
Consent of instructor, receipt of an acceptable proposal, and permission of the department head. Graded on a satisfactory/no credit basis. Maximum of 4 hours.

499r Individual Studies (1-4)
Consent of instructor, receipt of an acceptable proposal, and permission of the department head. Graded on a satisfactory/no credit basis. Maximum of 4 hours.

499r Group Studies (1-4)
Consent of instructor. Maximum of 4 hours.

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.

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)
Human perception of environment, rural/urban behavior, territoriality, prejudicial uses of space, spatial diffusion, migration, and spatial patterns of selected cultural activities.

199r Special Projects (1-4)
Individual or group projects. Graded on a satisfactory/no credit basis. Consent of instructor, receipt of acceptable proposal, and permission of department head. Maximum credit 4 hours.

202 Geography of Latin America (3)
Middle and South America, stressing the interrelationship of physical environment and the impact of the physical environment on people.

203 Geography of Europe (3)
Europe with emphasis on physical geography and its influence on human activities.

204 Geography of North America (3)
Topical and regional study of the physical, social, and economic structure of Anglo-America. Particular emphasis given to the growth and development of the United States.

205 Geography of Asia (3)
Introduction to the physical and cultural geography of Asia, excluding the Soviet Union.

206 Atmosphere, Climatology, and Mankind (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.

209 Economic Geography (3)
Spatial influences on economic behavior, analysis of the location and spatial structure of world economic activities.

221 Maps and Map Interpretation (3)
Nature and use of maps, with particular reference to the construction of map projections. Use of special maps and the interpretation of aerial photographs.

241 Elements of Cartography (4)
Theory and construction of maps from compilation through reproduction. Projections, symbols, techniques and quantitative symbolization, and an introduction to computer generated maps. Lecture two hours, laboratory four hours. No familiarity with drafting or computer techniques required.

308 Geomorphology (3)
Landforms and the processes responsible for their developments. Emphasis on the occurrence and description of the various geomorphic regions of North America. Lecture two hours, laboratory two hours. Field trips. Prerequisite: 707 or 227, or Geo/cagy 777.

407 Environmental Conservation (3)
Theories, methods, and practices of environmental management and resource utilization. Emphasis on soil, forest, water, mineral, and human resources.

415 Urban Geography: Urban Land Development and Redevelopment (3)
Settlement of the land, and use, misuse, and reuse of urban land in a changing society. May be registered as Sociology 475.

430 Permitting of Coal, Oil, and Gas Lands (2)
Consideration of the permitting process for exploitation of coal, oil, and gas properties, especially as applied to Tennessee, but emphasizing the common features of state and federal regulations in the adjoining states.

440 Environmental Impact of Coal Extraction (3)
Consideration of the environmental impact of coal’s extraction by strip and deep processes. Case study approach to the problem. Emphasis is on most environmentally sound techniques available.

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. Lecture two hours, laboratory two hours. Prerequisites: senior standing and approval of instructor.

497r Research (1-4)
Consent of instructor, receipt of an acceptable proposal, and permission of the department head. Graded on a satisfactory/no credit basis. Maximum of 4 hours.

498r Individual Studies (1-4)
Consent of instructor, receipt of an acceptable proposal, and permission of the department head. Graded on a satisfactory/no credit basis. Maximum of 4 hours.

499r Group Studies (1-4)
Consent of instructor. Maximum of 4 hours.

German
See Foreign Languages and Literatures, page 63.

Greek
See Foreign Languages and Literatures, page 63.

Health, Physical Education and Recreation

History

Associate Professor Moore, Head
Professors Bowman, Harbaugh, Ward
Associate Professors Deierhoi, Ingle, Linnemann, Rice, Russell, Wright

History (B.A.)

General Education (see pages 26-27 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)
70—History

**Category G**

- 1 approved perspectives course other than history (3 hours)
- Health and Physical Education 021 plus one additional semester physical education activity

**Foreign language through second college year**

**Major**

33 hours history including 101, 102, 301, and either 400 or 401; no more than one-half of the history courses at the 100 and 200 level.

12 hours of related courses beyond the general education requirements; 6 in the humanities and fine arts and 6 in the behavioral and social sciences; 6 to be taken at the 300 level or higher. Courses suitable as related courses will vary according to a student’s program and will be determined by a student’s adviser.

2.00 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.)**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>History 101</td>
<td>History 102</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>General Education Category A</td>
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<tr>
<td>General Education Category B</td>
<td>General Education Category C</td>
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<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>16-17</td>
<td>16-17</td>
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</tbody>
</table>

| Sophomore                        |                                         |
| History 203                      | History 204                           |
| Foreign Language                 | Foreign Language                      |
| General Education Category C     | General Education Category B           |
| Elective                         | Elective                             |
| 15                               | 16                                    |

| Junior                            |                                         |
| History 301 or Elective           | History 301 or Elective                |
| History Elective                  | History Elective                      |
| General Education Category G      | General Education Category B           |
| Electives                         | Electives                             |
| 15                               | 18                                    |

| Senior                            |                                         |
| History 400 or 401                | History 401 or Elective                |
| History Elective                  | History Elective                      |
| Electives                         | Electives                             |
| 15-16                            | 15-16                                 |

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

**Minor**

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 207-208 or 211-212 (6 hours) plus an additional 12 hours in European or non-Western history at the 300-400 level (total of 18 hours).

**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.

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.

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.

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

207 *Introduction to Asian Civilization: Middle East and India* (3)

A survey of the major trends of Islamic and Indian history. Emphasis placed on traditional cultural values, periods of power and greatness, problems of modernization, and recent developments. Students should gain perspective on such current issues as the Arab-Israeli conflict and the oil crisis.

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.

211 *History of Sub-Saharan Africa to 1880* (3)

Geography and people of Africa; origin of traditional African societies, major African empires; Islamic impact on Africa; oral traditions; the slave trade; African artistic, musical, architectural, and religious traditions; early European presence in Africa; Swahili city states; African commerce and technology; major central and southern African politics.

212 *History of Sub-Saharan Africa, 1880-Present* (3)

Partition of Africa; establishment and functions of European colonial systems; rise of African nationalism and resistance movements; the African response to social, political, and economic modernization; independence and Pan-Africanism; examination of colonial legacies and European impact on traditional African society.

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.

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.

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.

310 *The Greco-Roman World* (3)

The history, culture, and life-styles of the ancient Greeks and Romans. 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.

313 *The Age of the Renaissance* (3)

Economic, social, artistic, and political developments, 1300-1500; Italian Humanism; Christian Humanism; and ferment in the Church.
314 The Age of the Reformation (3)
Religious, political, social, and economic factors involved in the Protestant and Catholic Reformation in the 16th century.

315 Early Modern Europe, 1600-1750 (3)
Religious, political, economic, and social development in this period of contradiction and intellectual ferment; Puritans, counter-Revolution; Constitutionalism, Absolutism; Scientific Revolution, the Baroque in the arts.

316 The Enlightenment (3)
Intellectual developments from the mid-17th century through the 18th century, scientific revolutions, virtuosos, and the Philosophes.

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.

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.

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.

320, 321 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.

322, 323 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.

324 History of England (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.

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 devolution. First semester to c. 1867.

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.

330 Colonial North America (3)
The Colonial Period of American history, from the beginnings to 1776; background of English colonization of America, colonial settlements, the development of colonial society and institutions.

331 U.S., 1776-1815 (3)
Founding of the American nation. The Revolutionary, Federalist, and Jeffersonian periods of American history.

334 U.S., 1816-1850: The Middle Period (3)
The westward movement and the beginnings of industrialism, Jacksonian democracy, slavery, and Manifest Destiny through the war with Mexico and the Compromise of 1850.

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.

336 The Emergence of Modern America (3)
The United States from the end of the Civil War to 1900.

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.

338 Contemporary America Since 1945 (3)
An examination of political, economic, and social aspects of the recent past, including post-World War II realignments, the Cold War, the Kennedy years, the Vietnam trauma, and the downfall of the "imperial presidency."

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.

343 History of Tennessee (3)
A study of the political, economic, and cultural development of the state from the days of the Indians to the present.

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.

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.

364 Traditional China: History and Culture (3)
A survey of Chinese history and culture prior to the impact of the West. Course readings provide a basic political and chronological orientation, but emphasis placed on literary and philosophical writings in translation, and on studies of the social structure of traditional Chinese society.

365 Traditional Japan: History and Culture (3)
A survey of traditional Japanese history and culture prior to the impact of the West. Course readings provide a basic political and chronological orientation, but emphasis placed on literary, cultural, and artistic achievements, and on studies of the social structure of traditional Japanese society.

368 The Far East in Modern Times (3)
East Asia since the mid-19th century and the impact 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.

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 will include: Mao Tse-tung, the Korean War, Great Leap Forward, the Cultural Revolution, and events since Mao's death in 1976.

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. Prerequisites: History 101, 102, or permission of instructor.

372 South Asia in Modern Times (3)
The sunset of the British Raj in India; Gandhi, Nehru, and the Indian independence movement; the partition between India and Pakistan; postindependence years including the government of Indira Gandhi.

385 National History (3)
A course dealing with a selected national history. By special arrangement with the department head and instructor. Specific prerequisites to be given when the topic is announced.

400 Historical Writing: Theory and Practice (3)
Readings in the works of selected, representative historians from the ancient Greeks to contemporary Americans: Herodotus to Hofstadter. Designed to provide an introduction to the development of Western historiography and some familiarity with the great figures and works of
our historical tradition. Primarily for senior majors in history and others interested in the development of historical writing.

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.

411, 412 American Intellectual and Social History (3,3)
Survey and analysis of American assumptions, social attitudes, and institutions, and their impact on American life. First semester coverage extends to 1865.

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.

417, 418 Diplomatic History of the U.S. (3,3)
The history of American foreign relations from their colonial origins to the present.

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.

420 History of the American Presidency (3)
A seminar on the nature, development, and problems of the American presidency in historical context with emphasis on those presidents who have contributed significantly to its range and scope, from Washington to Reagan. Prerequisites: History 203 and 204, or permission of instructor.

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

461 European Diplomatic History (3)
From the defeat of Napoleon to the Cold War; attempts to create a European system, the failure of the Congress system, and the operation of the balance of power; the diplomacy of imperialism; World Wars I and II; 20th-century attempts at a world order.

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.

465 The History of European Thought, 1600-1789 (3)
A study of the European mind from the rise of modern science through the intellectual revolution of the Philosophes. Special attention to the development of empiricism and rationalism, to Hobbesian absolutism and Lockean liberalism, to the origins of sociological method in the work of Montesquieu, to currents of radical scepticism and Deism in the Enlightenment, to 18th-century origins of Romanticism, and to the development of the idea of progress in the French Enlightenment.

466 The History of European Thought, 1789 to the Present (3)
A study of the European mind from the French Revolution to the present, emphasizing intellectual responses to the Industrial and French Revolutions, and to the impact of World War I and the growth of mass culture. Special attention to the philosophical and historical origins of Conservatism, Utopian Socialism, Marxism, Darwinism, Nihilism, Freudianism, and Existentialism. Students encouraged to undertake research projects utilizing interdisciplinary techniques in the history of ideas.

470 Psychohistory (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.

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. 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)
See "Departmental Honors," page 32.

497r Research (1-3)

499r Individual Studies (1-3)

499r Group Studies (3)

Home Economics
See School of Human Services, page 157.

Humanities
See Interdisciplinary Studies, page 77.

Human Services
See School of Human Services, page 160.

Interdisciplinary Studies

Professor John E. Trimpey, Acting Head

The Department of Interdisciplinary Studies coordinates a number of programs leading to baccalaureate degrees as well as several other nondegree programs. Because of their interdisciplinary nature, these programs draw upon the varied resources of a number of departments.

Degree programs: American Studies (B.A.); Communications (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 to 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, business-economics, 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 26-27 for list of approved courses)
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

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<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td></td>
</tr>
<tr>
<td>Economics C101</td>
<td>3</td>
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<tr>
<td>English A101</td>
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<td><strong>Sophomore</strong></td>
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<tr>
<td>American Literature 213</td>
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<tr>
<td>American History B203</td>
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<td>Religion 236</td>
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<td>Music 212</td>
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<td>French 101</td>
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<td>French 211</td>
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<td>Philosophy 360</td>
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<td>History 308</td>
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<tr>
<td>ED Curr. &amp; Instr. 201</td>
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<tr>
<td>History 333</td>
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<tr>
<td>American Studies 400</td>
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<td>American Literature 332</td>
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</tbody>
</table>

American Studies Courses

19r Special Projects (1-4)

Individual and group studies

200 American Ideals in the Arts (3)

Specific works of art drawn from music, painting, architecture, theater, and literature considered in relation to each other and to American social and spiritual ideals. In addition to the instructor, specialists from various disciplines and the community will serve as guest lecturers.

400 American Studies Seminar (3)

Advanced level discussion of the interrelationship of methodologies and some research project in which each student applies the methodology of an area of concentration to a broad cultural phenomenon within American life. Prerequisite: 495r.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)

See "Departmental Honors," page 32.

497r Research (1-4)

Prerequisite: approval of the coordinator and the department head.

498r Individual Studies (1-4)

Prerequisite: approval of the coordinator and the department head.
Communications

Associate Professor Pringle, Coordinator
Assistant Professors De Riemer, Rushing

The Communications Program leads to a Bachelor of Arts degree requiring a combination of broad liberal learning and specialized study in communications. In addition to meeting the General Education requirements, the Communications major must study in some depth in one or two departments outside the program. Concentrations in Communications are available in Advertising, Broadcasting and Electronic Media, Broadcast Journalism, Journalism, and Public Relations.

Communications (B.A.)

General Education (see pages 26-27 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
Mathematics F210

Category C
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester of physical education activity

Foreign Language through second college year

Related Study
Completion of one of the following—

1. Two minors* in different departments in the College of Arts and Sciences, including at least one from humanities/fine arts or behavioral/social sciences (economics may be included), approved by the adviser.

2. A major in a department in the College of Arts and Sciences, other than Communications, approved by the adviser.

*Approved courses in the minors may also be used to satisfy general education requirements.

Major
Completion of one of the following concentrations—

1. Advertising:
   Communications 101,110,260,271,365,450,451,465,480 or 485r; Art 101; English 300, 370; Marketing 313, 362.

2. Broadcasting and Electronic Media:
   Communications 101,110,260,290,340,345,364,450,451,480 or 485r, 490; English 300.

3. Broadcast Journalism:
   Communications 101,110,260,290,340,345,360,381,450,451,480 or 485r, 481; English 300.

4. Journalism:
   Communications 101,110,260,360,361,363,367,450,451,462,480 or 485r; Art 281; English 300, 370.

5. Public Relations:
   Communications 101,110,250,260,271,360,363,450,451,471,480 or 485r; Art 281; English 300, 370.

2.00 average in all communications courses

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

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

Communications (B.A.): advertising concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Freshman</td>
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<td>Communications 110</td>
<td>Art 101</td>
</tr>
<tr>
<td>English A101</td>
<td>English A102</td>
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<td>Economics C101</td>
<td>Economics C102</td>
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<tr>
<td>Foreign Language 101</td>
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<td>Physical Education 021</td>
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<td>Mathematics F210</td>
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<td>Communications 365</td>
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<td>Senior</td>
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<td>Communications 451</td>
<td>Communications 480 or 485</td>
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<td>Communications 465</td>
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Communications (B.A.) broadcasting and electronic media concentration

<table>
<thead>
<tr>
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<tbody>
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<tr>
<td>Communications 101</td>
<td>Communications 110</td>
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<tr>
<td>English A101</td>
<td>English A102</td>
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<tr>
<td>Foreign Language 101</td>
<td>Foreign Language 102</td>
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</table>
Sophomore  
Communications 290 3  
Foreign Language 211 or 213 3  
General Education Category B 3  
General Education Category D 4  
General Education Category C 3  
Physical Education Activity L 17  
Minor or Electives 15  

Junior  
Communications 345 3  
Communications 451 3  
Minor or Electives 12  
English 300 3  
Minor or Electives 18  

Senior  
Communications 450 3  
Communications 480 or 485 3  
Minor or Electives 12  
Minor or Electives 9  

Communications (B.A.): broadcast journalism concentration  
First Semester  
Freshman  
Communications 101 3  
English A101 3  
Foreign Language 101 4  
Physical Education 021 1  
General Education Category B 3  
General Education Category C 3  
Physical Education Activity L 17  

Sophomore  
Communications 260 3  
Communications 340 3  
Foreign Language 212 or 214 3  
Mathematics F210 3  
Minor or Electives 15  

Junior  
Communications 345 3  
Communications 481 3  
Minor or Electives 12  

Senior  
Communications 450 3  
Communications 480 or 485 3  
Minor or Electives 12  

Communications (B.A.): journalism concentration  
First Semester  
Freshman  
Communications 101 3  
English A101 3  
Foreign Language 101 4  
Physical Education 021 1  
General Education Category B 3  
General Education Category C 3  
Physical Education Activity L 17  

Sophomore  
Communications 260 3  
Communications 340 3  
Foreign Language 212 or 214 3  
Mathematics F210 3  
English A102 3  

Junior  
Communications 345 3  
Communications 481 3  
Minor or Electives 12  

Senior  
Communications 450 3  
Communications 480 or 485 3  
Minor or Electives 12  

Communications (B.A.): public relations concentration  
First Semester  
Freshman  
Communications 101 3  
Communications 110 3  
English A101 3  
Foreign Language 101 4  
Physical Education 021 1  
General Education Category G 3  

Sophomore  
Communications 271 3  
Communications 340 3  
Foreign Language 212 or 214 3  
Mathematics F210 3  
English A102 3  

Junior  
Communications 363 3  
Communications 471 3  

Senior  
Communications 450 3  
Communications 480 or 485 3  
Minor Electives J2  

Minor  
A total of 18 hours, including Communications 101, 110, and 260. Nine hours of approved Communications courses at the 300 level or above.  

Communications Courses  
101 Introduction to Mass Communication (3)  
History, theory, and practice of mass communication designed to expose beginning students to the broad subject of communication. Major media issues explored. Formerly Theatre & Speech 270.  

110 Fundamentals of Media Communication (3)  
Applications of communication principles to the mass media. Introduction to media technology and procedures, analysis of and practice in the preparation of basic content for electronic and print media.  

120 Mass Media in American Society (3)  
Course examines the effects of the development and growth of mass
media in American society. Mass media effects are discussed as these relate to research findings. The role of mass media in the individual's daily life is studied through discussion of such concepts as selective exposure and perception, agenda setting by mass media, media dependency, video-malaise, and other mass media effects.

199r Special Projects (1-4)
Individual or group studies.

210 History of American Journalism (3)
History of American journalism; examination of current issues in journalism. Formerly English 271.

250 Publication Layout and Design (3)
Practice in publication production. Special attention to typography, graphics, and design techniques. Managing the production of publications. Prerequisites: 101, 110, or approval of instructor.

260 Writing for the Mass Media (3)
Intensive practice in writing techniques used by the print and electronic media. Style, usage, and format will be studied in depth. Prerequisites: Communications 101, 110; English 101 and the ability to type 30 wpm; or approval of instructor.

271 Principles and Practices of 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. Prerequisites: 101, 110, 260, or approval of instructor.

290 Introduction to Broadcasting and Electronic Media (3)

340 Audio Production and Presentation (3)
Producing and presenting content in radio and non-broadcast audio media, using both studio and portable facilities. Studio, control room, and field production procedures, recording and editing, music and sound effects. Prerequisite: 110.

345 Video Production and Presentation (3)
Producing and presenting content in television, cable TV, and non-broadcast video media, using both studio and portable facilities. Studio, control room, and field production procedures, recording and editing, lighting, and graphics. Prerequisite: 340.

360 News Writing and Reporting I (3)
Fundamentals of news gathering, news writing, news evaluation, and the structure of news stories. Formerly English 371. Prerequisites: 260, English 300, typing proficiency of 36 wpm, or permission of coordinator.

361 News Writing and Reporting II (3)
Instruction and practice in reporting news gathered from the traditional news beats (courts, county-city government, university, city, etc.). Prerequisite: 360 or permission of coordinator.

363 Feature Writing (3)
Nonfiction writing for magazines and for specialized publications. Formerly English 374. Prerequisite: 360 or permission of coordinator.

364 Writing for Broadcast and Electronic Media (3)
Techniques of writing for radio, television, cable TV, and for non-broadcast audio and video media. News, commercials, public service announcements, continuity, and institutional communication content. Prerequisites: 260, 290; English 300; typing proficiency of 36 wpm; or permission of coordinator.

365 Advertising Copy Writing (3)
Principles and practices in the preparation of effective advertising copy for a variety of media. Includes basic consumer research, creative conceptual and campaign design, copy testing. Emphasis on print advertising, but radio and TV covered. Prerequisites: Marketing 362, English 300; typing proficiency of 36 wpm; or permission of coordinator.

367 Newspaper Editing and Design (3)
Principles and practices of editing and evaluating news copy, writing headlines and captions, newspaper layout and design practices, electronic editing, and newspaper production processes. Prerequisite: 360.

381 Broadcast News and Public Affairs I (3)
Researching, writing, reporting, and producing news and public affairs programs for radio and television. Legal, ethical, and managerial concerns. Prerequisites: 340, 360.

450 Communication Research (3)
Analyzing and using research in the mass media. Interpreting audience and message research. Fundamentals of media research methods and participation in a media research project. Prerequisites: junior standing and Math 210.

451 Legal and Ethical Aspects of Mass Media (3)
Rights and privileges, secrecy and censorship, libel, privacy, contempt, broadcasting law, commerce provisions, and copyright. Contemporary case studies.

462 Interpretive and Editorial Writing (3)
Instruction and practice in analytical, interpretive, persuasive writing; concepts of editorial responsibility. Formerly English 372. Prerequisite: 361 or permission of coordinator.

465 Advertising Campaign (3)
Planning and implementing the complete advertising campaign, from designing the creative platform to writing and producing advertisements and commercials in the several media; procedures in media buying; methods of evaluating campaign results. Use of case studies and workshops. Prerequisite: 365.

471 Publicity Methods (3)
Planning and implementing the public relations campaign. Using the mass media to achieve publicity objectives. Case studies of publicity campaigns and class implementation of a campaign. Prerequisite: 271 or approval of instructor.

475r Specialized Public Relations Practice (3)
Intensive exploration of specialized application of public relations in such areas as fund-raising, employee communication, consumer behavior, and environmental public relations. Topics vary. Offerings are announced at preregistration. Course may be repeated for a maximum of six semester hours. Prerequisite: 271 or approval of instructor.

480 Directed Project (3)
Guided project designed to demonstrate proficiency at preprofessional level in area of concentration. Prerequisites: senior standing and permission of coordinator.

481 Broadcast News and Public Affairs II (3)
A continuation of Communications 381 with the emphasis on television news and public affairs. Prerequisite: 381.

485r Individual Internship (3)
Professional service, arranged and supervised individually, with newspapers, radio and television stations, advertising agencies, and other media institutions. Prerequisites: senior standing; approval of communications adviser one full semester in advance. Maximum six hours.

490 Broadcast and Electronic Media Management (3)
Principles of management and their application to radio, television, cable television, and other electronic media systems. Emphasis on personnel, programming, sales, and promotion.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)
Prerequisites: approval of coordinator and department head.

499r Individual Studies (1-4)
Prerequisites: approval of coordinator and department head.

499r Group Studies (1-4)
Interdisciplinary Studies—77

Humanities

Associate Professor Fulton, Coordinator

The humanities generally comprise languages and literature, philosophy, religion, history, and the fine arts. With the approval of the Faculty Board for the Humanities, each major designs a program of study by selecting appropriate courses from those disciplines and from the humanities courses listed below.

Humanities (B.A.)

General Education (see pages 26-27 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 C
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

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). 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.

Humanities 490: Senior Educational Experience
2.00 average in the approved program courses

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 Second Semester

Freshman

General Education Category A 3 General Education Category A 3
Philosophy 201 3 History B101 3
General Education Category F 3 General Education Category D 4
General Education Category C 3 General Education Category B 3
Foreign Language 3-4 Foreign Language 3-4
Physical Education 021 1 Physical Education Activity 1

16-17 17-18

University Studies

Professor John E. Trimpey, Acting Head

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.

199r Interdisciplinary Seminars (1-4)
Specific topics, themes, and subjects for which the interdisciplinary approach is especially useful.

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

For current offerings see schedule of classes.
Mathematics

Professor J. Ware, Head
Professors Jayne, Nymann
Associate Professors W. Edwards, Hutcherson, McIntosh, Rozema, R. Smith
Assistant Professors Cuffe, Danial, Fordyce, Kuhn, Schlereth
Instructors Byrd, Perry
Lecturers Hartley, J. Jones, B. Smith

Mathematics Learning Center Coordinators Brown, Urcavich

The Department of Mathematics offers two degree programs, the BA and the BS in applied mathematics. The BA is the traditional liberal arts degree with a major in mathematics. The BS is in applied mathematics is a relatively new 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, corporate science, or systems analysis. It is also possible for a student to receive a BS degree with a teaching area in mathematics. See School of Education listing.

The Department of Mathematics also offers a minor in mathematics.

Applied Mathematics (B.S.)

General Education (see pages 26-27 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)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
Mathematics (135 and/or F145)*, F150, 160, 195, 200, 260, 308, 350, 407, 408, 412, and either 414 or 424
3 additional mathematics courses elected from 303, 321, 322, 410, 414, 418, 424, 428, 440, 445, 450, 452, 454, 460, 470
Economics C101, C102; Computer Science 118

One of the following concentrations—

1. Actuarial Science: courses from the School of Business Administration including Accounting 201, 202; Finance 302, 321; Marketing 336; Finance 337; Marketing 450 or Economics 460; one elective from: Accounting 303, 304; Finance 422, Economics 301, 324, 429.

2. Corporate Science (formerly business administration): 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).

3. Computer Science: Computer Science 121 or 150, 122, 201, 251, 252, 301; Either Mathematics 418 or 428 (may not be used to satisfy mathematics elective course); two electives from Computer Science 300-400 level courses (excluding 340).


A student may not elect both the corporate science and the actuarial science concentrations.

No more than 32 hours from the School of Business Administration may be credited toward the degree.

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

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

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

Typical courses of study in applied mathematics

Applied mathematics (B.S.): actuarial science concentration

First Semester | Second Semester
---|---
Freshman | 
Economics 101 Category C | 3 | Economics 102 Category C | 3
General Education Category A | 3 | General Education Category A | 3
Mathematics F150 (135/F145)* | 4 | Mathematics 160 (150)* | 4
General Education Category D | 4 | Computer Science 118 | 3
Elective | 3 | Elective | 3
Physical Education 021 | 1 | Physical Education Activity | 1
18 | 17

(Mathematics 160 in Summer School — if needed)

Sophomore | 
Mathematics 250 | 4 | Mathematics 260 | 4
Mathematics 195 | 3 | Mathematics 308 | 3
General Education Category B | 3 | Fine Arts Category B | 3
B Accounting 201 | 3 | B Accounting 202 | 3
Elective | 3 | General Education Category B | 3
16 | 16

Junior | 
Mathematics 407 | 3 | Mathematics 408 | 3
Mathematics 350 | 3 | Mathematics 412 | 3
Mathematics Elective | 3 | B Finance 321 | 3
B Finance 302 | 3 | B Marketing 336 | 3
Elective | 3 | Concentration Elective | 3
15 | 15

Senior | 
Mathematics 414 | 3 | Mathematics Elective | 3
Mathematics Elective | 3 | B Marketing 450 | 3
B Finance 337 | 3 | or Economics 460 | 3
General Education Category G | 3 | Electives | 10
Elective | 3 | 15 | 16

*Mathematics sequence may begin with 135 and/or F145 rather than 150 depending on preparation.
### Applied mathematics (B.S.): corporate science concentration

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<thead>
<tr>
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<th>Second Semester</th>
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<tbody>
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<tr>
<td>Economics 101 Category C</td>
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<td>General Education Category A</td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Mathematics 250</td>
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<td>Mathematics 195</td>
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<td>B Accounting 201</td>
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<td></td>
<td>16</td>
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<tr>
<td><strong>Junior</strong></td>
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<td>Mathematics 407</td>
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<td>Mathematics 390</td>
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<td>B Finance 302</td>
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<td>Mathematics 414</td>
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<td>Economics 429</td>
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<tr>
<td>Electives</td>
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</table>

(Mathematics 160 in Summer School — if needed)

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

### Applied mathematics (B.S.): systems analysis concentration

<table>
<thead>
<tr>
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<th>Second Semester</th>
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<tbody>
<tr>
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<tr>
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<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics F150</td>
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<tr>
<td>General Education Category B</td>
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<td></td>
<td>18</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Mathematics 250</td>
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### Mathematics (B.A.)

**General Education** (see pages 26-27 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)

**Category F**
1 approved mathematics course (3 hours; courses below will apply)

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

Health and Physical Education 021 plus one additional semester physical education activity
### Major and related courses

**Computer Science 118**

Mathematics (135 and/or F145), F150, 160, 195, 250, 260, and 18 hours 300 and 400-level mathematics courses including 321, 350, but excluding 415, 416, 451.

**Physics 230, 231**

2.00 average in all mathematics courses and also in all 300, 400-level mathematics courses.

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

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

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

<table>
<thead>
<tr>
<th></th>
<th>First Semester</th>
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<td>Mathematics 160 (150)*</td>
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<td>Language 101</td>
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<td>Language 102</td>
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(Mathematics 160 in Summer School — if needed)

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<tr>
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<td>General Education Category B</td>
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<td>Physics 230</td>
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<td>Elective</td>
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<td>Language (2nd year)</td>
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<table>
<thead>
<tr>
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<td>Mathematics 350</td>
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<table>
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<th>Second Semester</th>
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<tr>
<td></td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>

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

### Minor

**Required courses:** Mathematics 150, 160, 250, 260

**Elective courses:**

Three courses totaling at least nine hours from: Mathematics 195 and/or any 300-400 level mathematics course (excluding 415, 416, 451)

(Note: 195 is not required for minor.)

A 2.0 average on all elective courses

At least two elective courses must be taken at this institution

### Mathematics Courses

**A minimum grade of C must be made on any mathematics course used as a prerequisite for any other mathematics course.**

#### 107 Algebra (2)

Review of high school algebra; selected topics from college algebra. Graded on satisfactory/no-credit/fail basis. Lecture and laboratory. Credit not allowed after completion of any college level mathematics course.

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. Prerequisites: two years of high school algebra and acceptable test scores or 107. Mathematics 115 (with minimum grade of C) is prerequisite to 116. Restricted to majors in elementary, early childhood, and special education.

120 Introduction to Contemporary Mathematics (3)

A study of the nature and techniques of mathematics, including such topics as number systems, modern geometry, probability, the history and development of mathematical ideas. Prerequisites: two years of high school algebra and acceptable test scores or 107.

124 Elementary Linear Programming (1)

Linear programming and other selected topics which would not be covered in a traditional college algebra or precalculus course. Includes use of the computer. Prerequisite: permission of the department.

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. Prerequisites: two years of high school algebra and acceptable test scores or 107. Credit not allowed in 135 after 136, 145, or 150.

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. Prerequisites: four years of college preparatory mathematics and acceptable test scores or 135 with minimum grade of C. Credit not allowed in 136 after 150.

145 Precalculus II (3)

Exponential and logarithmic functions; complex numbers; the remainder and factor theorems; trigonometry; conic sections; sequences and series; applications; other selected topics. Prerequisites: two years of high school algebra, advanced mathematics, and acceptable test scores or 135 with minimum grade of C. Credit not allowed in 145 after 150.

150 Calculus I with Analytic Geometry (4)

Topics in analytic geometry; limits; derivatives of algebraic functions and their applications; integrals of algebraic functions. Prerequisites: four years of college preparatory mathematics and acceptable test scores 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. Prerequisite: Brock Scholar, others by consent of the department head. Credit not allowed in 136 or 150 after 155. May be substituted for 150 in meeting all requirements.

160 Calculus II with Analytic Geometry (4)

Additional topics in analytic geometry; applications of integration; transcendental functions; hyperbolic functions; techniques of integration, infinite series. Prerequisite: 150 with minimum grade of C.

195 Foundations of Mathematics (3)

Introductory concepts of sets, functions, equivalence relations, ordering relations, logic, methods of proof, and axiomatic theories. Prerequisite: 160 with minimum grade of Cor permission of instructor. This course is a prerequisite for 321, 322, 350, 412 and 452. Mathematics majors should enroll in it during their sophomore year.

199 Special Projects (1-4)

Individual or group projects. Maximum credit four hours.

210 Introductory Statistics (3)

An introductory course suitable for students in a variety of disciplines, including such topics as: nature, sources, collection, and presentation of data; measures of central tendency; probability; sampling distributions; hypothesis testing; regression and correlation; analysis of variance; other non-parametric statistics. Prerequisites: two years of high school algebra and acceptable test scores or 107.
225 Topics in Mathematics for Management, Life, and Social Sciences (3)
Topics from mathematical modeling, the calculus, probability, Markov processes, linear programming, game theory, and other applications. Prerequisites: Linear programming (124 or 135) and calculus (156 or 150) with minimum grades of C.

250 Introduction to Ordinary Differential Equations (4)
Topics in linear algebra and in differential equations. Prerequisite: 160 with minimum grade of C.

260 Multivariate Calculus (4)
Vector analysis, three dimensional analytic geometry, polar coordinates, multiple integration and partial differentiation. Prerequisite: 160 with minimum grade of C.

303 Discrete Structures (3)
Combinatorial topics, graph theory, abstract algebra, formal logic. Designed to acquaint students with some of the terminology, concepts, and techniques of several areas of discrete mathematics, especially those often applied in computer science, and to give students an appreciation for the nature and utility of precise definitions and careful logical arguments concerning their consequences. Prerequisites: Mathematics 225 or 250 with minimum grade of C and Computer Science 117 or 118 or 121.

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. Prerequisites: Computer Science 118 or equivalent, Mathematics 250 with minimum grade of C. Pre- or corequisite: Mathematics 260.

321 Introduction to Modern Algebra (3)
Integral domains, rings, fields/groups, elementary number theory, and other selected topics. Required of all B.A. mathematics majors. Prerequisite: 195 with minimum grade of C.

322 Introduction to Point Set Topology (3)
Introductory set theory, topologies and topological spaces, continuous mappings, compactness, connectedness, separation axioms and metric spaces. Prerequisite: 195 with minimum grade 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. Required of all mathematics majors. Prerequisites: 195, 250, 260 with minimum grades of C.

407 Introduction to Probability and Statistics (3)
Permutations, combinations, finite sample spaces, averages, variance, binomial and normal distributions, random variables, statistical inference. Prerequisite: 260 with minimum grade of C.

408 Mathematical Statistics (3)
Coefficients of dispersion and skewness, correlation, regression line, DeMoivre-Laplace theorem, Poisson distribution, chi-square and t and F distributions, frequency distributions of two variables, moment generating functions. Prerequisite: 407 with minimum grade of C.

410 Number Theory (3)
Divisibility, primes, congruences, Fermat’s Theorem, number theoretic functions, primitive roots and indices, the quadratic reciprocity law. Prerequisites: 195 and either 250 or 260 with minimum grades of C.

412 Introduction to Linear Algebra (3)
Vector spaces, linear transformations, matrix algebra, determinants, systems of linear equations. Applications to science and engineering. Prerequisites: 195, 250 with minimum grades of C.

414 Operations Research (Linear) (3)
Introduction to linear programming, duality, transportation and assignment problems, integer programming. Prerequisites: Computer Science 118, Mathematics 412 with minimum grade of C, or approval of instructor.

415 Numeric Concepts for Elementary Teachers (3)
Designed to reinforce mathematical concepts for those teaching in the elementary grades. Emphasis on the relationship between mathematical ideas and reality. Logic and set operations, algebraic systems, and number systems included. 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. 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. Prerequisites: 260, 308 with minimum grades of C, or approval of instructor.

424 Operations Research (Non-Linear) (3)
Network flows, Markov chains and applications, queuing theory and applications, inventory theory, decision theory, and games. Prerequisites: Computer Science 118, Mathematics 407 with minimum grade of C, or approval of instructor.

426 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, UNPACK, EISPACK, MINPACK. Prerequisites: Computer Science 118, Math 250, and one of the following: Math 308, Engineering 225, Computer Science 231 with minimum grades of C.

440 Applied Analysis (3)
Vector analysis through Stokes’ Theorem and the Divergence Theorem. Topics in advanced calculus including implicit functions, Jacobians, interchange of limit processes, and uniform convergence of series of functions; introduction to power series solutions of differential equations. Prerequisites: 250, 260 with minimum grades of C.

445 Advanced Differential Equations (3)
Systems of differential equations; existence and uniqueness theorems; linear systems; phase plane analysis; stability theory; applications. Prerequisite: 250, 260 with minimum grades of C.

450 Modern Analysis (3)
Differentiation; inverse and implicit function theorems; functions of bounded variation, integration and measure; integration on manifolds; Stokes’ and Green’s Theorems; other selected topics. Prerequisite: 350 with minimum grade of C.

451 Basic Concepts of Modern Mathematics (3)
Basic mathematical concepts from modern algebra, set theory, logic, probability and statistics, geometry, and number theory including examination of underlying assumptions in these areas. Prerequisite: one year of college mathematics. Not applicable on B.A. mathematics major. Restricted to mathematics education majors, teachers currently certified to teach mathematics in grades 7-12, or students approved by instructor.

452 Basic Concepts of Geometry (3)
Deficiencies in Euclidean geometry. Euclid’s parallel postulate, introduction to non-Euclidean geometry, consistency and validity of non-Euclidean geometry, incidence geometries, affine geometries, linear, planar, and spatial order properties. Prerequisite: 195 with minimum grade of C or approval of instructor.

454 Abstract Algebra (3)
A study of special topics from advanced algebra, various algebraic structures, and the applications of algebra. Prerequisite: 321 or 412 with minimum grade of C or approval of instructor.
Music

Cadek Department of Music

*Professor Gerschefski, Head*

**Professors** Breland, Draper, Rivituso, Stroud  
**Associate Professors** Abril, Bales, Branch, Creider, D'Andrea, Littleton, Miller, Pennebaker, Peretz, Temko  
**Assistant Professors** Coleman, Cox, Jennings, Johnson, Sanders, Sasse, Stryker, Zimmer  
**Instructor** Coulter  
**Director of Choral Activities** Draper  
**Director of Bands** D’Andrea  
**Director of Orchestras** Stroud

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 Tennesse 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 BA 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. The student will also take an entrance test in music theory. 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 2.00 average in music courses is required for enrollment in 300 and 400 level music courses. A senior educational experience is required of all majors.

In addition to degree requirements herein listed, other regulations for music majors appear in the current *Music Student Handbook*.

The following are suggested courses of study for the several degrees in music. Specific course requirements are listed by course number; general education category requirements are indicated by category 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 26-27 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 O**
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)

**Health and Physical Education 021** plus one additional semester physical education activity

Foreign language through second college year

**Major**

Music 107, 108, 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
2.00 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.)**

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<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<td>Music 000</td>
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<td>General Education Category B</td>
<td>General Education Category B</td>
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<td>Foreign Language</td>
<td>Foreign Language</td>
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<td>Physical Education 021</td>
<td>Physical Education Activity</td>
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<tr>
<td>Music 107</td>
<td>Music 108</td>
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<tr>
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<td></td>
</tr>
<tr>
<td><strong>Senior</strong></td>
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<td>Music 000</td>
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<tr>
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<tr>
<td>Non-Music Electives</td>
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<td>Applied Music (Primary)</td>
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</table>

**Music (B.M.)**

**General Education** (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>2 approved courses in written communication in the English language (6 hours)</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>3 approved courses other than music: one from humanities, one from fine arts, and one from either (3 hours each)</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>2 approved behavioral or social science courses (6 hours)</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>1 approved physical or natural science course with laboratory (4 hours)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>1 approved mathematics course (3 hours)</td>
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</table>

**Category C**

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 approved perspectives course other than music (3 hours)</td>
</tr>
</tbody>
</table>

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

**Major**

Core: Music 107, 108, 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; Music 332 (for piano majors). 19-21 hours music electives other than primary applied study

2. **Vocal Performance**: 8 semesters (32 hours) voice study; 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; 2 hours of 305r; 309, 310; 405r (field work); 404, 405, 406.

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

2.00 average in all music courses

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><strong>Freshman</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
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<tr>
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<td>Music 108</td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
</tr>
<tr>
<td>Music 207</td>
<td>Music 208</td>
</tr>
<tr>
<td>Music 315</td>
<td>Music 316</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Applied Music (Primary)</td>
</tr>
<tr>
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<td>0</td>
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<tr>
<td><strong>Junior</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
</tr>
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<td>General Education Category B</td>
<td>General Education Category D</td>
</tr>
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<td>General Education Category B</td>
<td>General Education Category G</td>
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<tr>
<td>Non-Music Electives</td>
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<td>Applied Music (Primary)</td>
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<td>Ensemble</td>
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<tr>
<td><strong>Senior</strong></td>
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<tr>
<td>Music 000</td>
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<td>Music Elective</td>
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<tr>
<td>Applied Music (Primary)</td>
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<td>Non-Music Electives</td>
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</tbody>
</table>

**Music—83**

**Major**

Core: Music 107, 108, 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; Music 332 (for piano majors). 19-21 hours music electives other than primary applied study

2. **Vocal Performance**: 8 semesters (32 hours) voice study; 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; 2 hours of 305r; 309, 310; 405r (field work); 404, 405, 406.

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

2.00 average in all music courses

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.): sacred music 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>
<tr>
<td>Music 000</td>
<td>Music 000</td>
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<tr>
<td>General Education Category A</td>
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<td>Foreign Language</td>
<td>Foreign Language</td>
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<tr>
<td>Music 207</td>
<td>Music 208</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Applied Music (Primary)</td>
</tr>
<tr>
<td>Applied Music (Secondary)</td>
<td>Applied Music (Secondary)</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>General Education Category B</td>
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<td><strong>Sophomore</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>Music 207</td>
<td>Music 208</td>
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<td>Applied Music (Secondary)</td>
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<td>Applied Music (Secondary)</td>
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</tr>
<tr>
<td><strong>Senior</strong></td>
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<td>Music 000</td>
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<td>General Education Category C</td>
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<tr>
<td>General Education Category B</td>
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</table>
| **Music (B.M.): vocal performance 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>
<td>Music 000</td>
<td>Music 000</td>
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<tr>
<td>General Education Category A</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>Music 207</td>
<td>Music 208</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Applied Music (Primary)</td>
</tr>
<tr>
<td>Applied Music (Secondary)</td>
<td>Applied Music (Secondary)</td>
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<tr>
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<td>General Education Category B</td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
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<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
</tr>
<tr>
<td>Music 207</td>
<td>Music 208</td>
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<tr>
<td>Applied Music (Primary)</td>
<td>Applied Music (Primary)</td>
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<tr>
<td>Applied Music (Secondary)</td>
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<tr>
<td><strong>Junior</strong></td>
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<tr>
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<td>General Education Category B</td>
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</table>

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

2 For piano majors.

3 For composition majors.

4 For theory majors.

**Music (B.M.): theory and composition concentration**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td></td>
</tr>
<tr>
<td>Music 000</td>
<td>Music 000</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>General Education Category A</td>
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<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
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<tr>
<td>Physical Education 021</td>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>Music 107</td>
<td>Music 108</td>
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<tr>
<td>Applied Music (Primary)</td>
<td>Applied Music (Primary)</td>
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<tr>
<td>Ensemble</td>
<td>Ensemble</td>
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<tr>
<td>Music 131 or 25V</td>
<td>Music 132 or 251</td>
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<td><strong>Sophomore</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td><strong>Junior</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
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<td>General Education Category B</td>
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<tr>
<td>General Education Category F</td>
<td>General Education Category F</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Applied Music (Primary)</td>
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<tr>
<td><strong>Senior</strong></td>
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<tr>
<td>Music 000</td>
<td>Music 000</td>
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<td>General Education Category C</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Applied Music (Primary)</td>
</tr>
</tbody>
</table>

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

2 For piano majors.

3 For composition majors.

4 For theory majors.
Music Education (B.S.)

**General Education** (see pages 26-27 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), plus courses in humanities/fine arts to total 12 hours in three fields other than history

**Category C**
2 approved behavioral or social science courses plus one course to total 9 hours behavioral or social science in two fields other than education; for certification purposes, 3 of the hours may be in history

**Category D**
2 approved 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 music (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**
Music 107, 108, 207, 208, 209, 210, 315, 316
20 hours applied music including: ensemble participation required each semester of residence, with the exception of student teaching semester, minimum of 8 hours credit; 8 semesters (8 hours) primary instrumental or vocal study or 6 hours primary and 2 hours secondary; Music 131, 132, 141, 142, for piano proficiency

One of the following concentrations—

1. **Instrumental**: Music 221; 3 hours of 223r, 3 hours of 224r; 2 hours of 225r; 226; 307 or 326; 325, 327, 328

2. **Vocal**: 133, 134, 221, 222; 307, 309, 310, 333, 2 hours applied piano study in addition to piano proficiency study

30 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 432, 436r, 437, 439; Special Education 333; Music 321

2.25 average both in teaching field and in School of Education courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

See School of Education section for teacher education, certification, and student teaching requirements.

**Typical course of study in music (B.S.)**

**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</td>
<td>Music 000</td>
</tr>
<tr>
<td>Mathematics F120</td>
<td>General Education Category A</td>
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</tbody>
</table>
Minor
The Music Department offers a minor in music. Requirements for the music minor include a core of fourteen required hours plus electives in music for a total of 22 hours. Core courses include Music 100 (2), Music 101 (2), Music 315 (3), Music 316 (3), and four hours of applied music instruction at the 200 level. Six of the elective hours must be taken at the 200 level or above. A maximum of two hours of ensemble credit will be accepted toward the program.

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.

Music Courses

010r Recital (0)
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. 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. Prerequisite: Music 100.

107, 108 Theory I (4,4)
A comprehensive approach to the study of melody, counterpoint, diatonic and chromatic harmony, basic instrumentation and aural skills. Performance, composition, and analysis of music from all periods and styles. Prerequisite: 100 or placement examination. Music 107 prerequisite to Music 108. Class hours five.

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.

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. Credit not permitted toward graduation for music majors.

115 Introduction to Electronic Music (2)
An introduction to the appreciation and composition of electronic music. Basic tape manipulation technique; the vocabulary and usage of synthesizers; rudimentary electronics and acoustics; composition and analysis. For nonmusic majors. Prerequisite: permission of the instructor.

121 Piano Class (1)
For persons without keyboard or music reading experience. Class hours two.
131, 132 Piano Class (1, 1)
For persons without keyboard experience. Class hours two. 131 prerequisite to 132.

133, 134 Voice Class (1, 1)
For persons without vocal experience. Class hours two. 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. Class hours two. 135 prerequisite to 136.

141, 142 Piano Class (1, 1)
Class hours two. Prerequisite: 132 or audition; 141 prerequisite to 142.

190r Special Projects (1-4)
Individual or group projects. Maximum credit four hours.

201r Ensemble (1)
Accompanying, chamber, and other ensemble music.

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. Offered spring semester only. Prerequisite: Music 107 or permission of instructor.

207, 208 Theory II (4, 4)
A comprehensive approach to the study of musical structure. Continued study of melody, harmony, counterpoint, and aural skills. Introduction to 21st century compositional techniques. Performance, composition, and analysis. Class hours five. Prerequisites: 107, 108; 207 prerequisite to 208.

209, 210 Keyboard Harmony (1, 1)
The use of harmonic materials at the keyboard. 209 prerequisite to 210.

211 The Literature of the Symphony Orchestra (3)
Symphonic music from the middle of the 18th century to the present. Discussion, analysis, and recorded performance of standard masterpieces in the field. Offered alternate years: offered fall, 1983.

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. Offered alternate years: offered fall, 1983.

214 Music in Non-Western Culture (3)
Selected traditions of music other than classical Western art music. The role of music in society, the uses of music, and changes in music as a result of the spread of Westernization. Four cultures—Chinese, Indian, West African, and U.S. Native American—will be examined.

217, 218 Diction for Singers (2, 2)
An introduction to the pronunciation of Italian, German, French, and English based on the International Phonetic Alphabet. Open to voice majors; others by permission.

221 String Methods (2)
Class instruction of the string instruments: violin, viola, cello, and double bass. Ensemble playing. Offered fall semester only.

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 instruments. Offered spring semester only. Prerequisite: Vocal Music Education Major status.

222r Woodwind Methods (1)
Class instruction of woodwind instruments; tuning and care of instruments. Teaching techniques. Single reed instruments, double reed instruments, and flute. Offered fall semester only. Class one hour, laboratory one hour.

224r Brass Methods (1)
Class instruction of brass instruments; tuning and care of instruments. Teaching techniques. Piston valve instruments, French horn, and trombone. Offered spring semester only. Class one hour, laboratory one hour.

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

226 Marching Band Techniques (2)
A study of the techniques and style employed in training the marching band. Offered fall semester only.

251r Keyboard Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisite: audition.

253r String Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisite: audition.

255r Voice Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisite: audition.

257r Woodwind Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisite: audition.

261r Percussion Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisite: audition.

302 Counterpoint (2)
An analytical survey of contrapuntal techniques. Prerequisites: 107, 108, or permission. Offered alternate years; offered spring, 1984.

304 Arranging and Composing for Percussion Instruments (1)
Aspects of composing and arranging peculiar to instruments of the percussion family. Nature of sound as related to specific available instruments, technical problems, and notation practice. Investigation of percussion instruments in combination with other instruments, solo contexts, and in ensembles composed entirely of percussion instruments. Prerequisite: 208 and permission of instructor. Offered alternate years; offered spring 1983.

305r Composition (1-4)
Beginning composition study concentrating on small groups and short forms. Prerequisites: 207, 208.

307 Orchestration (2)
Scoring for strings, woodwinds, brasses, and full orchestra. Piano transcriptions from orchestral scores. Prerequisites: 207, 208. Offered alternate years; offered fall, 1983.

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 prerequisite to 310. Prerequisites: 207, 208. Offered alternate years; offered 1983-84.

315, 316 History of Music (3, 3)
A general survey of the history of music in Western civilization. Prerequisite: 108.

317 Survey of Jazz (3)
A survey of jazz from its ethnic origins through its chronological development to its current styles.
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.

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.

325 Band Organization and Management (3) The techniques used in the organization, administration, and preparation of school bands. The selection, care, and repair of materials, instruments, and other equipment.

326 Band Arranging (2) Band instrumentation and general principles of arranging; special reference to writing for bands having incomplete instrumentation and less experienced players.

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 prerequisite to 328. Prerequisites: 207, 208. Offered alternate years; offered 1983-84.

332 Piano Pedagogy (2) Piano methods and materials. For advanced students planning to teach piano. Offered alternate years: offered fall, 1983.

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.

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. Prerequisite: 132, 208, or permission.

401r Composition II (1-4) Advanced composition study. Prerequisites: 305, 307.

404 Liturgies and Service Structure (2) History, content, theology of worship; similarities in Jewish and Christian worship and liturgy; application of liturgical principles to various types of worship service; service playing. Open to music majors; others by permission. Offered alternate years: offered spring, 1984.

405 Ministry of Music (2) Philosophy of music in the church; the role of music in worship; the organization of a church music program; staff relations. Open to music majors; others by permission. Offered alternate years: offered fall, 1983.

406 Hymnology (2) Historical development of the Christian hymn; criteria for use of hymns and hymn tunes; the composition of hymns. Open to music majors; others by permission. Offered alternate years: offered fall, 1983.

407, 408 Advanced Analysis (2,2) Compositional, analytic techniques, and formal procedures, with emphasis on the 20th century. Prerequisite: 208 or permission of instructor; 407 prerequisite to 408. Offered alternate years; offered 1984-85.

409, 410 Musical Styles (2,2) Literature of the various periods of music history, including characteristic features of musical style. Prerequisite: permission of instructor. Offered alternate years: offered 1983-84.

411 Music Before 1600 (3) A study of works, both monodic and polyphonic, characteristic of European music before 1600. Prerequisites: 208 or permission of instructor.

412 Music from 1600 to 1750 (3) A study of works characteristic of the period and illustrative of musical trends in the era. Prerequisites: 208 or permission of instructor.

413 Music from 1725 to 1825 (3) A study of works characteristic of the period and illustrative of musical trends in the era. Extensive examination of representative scores. Prerequisites: 208 or permission of instructor.

414 Nineteenth Century Music (3) A study of works characteristic of the period and illustrative of musical trends in the era. Prerequisites: 208 or permission of instructor.

415 Twentieth Century Music (3) A study of works characteristic of the period and illustrative of musical trends in the era. Prerequisites: 208 or permission of instructor.

426 Jazz Arranging (2) Fundamentals of composing and arranging for the contemporary jazz ensemble. Prerequisites: 208, 307 or 326, or permission of instructor.

451r Keyboard Instruction (1-4) Four hours per week practice required for each hour credit. Prerequisite: 76 hours of 251r and successful audition for the division jury.

453r String Instruction (1-4) Four hours per week practice required for each hour credit. Prerequisite: 76 hours of 253r and successful audition for the division jury.

455r Voice Instruction (1-4) Four hours per week practice required for each hour credit. Prerequisite: 16 hours of 255r and successful audition for the division jury.

457r Woodwind Instruction (1-4) Four hours per week practice required for each hour credit. Prerequisite: 16 hours of 257r and successful audition for the division jury.

459r Brass Instruction (1-4) Four hours per week practice required for each hour credit. Prerequisite: 76 hours of 259r and successful audition for the division jury.

461r Percussion Instruction (1-4) Four hours per week required for each hour credit. Prerequisite: 76 hours of 261r and successful audition for the division jury.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms) See “Departmental Honors,” page 32.

497r Research (1-4)

499r Individual Studies (1-4)

499r Group Studies (1-4)

Nursing

5ee page 166.
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.

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

**General Education** (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2 approved courses in written communication in the English language (6 hours)</td>
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<tr>
<td>B</td>
<td>3 approved courses other than philosophy and religion: one from humanities, one from fine arts, and one from either (3 hours each)</td>
</tr>
<tr>
<td>C</td>
<td>2 approved behavioral or social science courses (6 hours)</td>
</tr>
<tr>
<td>D</td>
<td>1 approved physical or natural science course with laboratory (4 hours)</td>
</tr>
<tr>
<td>E</td>
<td>1 approved mathematics course (3 hours)</td>
</tr>
<tr>
<td>F</td>
<td>1 approved perspectives course other than philosophy and religion (3 hours)</td>
</tr>
</tbody>
</table>

Health and Physical Education 021 plus one additional semester physical education activity

Foreign Language through second college year (Department recommends Creek, Latin, German, or French)

**Major**

One of the following concentrations—

1. **Philosophy:**
   - 30 hours philosophy beyond 100 level including Philosophy 211, 351, 353, 498r; one course in ethics, metaphysics, or epistemology
   - 2.00 average in all philosophy courses

2. **Religious Studies:**
   - Total of 30 hours including Philosophy 351 and 353; Philosophy 498r or Religion 498r; and also including 21 hours religion with two courses chosen from each of the following groups:
     1. Religion 211, 314, 316r, 418, 493
     2. Religion 232, 337, 355, 362, 467, 482, 492r
   - 2.00 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
   - 2.00 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.): philosophy concentration**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
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<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>4</td>
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<tr>
<td>General Education Category C</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 106¹</td>
<td>3</td>
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<tr>
<td>Physical Education 021</td>
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<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Philosophy 201²</td>
<td>3</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>Philosophy 211</td>
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<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Philosophy 351</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 341 or 345</td>
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<td>General Education Category B</td>
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<tr>
<td>Electives³</td>
<td>6</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Philosophy (300 or 400 level)</td>
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<tr>
<td>General Education Category G</td>
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<tr>
<td>Electives</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

¹This course does not count toward major.
²Major requires 30 hours philosophy beyond the 100 level, including Philosophy 211, 351, 353, 498r, and one course in ethics, metaphysics, or epistemology. Not more than 42 hours in any one department may be applied toward a B.A. degree. One course outside the department may count toward major with approval by department head. 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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</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>General Education Category A</td>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>Religion 103</td>
<td>3</td>
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<tr>
<td>General Education Category C</td>
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<tr>
<td>Physical Education 021</td>
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<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td></td>
<td>17</td>
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<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Religion (200 level)²</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
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<tr>
<td>General Education Category F</td>
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</tr>
<tr>
<td>Electives³</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Philosophy 351</td>
<td>3</td>
</tr>
<tr>
<td>Religion (300 level)²</td>
<td>3</td>
</tr>
</tbody>
</table>
90—Philosophy & Religion

General Education Category B 3  General Education Category C 3
Electives 6  Electives
15

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

Electives 3

1. This course does not count toward major.
2. In addition to Philosophy 351, 353, and 498r (or Religion 498r), major requires 21 hours in religion with two courses from each of the following groups:
   (a) Religion 211, 314, 316r, 418, 493r
   (b) Religion 232, 337, 355, 467, 482, 492
3. Not more than 42 hours in any one department may be applied toward a B.A. degree. One course outside department may count toward major with approval by department head.

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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
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</tr>
<tr>
<td>General Education Category A 3</td>
<td>General Education Category A 3</td>
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<tr>
<td>Foreign Language 4</td>
<td>Foreign Language 4</td>
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<tr>
<td>Religion 103 3</td>
<td>Philosophy 106” or Elective 3</td>
</tr>
<tr>
<td>General Education Category C 3</td>
<td>General Education Category B 3</td>
</tr>
<tr>
<td>Physical Education 021 1</td>
<td>Physical Education Activity 1</td>
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<tr>
<td>Elective 3</td>
<td>Elective 3</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Philosophy (200 level) or Religion (200 level) 3</td>
<td>Philosophy (200 level) or Religion (200 level) 3</td>
</tr>
<tr>
<td>Foreign Language 3</td>
<td>Foreign Language 3</td>
</tr>
<tr>
<td>General Education Category F 3</td>
<td>General Education Category D 4</td>
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<tr>
<td>Electives 6</td>
<td>Electives 6</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Philosophy 351 3</td>
<td>Philosophy 353</td>
</tr>
<tr>
<td>Religion 355, 362, or 492r 3</td>
<td>Religion 337, 467, or 482</td>
</tr>
<tr>
<td>General Education Category B 3</td>
<td>General Education Category C 3</td>
</tr>
<tr>
<td>Electives 6</td>
<td>Electives 4</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Philosophy (300 or 400 level) 3</td>
<td>Philosophy (300 or 400 level) 3</td>
</tr>
<tr>
<td>or Religion (300 or 400 level) 3</td>
<td>Philosophy 498r or</td>
</tr>
<tr>
<td>General Education Category G 3</td>
<td>Religion (300 or 400 level) 3</td>
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<tr>
<td>Electives</td>
<td>Electives</td>
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<tr>
<td></td>
<td>JO</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

*This course does not count toward major.
2Major requires at least 15 hours in philosophy and 15 hours in religion including Philosophy 351, 353, 498r, and two courses from Religion 337, 355, 362, 467, 482, 492r.
3Not more than 42 hours in any one department may be applied toward a B.A. degree. One course outside the department may count toward major with approval by department head.

Minor

One of the following concentrations—

1. Philosophy:
   18 hours of philosophy beyond 100 level including Philosophy 211, 351, 353
   Nine of these hours must be earned in courses at 300 level or above.

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, 314, 316r, 418, 493r
Religion 232, 337, 355, 362, 467, 482, 492r
Nine of the 18 hours must be earned in courses at 300 level or above.

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.

190r Special Projects (1-4)
Individual or group projects. Maximum credit four 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.

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.

221 Introduction to Ethics (3)
An examination of classical and modern theories of the foundations of morality. Selections from such philosophers as Plato, Aristotle, Hobbes, Butler, Hume, Kant, Bentham, Sidgwick, and Mill.

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.

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.

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.

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.

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.

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.

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.

351 History of Ancient Philosophy (3)
Selections from the pre-Socratic through the late Greco-Roman writers, including Plotinus. Emphasis on Plato and Aristotle.
353 History of Modern Philosophy (3)
Rationalism and empiricism as developed by leading thinkers; selections from chief representatives from Hobbes and Descartes through Kant.

360 American Philosophy (3)
Earlier American thought in its reaction to European movements; the emergence of a genuinely American philosophy. Emphasis on James, Pierce, Santayana, Royce, Lewis, and Whitehead.

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.

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.

461 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.

491r Studies in Philosophy (3)
A seminar or tutorial for the intensive consideration of one philosophical problem, movement, or figure.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)

498r Individual Studies (1-4)
Must be taken for at least three hours in one semester by all majors.

499r Group Studies (1-4)

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.

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

211 Religions of the World (3)
An examination of the history of religions, with particular emphasis given to selected examples of contemporary, living world religions in terms of their history, major ideas, and ritual practices.

221, 222 Biblical Literature (3,3)

232 Religion and the Modern Consciousness (3)
Examination of the 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.

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.

314 Primitive Religion (3)
The place of religion in the social and cultural settings of selected peoples as evidenced through magic, myth, totemism, fetish, sacrifice, shamanism, and initiatory rites; an attempt to delineate the common elements of primitive religion.

316r Religious Traditions in Asia (3)
Alternating concentration on three traditions; intensive reading of primary texts in translation. Hinduism: concentration on philosophical and religious problems exemplified primarily in the orthodox Hindu expressions of religion and secondarily in the Jain and Buddhist writings. Buddhism: detailed studies of the classical formulations (Theravada) and later Buddhist writings (Mahayana). Islam: examination and the study of the Koran with particular emphasis on the schools and sects emerging from different interpretations of the law.

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.

355 Classics of the Christian Tradition (3)
Selected readings in leading works of Christian literature from the Patristic, Medieval, Reformation, and Enlightenment periods as represented by such authors as Augustine, Anselm, Aquinas, Luther, Calvin, and Wesley.

362 Theology in the Modern Period (3)
An examination of the major post-Kantian developments in Europe, Britain, and America, including such figures as Schleiermacher, Newman, Buber, Niebuhr, Barth, and Tillich.

401 Religious Studies in the Public School Curriculum (3)
Examination of the legal, theoretical, curricular, pedagogical, and methodological aspects of developing a religious studies program for public schools. Designed especially for teachers and administrators.

418 History and Phenomenology of Religion (3)
A seminar on problems of method in developing data and interpretations of religious phenomena; attention to sociological, anthropological, psychological, and scientific studies; readings from such writers as Frazer, Eliade, Tylor, Durkheim, Jung, Muller, and Otto.

467 Contemporary Religious Thought (3)
Analysis of changing religious ideas in Europe and America from 1950 to the present; readings selected from Protestant, Catholic, and Jewish writers with emphasis on the interrelationship of faith and culture.

470 Psychology of Religion (3)
Analysis of empirical data and psychological theories involving religious beliefs, practices, and experiences. Prerequisites: six units psychology or philosophy-religion. May be registered as Psychology 470.

482 Christian Faith and Recent Philosophy (3)
Recent attempts to utilize philosophy as a resource for theology; special attention to one philosophical tradition—analytic, existentialist, or process philosophy—together with related religious thinkers.

491r Studies in Religion (3)
A seminar or tutorial for the intensive consideration of one problem, movement, or figure in the field of religion.

492r Studies in Western Religious Thought (3)
A seminar or tutorial for the intensive consideration of one problem, movement, or figure in Western religious thought.

493r Studies in the History of Religions (3)
A seminar or tutorial for the intensive consideration of one problem, movement, or figure in the history of religions.

497r Research (1-4)

498r Individual Studies (1-4)
Must be taken for at least 3 hours in one semester by all majors.

499r Group Studies (1-4)
Physics and Astronomy

Professor Walker, Head
Associate Professors Hetzler, Lane, Wurtz
Assistant Professors Davis, Peterson

Physics (B.S.)

General Education (see pages 26-27 for list of approved courses)

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

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

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

Category D
1 approved physical or natural science course other than physics with laboratory (4 hours; approved related courses below will apply)

Category F
1 approved mathematics course (3 hours; approved related courses below will apply)

Category G
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity.

Major and related courses

One of the following options:
1. Two semesters of French or German
2. Computer Science 118 or Engineering 124

Mathematics F150, 160, 250, 260
Chemistry D121, 122
Physics 191 and 230 (or 103 and 104)
Physics 231 and 232
Physics 341, 342, and 411
6 hours from Physics 381r, 382r, 481r, and 482r
30 additional hours from physics, astronomy, chemistry, engineering, and mathematics at the 200 level or above from geology and biology or other fields with prior approval by the department.

At least 30 hours of physics and astronomy at the 300 and 400 level 2.00 average in all physics courses

Electives to complete 128 hours

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

<table>
<thead>
<tr>
<th>First semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>Physics 191</td>
<td>Physics 230</td>
</tr>
<tr>
<td>Chemistry 121</td>
<td>Chemistry 122</td>
</tr>
<tr>
<td>Mathematics F150</td>
<td>Mathematics 160</td>
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<td>General Education Category A</td>
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<td>Physical Education Activity</td>
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<td>Physical Education 021</td>
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<tr>
<td>Junior</td>
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<tr>
<td>Physics 341</td>
<td>Physics 342</td>
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<tr>
<td>Physics Electives</td>
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<td>Electives</td>
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<tr>
<td>Physics 381r</td>
<td>Physics 382r</td>
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<tr>
<td>Electives</td>
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<td>Senior</td>
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<tr>
<td>Physics 411</td>
<td>Electives</td>
</tr>
<tr>
<td>Physics 481r</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

Minor

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 twelve hours of physics at the 300-400 level selected with the prior approval of the department.

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 two-hour laboratory illustrates concepts of practical astronomy. Lecture three hours.

102 Introduction to Astronomy-Stars and Galaxies (4 with lab, 3 without)
Descriptive and conceptual. The nature of stars, galaxies, and the structure of the visible universe. Optional two-hour laboratory illustrates concepts of practical astronomy. Lecture three hours.

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. Maximum credit two 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. Prerequisite: Physics 342.

498r Individual Studies (1-4)

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. Lecture three hours, laboratory two hours. Prerequisite: two units of college preparatory mathematics or Mathematics 107.

Physics Courses

103, 104 General Physics (4,4)
The basic principles of physics with applications to problems of modern science and technology. Required in premedical, preental, prepharmacy, and physical therapy programs. Lecture three hours, laboratory two hours. Prerequisites: three units of college preparatory mathematics.

191 Laboratory Practice in Physics (1)
An introduction to standard techniques in experimental physics with an emphasis on the design, construction, and use of apparatus for making a variety of measurements. Laboratory two hours.

199r Special Projects (1-4)
Individual or group projects. Maximum credit four hours.
230 Principles of Physics—Mechanics, Heat, Sound (4)
Fundamental principles and methods of physics: mechanics, heat, sound. Calculus is used wherever appropriate to the treatment of topics. Lecture three hours, laboratory two hours. Corequisite: Mathematics 160.

231 Principles of Physics—Electricity, Magnetism, Waves, Light (4)
Fundamental principles and methods of physics: electricity and magnetism, wave motion, light. For all engineering students. Lecture three hours, laboratory two hours. Prerequisites: Engineering 103, 104 or Physics 104; Mathematics 150, 160.

232 Principles of Physics—Optics, Modern Physics (4)
Fundamental principles and methods of physics: modern physics, atomic physics, nuclear physics. For all engineering students. Lecture three hours, laboratory two hours. Prerequisites: Engineering 103, 104 or Physics 230 or 104; Mathematics 150, 160.

303 Basic Electronics (4)
Fundamental theory of electronic devices including vacuum tubes and semiconducting devices. Characteristics and applications of components in basic electronic circuits including amplifiers and power supplies. Lecture three hours, laboratory two hours. Prerequisites: 103, 104 or 231.

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 varying emphasis, lecture three hours, laboratory two hours. Prerequisite: 303.

307 Optics (4)
Geometrical and physical optics, including reflection, refraction, interference, diffraction, and polarization; introduction to theory of spectra, lecture three hours, laboratory two hours. Prerequisites: 230, 231, 232 or (103, 104); Mathematics 160.

310 Introduction to Thermal Physics (4)

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. Prerequisite: 104 or 232.

341 Methods of Theoretical Physics I—Classical Mechanics (4)
An introduction to the mathematical techniques used in the classical descriptions of 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, lecture three hours, recitation two hours. Prerequisites: 230, 231 or 103 & 104. Corequisite: Mathematics 250 or 260.

342 Methods of Theoretical Physics II—Electricity and Magnetism (4)
Basic laws of electromagnetism, electric and magnetic properties of materials, Maxwell’s equations, boundary value problems, electromagnetic waves, lecture three hours, recitation two hours. Prerequisite: 341 or Mathematics 250, 260.

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. Maximum credit four hours. Lecture one hour, laboratory two hours. Prerequisites: 230, 231, 232 or (103, 104); Mathematics 250, 260.

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. Maximum credit four hours. Lecture one hour, laboratory two hours. Prerequisites: 230, 231, 232 or (103, 104); Mathematics 250, 260.

400r Physics Seminar (1)
A study of reporting and review for physics research, including the abstracting of published reports. Maximum credit two 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. Prerequisites: 230, 231, 232 or (103, 104); Mathematics 250.

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. Lecture three hours. Prerequisites: 230, 231, 232 or (103, 104); Mathematics 250.

414 Advanced Modern Physics (3)
A study of the fundamentals of quantum mechanics and relativity. Emphasis on the relation of experimental evidence to the assumptions of the theories and the predictions. Consequences of the theories obtained for important cases which illustrate the nature of relativistic and quantum physics. Prerequisites: 341; Mathematics 250, 260.

419 Introduction to Nuclear Reactor Physics (3)
Nuclear reactions and radiation; fission processes, neutron diffusion, reactor design variables, reactor materials and shielding, reactivity coefficients. Prerequisite: 412 or equivalent.

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, IEE-488, and RS232C bus structures. Survey of microcomputer applications. Projects involving interfacing instruments with microcomputers. Lecture two hours, laboratory two hours. Prerequisites: Computer Science 210 or equivalent, Physics 104 or 232 or equivalent.

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. Prerequisites: 104 or 232.

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. Prerequisites: 104 or 232.

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 include emission and absorption spectra of atoms and atomic ions, the Franck-Hertz experiment, the Stern-Gerlach experiment, electron-spin resonance, and nuclear magnetic resonance. Analysis of experimental results will be used to study theoretical models of physical processes. Maximum credit four hours. Lecture one hour, laboratory two hours. Prerequisites: 230, 231, and 232 (or 103, 104); Mathematics 250.

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. Maximum credit four hours. Lecture one hour, laboratory two hours. Prerequisites: 230, 231, 232 or (103, 104, 318); Mathematics 250.
Political Science

Professor Swansbrough, Head
Professor Moughrabi
Associate Professors Brodsky, Carrithers, Richard Wilson

Students majoring in political science may earn a B.S. degree, choosing either the public administration concentration, emphasizing preparation for government service and graduate training, or the preprofessional concentration, emphasizing preparation for careers in law, international business, and the diplomatic service.

The department offers courses in five major subfields of the discipline: Political Behavior and Methodology (202, 203, 301, 302, 402r, 403r); Political Theory (212, 213, 214, 312, 313, 314, 411r); Public Law and Administration (222, 223, 322, 323, 324, 421r); American Institutions and Processes (232, 233, 234, 331, 332, 335, 431r); and International Relations and Comparative Government (242, 243, 244, 342, 343, 344, 345, 441 r, 442r). Certain students may also participate in the State Government Internship Program, the Metropolitan Government Internship Program, and the Dual Degree Program for combined undergraduate and graduate study in Political Science or Public Administration. The Dual Degree Program is offered in conjunction with The University of Tennessee, Knoxville.

Political Science (B.S.): Public Administration Concentration

General Education (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2 approved courses in written communication in the English language (6 hours)</td>
</tr>
<tr>
<td>B</td>
<td>3 approved courses other than political science: one from humanities, one from fine arts, and one from either (3 hours each)</td>
</tr>
<tr>
<td>C</td>
<td>2 approved behavioral or social science courses other than political science (6 hours)</td>
</tr>
<tr>
<td>D</td>
<td>1 approved physical or natural science course with laboratory (4 hours)</td>
</tr>
<tr>
<td>E</td>
<td>1 approved mathematics course (3 hours)</td>
</tr>
<tr>
<td>F</td>
<td>1 approved perspectives course other than political science (3 hours)</td>
</tr>
</tbody>
</table>

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses

- 3 hours Political Science 101
- 3 hours Political Science 201
- 3 hours Political Science 301
- 9 hours from political science courses at the 200 level (excluding 201) distributed among three of five subfields listed above
- 9 hours from political science courses at the 300 level (excluding 301)
- 12 hours from political science courses at the 400 level including at least three hours but no more than six hours from Political Science 461r, 462r, 463, 464, 471r, 480, 495r, 497r, 498r or 499r

Related courses (21 hours):
- 3 hours Mathematics F210
- 3 hours Computer Science 210 or 340
- 3 hours Economics C101 or C102
- 3 hours English 300
- 9 hours additional from Sociology 209, 317, 318, 340; Philosophy 211, B221, 322, 348, 425; Human Services 300; History at 200, 300, 400 level approved by departmental adviser

2.00 average in all political science courses

Typical course of study in political science (B.S.): public administration concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>Political Science 101</td>
<td>Political Science 201</td>
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<td>General Education Category A</td>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>General Education Category B</td>
</tr>
<tr>
<td>Economics C101 or C102</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>General Education Category A</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
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<tr>
<td>Sophomore</td>
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<tr>
<td>2 Political Science Courses at the 200 level</td>
<td>Political Science 301</td>
</tr>
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<td>1 Political Science Course</td>
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<td>at the 200 level</td>
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<tr>
<td>Electives</td>
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<td></td>
<td>Elective</td>
</tr>
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<td>Junior</td>
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<tr>
<td>2 Political Science Courses at the 300 level</td>
<td>1 Political Science Course</td>
</tr>
<tr>
<td>Computer Science 210 or 340</td>
<td>at the 300 level</td>
</tr>
<tr>
<td>English 300</td>
<td>General Education Electives</td>
</tr>
<tr>
<td>Mathematics F210</td>
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<tr>
<td>Concentration Elective</td>
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<tr>
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<td>18</td>
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<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>2 Political Science courses at the 400 level</td>
<td>2 Political Science courses</td>
</tr>
<tr>
<td></td>
<td>at the 400 level</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
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<tr>
<td></td>
<td>9</td>
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<tr>
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<td>15</td>
</tr>
</tbody>
</table>

Political Science (B.S.): Preprofessional Concentration

General Education (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2 approved courses in written communication in the English language (6 hours)</td>
</tr>
</tbody>
</table>

### 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 C
1 approved perspectives course other than political science (3 hours)

Health and Physical Education 021 plus one additional semester of physical education activity

### Major and related courses
- 3 hours Political Science 101
- 3 hours Political Science 201
- 3 hours Political Science 301
- 9 hours from political science courses at the 200 level (excluding 201) distributed among three of five subfields listed above
- 9 hours from political science courses at the 300 level (excluding 301)
- 12 hours from political science courses at the 400 level including at least three hours but no more than six hours from Political Science 461r, 462r, 463, 464, 471r, 480, 495r, 497r, 498r or 499r

### Related courses (26 hours):
- Two years of one foreign language at the college level
- 3 hours Economics C101 or C102
- 3 hours English 300
- 6 hours additional from Philosophy 211, 425; Human Services 300; History at 200, 300 or 400 level approved by the departmental adviser
- 2.00 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 hours necessary for graduation; list of courses normally prepared by the student and approved by the departmental adviser.

### Typical course of study in political science
**(B.S.): preprofessional concentration**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
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<td><strong>Freshman</strong></td>
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</tr>
<tr>
<td>Foreign Language</td>
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<tr>
<td>Political Science 101</td>
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</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
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<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Economics C101 or C102</td>
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<tr>
<td>General Education Category C</td>
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<table>
<thead>
<tr>
<th><strong>Sophomore</strong></th>
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</thead>
<tbody>
<tr>
<td>Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category D</td>
<td>4</td>
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<tr>
<td>2 Political Science Courses at the 200 level</td>
<td>6</td>
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<tr>
<td>General Education Category B</td>
<td>3</td>
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<td>Elective</td>
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<tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Junior</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Political Science Courses at the 300 level</td>
<td>6</td>
</tr>
<tr>
<td>Concentration Elective</td>
<td>3</td>
</tr>
<tr>
<td>English 300</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

### Senior

| 2 Political Science Courses at the 400 level | 6 |
| Electives | 2 |

### Minor

Required and elective courses totaling 18 hours

**Required:**
- Eighteen hours of political science including Political Science 201, fifteen hours distributed among three of the five subfields described above. Nine hours must be at upper levels with no more than three hours from Political Science 461 r, 462r, 463, 464, 471r, 480, 495r, 497r, 498r, or 499r.

### Political Science Courses

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

**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.

**199r Special Projects (1-4)**  
Individual or group projects.

**201 Introduction to Political Science (3)**  
Language, symbols, methods, and data of political discourse and analysis. Required for political science majors.

**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.

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

**212 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.

**213 American Political Ideas (3)**  
The major sources of American political ideas as a background to analyzing the political theory of the Founding Fathers.

**214 Southern Political Ideas (3)**  
The political ideas of selected southerners from revolutionary America to the present day.

**222 Introduction to American Constitutional Law (3)**  
Case studies of key Supreme Court decisions affecting the distribution of power in American society.

**223 Introduction to Public Administration (3)**  
Principles of government organization, management, financial control, personnel practices, and administration.

**232 Political Parties and Elections (3)**  
The evolution of American political parties, political machines, and third parties. Campaign techniques.

**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.

**234 The Presidency (3)**  
The nature of the presidency as an institution. Presidential decision making and relations with other branches of government.
war and peace. Focus on the role of power, sovereignty, and international law on world politics.

243 Political Development and Social Change (3)
A study of the social, economic, and psychological factors that influence development and change in advanced or developing societies.

244 Comparative Public Policy (3)
The formation and implementation of social welfare policies in developed and developing nations.

301 Research Methods (3)
Basic techniques in political science research. Required for political science majors.

302 Political Psychology (3)
Psychological bases for political action.

303 Politics and Communication (3)
Propaganda and other means of political and social control.

312 Classical Political Ideas (3)
The political ideas of the classical period with emphasis on Plato and Aristotle.

313 Democratic Theory (3)
The democratic state as seen by selected theorists from antiquity to the present day.

314 Contemporary Political Ideas (3)
The competing ideologies of the 20th century with emphasis on contemporary political and social thought including Marxism and Fascism.

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

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

324 Public Policy (3)
Public bureaucracies and the policy making process.

331 Urban Politics (3)
Political processes and institutions in urban areas.

332 Political Campaigning (3)
How to campaign as a candidate or campaign aide with emphasis on the practical aspects of campaign management.

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.

342 Comparative Government and Politics: Europe (3)
The political, economic, and social policies of European governments with emphasis on the European Economic Community.

343 Comparative Government and Politics: Middle East (3)
Political, social, and economic forces in the Middle East with an emphasis on governmental structures and competing ideologies.

344 Comparative Government and Politics: Latin America (3)
Political, social, and economic forces in the region with emphasis on governmental structures and competing ideologies.

345 American Foreign Policy (3)
The basic foreign policy problems confronting the United States.

411r Advanced Topics in Political Theory (3)
Selected topics in political theory. May be repeated once.

421r Advanced Topics in Public Law and Administration (3)
Selected topics in public law and administration. May be repeated once.

431r Advanced Topics in American Institutions and Processes (3)
Selected topics in American institutions and processes. May be repeated once.

441r Advanced Topics in International Relations and Foreign Policy (3)
Selected topics in international relations and foreign policy. May be repeated once.

442r Advanced Topics in Comparative Government (3)
Selected topics in comparative government. May be repeated once.

461r, 462r, 463, 464 State Government Internship Program (3)
Internship conducted during the legislative session in governor's and legislative offices in Nashville. No more than six credit hours may apply toward the major degree requirements in the department. Prior approval of instructor.

471r Metropolitan Government Internship Program (3-6)
Internship conducted in various governmental offices in Chattanooga. No more than six credit hours may apply toward the major degree requirements in the department. Prior approval of instructor.

480 Senior Tutorial (3)
Independent research. Primarily for political science majors.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Psychology

Professor Green, Head
Professor Hood
Associate Professors Biderman, Oorth, Reid
Assistant Professors Helton, Kleiman, Ozbek, Watson, Workman, Zager

The Department of Psychology has developed a curriculum which meets the needs of a wide spectrum of interests. 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 26-27 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 C
1 approved perspectives course (3-hours)

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

### Major and related courses
All psychology majors must take either an established minor from another department, or they must take either Philosophy 348, Philosophy of Science, or one of the ethics courses, Philosophy 221, 322 or 425 as part of the major-related degree requirements. In addition, each student must select at least 3 courses from one of the areas listed below. At least 2 courses are to be selected from 200 level or above. Courses selected from these areas to fulfill the major-related degree requirements cannot be simultaneously used to meet general education requirements of the University.

The areas:
1. Biology, chemistry, physics
2. History, political science, sociology/anthropology
3. Business administration, education, human services
4. Computer science, mathematics
5. Literature*, theatre & speech, philosophy

27 hours psychology including 101
One course from two of the following:
1) Psychology 311, 312, 314
2) Psychology 308, 331, 448
3) Psychology 406, 407, 484
Both courses from one of the following:
1) Psychology 331, 431
2) Psychology 448, 410
3) Psychology 221, 421
4) Psychology 311, 411
Either Psychology 460 or 461
The same course may not be used to fulfill two different requirements
Maximum of six hours of one psychology course labeled "t" and maximum of 9 hours of all psychology courses labeled "r" will count towards the 27 hours required for the major
Recommended: courses in statistics and research methodology 2.00 average in all psychology courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

*Including non-English Department literature courses

### Typical course of study in psychology (B.A.)

**Representative Programs**
It is recognized that the particular needs and interests of individual students vary widely. The accompanying typical courses of study are not intended to indicate, with the exception of the statistics and research methods course for the B.S. program, required courses of study. They are intended to serve as a model around which a student may construct his or her own program. Indicated are the general requirements for hours, limitations upon major hours for the B.A., and general education requirements.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Psychology 201</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
</tr>
</tbody>
</table>

### General Education (see pages 26-27 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)

Health and Physical Education 021 plus one additional semester of physical education activity

### Major and related courses
All psychology majors must take either an established minor from another department, or they must take either Philosophy 348, Philosophy of Science, or one of the ethics courses, Philosophy 221, 322 or 425 as part of the major-related degree requirements. In addition, each student must select at least 3 courses from one of the areas listed below. At least 2 courses are to be selected from 200 level or above. Courses selected from these areas to fulfill the major-related degree requirements cannot be simultaneously used to meet general education requirements of the University.

The areas:
1. Biology, chemistry, physics
2. History, political science, sociology/anthropology
3. Business administration, education, human services
4. Computer sciences, mathematics
5. Literature*, theatre & speech, philosophy
98—Psychology

33 hours psychology including 101, 201, or equivalent; either 202 or 203
One course from two of the following:
1) Psychology 311, 312, 314
2) Psychology 308, 331, 448
3) Psychology 406, 407, 484

Both courses from one of the following:
1) Psychology 331, 431
2) Psychology 448, 410
3) Psychology 221, 421
4) Psychology 311, 411
Either Psychology 460 or 461

The same course may not be used to fulfill two different requirements

Maximum of 6 hours of one psychology course labeled "r" and
maximum of 9 hours of all psychology courses labeled "r" will count
towards the 33 hours required for the major

2.00 average in all psychology courses

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

• Including non-English Department literature courses.

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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Freshman</td>
<td></td>
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<tr>
<td>Psychology 101</td>
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<tr>
<td>General Education Category A</td>
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<tr>
<td>General Education Category B</td>
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<tr>
<td>Physical Education 021</td>
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</tr>
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<td>Electives</td>
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<td>Sophomore</td>
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<tr>
<td>Psychology 202 or 203</td>
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<td>Psychology</td>
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<td>General Education Category B</td>
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<td>Electives</td>
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<td>Junior</td>
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<td>Philosophy 221, 322, 348, or 425</td>
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</tr>
<tr>
<td>Electives</td>
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<td>Senior</td>
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<td>Psychology</td>
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<td>General Education Category G</td>
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<tr>
<td>Electives</td>
<td>10</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
</tr>
</tbody>
</table>
| 18 hours psychology including Psychology 101; 9 hours must be upper level.

Psychology Courses

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. May not be taken for credit if Psychology 103 has been taken previously.

199r Special Projects (1-4)
Individual or group projects. Maximum credit four hours.
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. Prerequisite: 101 or six 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. 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. Prerequisite: six 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, error of measurement, techniques of test construction, and problems in assessment and prediction. Laboratory use of selected tests. Prerequisites: six hours of psychology and an introductory statistics course.

401 Intermediate Statistics in the Behavioral Sciences (3)
Consideration of the theory and application of non-parametric and parametric measures in research design; introduction to computer utilization in the analysis of data. Prerequisite: 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. 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. Prerequisite: nine hours of psychology or permission of instructor.

410r 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. Prerequisite: 101 or equivalent; six hours of upper division psychology, including 448; and approval of the instructor.

411 Experimental Analysis of Behavior (3)
A rigorous analysis of complex behavior from the standpoint of contemporary behavioral systems. Prerequisites: six hours psychology.

412 Advanced Seminar for Psychological Processes (3)
A comprehensive review of the field as summary experience, especially for senior major students planning to enter graduate study. Prerequisite: 18 hours of psychology and senior standing, or by permission of the instructor.

421 Advanced Developmental Psychology (3)
The growth of children through high school years with special attention to research methodology and findings in relation to factors of development and the acquisition of skills; understanding the development of attitudes, habits, and personality. Prerequisites: 101 or equivalent, 221 or 222, or equivalent.

431 Advanced Social Psychology (3)
Intensive treatment of selected research areas in social psychology. Emphasis upon the interrelationship between current theoretical perspectives and appropriate methodological procedures. May be registered for as Sociology 431. Prerequisite: Psychology 331 or equivalent.
100—Sociology & Anthropology

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.

Sociology and Anthropology: General, Anthropology, Sociology, Urban Studies Concentrations (B.A.)

General Education (see pages 26-27 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)

Category C
1 approved perspectives course other than anthropology and sociology (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

Major
Completion of one of following concentrations—

1. General:
33 hours sociology and anthropology including Sociology 151, 314, 394 or 450; Anthropology 152 or 208; Anthropology 302 or Sociology 312; plus 18 hours of electives of which 9 hours are at the 300-400 level.

2. Anthropology:
33 hours sociology and anthropology including Anthropology 152 and 302; nine hours selected from Anthropology 208-209, 210-211; Sociology 314 and 394 or nine hours of approved anthropology field and laboratory courses; three additional hours of sociology; additional hours of anthropology electives to complete concentration

3. Sociology:
Mathematics F210
33 hours sociology and anthropology including Sociology 151, 312, 314, 394; Anthropology 152 or 208 plus 18 hours of electives of which 9 hours are in Sociology at the 300-400 level.

4. Urban studies:
33 hours sociology and anthropology including Sociology 151, 314, 394 or 450; Anthropology 152 or 208; Anthropology 302 or Sociology 312; plus 18 hours of electives of which 9 hours are at the 300-400 level.

Sociology 312; plus 18 hours of electives of which 9 hours are at the 300-400 level (6 of the 18 hours must be selected from Sociology 209, 317, 318, 345, 400r, 415, 455r)
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
2.00 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

First Semester Second Semester
Freshman
General Education Category A 3  General Education Category A 3
Language 101 3-4  Language 102 3-4
Anthropology 152 3  Anthropology 208 or 209 3-4
General Elective 3  General Elective 3
General Education Category C 3  General Education Category C 3
Physical Education 021 1  Physical Education Activity 1
16-17 16-18

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

Junior
Anthropology 366r* 3-6  Anthropology 302 3
Anthropology Elective* 3  Anthropology Elective* 3
Social Science Elective 3  Social Science Elective 3
General Electives 7  Sociology Elective 3
General Electives 4  General Electives 4
16 16

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

*Sociology 314 and 394 may be taken in lieu of nine hours of anthropological field and laboratory courses. Anthropology 335 offered in summer school (6 hours).

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

First Semester Second Semester
Freshman
Sociology or 151 3  Anthropology 152 or 208 3
General Education Category A 3  General Education Category A 3
Language 4  Language 4
General Education Category B 3  General Education Category B 3
Social Science Elective 3  Social Science Elective 3
Physical Education 021 1  Physical Education Activity 1
17 17
Sociology and Anthropology:
Anthropology, Sociology, Urban Studies Concentrations (B.S.)

General Education (see pages 26-27 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 C
1 approved perspectives course other than anthropology and sociology (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity.

Major and related courses
Computer Science 210
English through 102; and one course in written communication above the 100 level
Completion of one of following concentrations—

1. Anthropology:
33 hours of sociology and anthropology including Anthropology 152 and 302; nine hours selected from Anthropology 208 and 209, 210 and 211; Sociology 314 and 394 or nine hours of approved anthropology field and laboratory courses; three 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 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 electives of which 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, 317, 318, 345, 400, 415, 456)
18 hours additional from Economics 306,455; Geography 415; Human Services 301; Political Science C101,233,323,331,401 r or 421r (when appropriate to urban studies), 461r, 462r, 463,464,471r; Psychology 316, 331, 421, 431, 456r
2.00 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 and anthropology (B.S.): anthropology concentration

First Semester Second Semester

Freshman
General Education Category A 3 General Education Category A 3
Anthropology 152 3 Anthropology 208 3
General Education Category C 3 General Education Category C 3
Physical Education 021 3 Physical Education Activity 1
Mathematics 135 3 Mathematics F136 3
General Elective 3 General Elective 3

Sophomore
General Education Category D 4 Anthropology 209 or 210 3-4
Anthropology 210 or 211 3 General Education Category B 3
Computer Science 210 3 Humanities 3
General Education Category B 3 General Education Category G 3
Fine Arts Elective 3 General Electives 4
General Elective 3 General Electives 3

Senior
Anthropology 366r* 3 Anthropology 302 3
Mathematics F210 3 Anthropology Elective* 3
Anthropology Elective* 3 Sociology Elective 3
Social Science Elective 3 General Electives 9
General Electives 3 General Electives 3

Junior
Anthropology 499r 4 Humanities or
General Education Category B 3 Fine Arts 3
General Electives 9 Anthropology Elective 2
Social Science Elective 3 General Electives 9

Senior
Anthropology 499r 4 Humanities or
General Education Category B 3 Fine Arts 3
General Electives 9 Anthropology Elective 2
Social Science Elective 3 General Electives 9

•Sociology 314 and 394 may be taken in lieu of nine hours of anthropology field and laboratory courses. Anthropology 335 offered in summer school (6 hours).

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

First Semester Second Semester

Freshman
Sociology 151 Anthropology 152 or 208
### 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.

#### 199r Special Projects (1-4)

#### 209 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.

#### 209 Physical Anthropology (4)
The origins and relationships of extinct and present forms of humankind 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. Lecture three hours, laboratory two hours.

#### 210 Language and Its Structure (3)
A first course in the nature of language and the analysis of linguistic structures with special reference to the structures of non-Western languages.

#### 302 Anthropological Theory (3)
A systematic survey of the development of major theories in anthropology with particular attention to theories of culture. **Prerequisite: three hours of anthropology.**

#### 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.

#### 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.

#### 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. Prerequisite: three hours of anthropology 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. **Prerequisite: approval of 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.

#### 356 Archaeological Collections (3)
Principles of organization, analysis, and interpretation of prehistoric and historic archaeological materials. Techniques of preservation and presentation. Two hours lecture, two hours laboratory. **Prerequisite: approval of instructor.**

#### 366r Communications Laboratory (3)
Laboratory methods and field techniques of research in human and animal communication. Individual or group projects. **Prerequisite: approval of instructor.**

#### 410 Culture and Personality (3)
The influence of cultural patterns upon the development of personality; materials from simple and complex societies; national and tribal character, and relevant theoretical viewpoints. **Prerequisites: three hours of sociology, anthropology, or psychology or approval of instructor.**

#### 411 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.

#### 425r Comparative Social Institutions (3)
The application of the comparative method in the analysis of sociocultural systems. Topics specified each semester. **Prerequisite: three hours of behavioral science or approval of instructor.**

#### 495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

#### 497r Research (1-4)

#### 498r Individual Studies (1-4)

#### 499r Group Studies (1-4)

### Sociology Courses

#### 125 Social and Cultural Perspectives (3)
What sociologists and anthropologists do and how they think; significant contemporary works and their applications; assumptions and perspectives in dealing with data, methods, and theory. May not be taken subsequent to Sociology 151. Not recommended for sociology majors.
151 Principles of Sociological Analysis (3)
Scientific study of human society and 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.

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

215 The Sociology of the Family (3)
The study of modern marriage and family institutions from sociological and social psychological perspectives; the social regulation of mate selection, kinship relationships and sexual behavior; evaluations of research findings and emerging trends.

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.

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.

250 Social Statistics (3)
Basic statistical techniques such as frequency distributions and graphs, the normal curve, tests of significance, correlation, simple analysis of variance, and applications to socio-cultural data and their interpretation. Prerequisite: approved computer science 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. Prerequisites: three hours of behavioral science.

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. Prerequisites: Sociology 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. Prerequisite: Sociology 151, or Anthropology 152 or 208, or approval of instructor.

317 Organizational Behavior (3)
Structure of social relationships in organizational life: common patterns in development and operation of bureaucratic systems and their impact upon personal values and individual behavior applications in modern education, industry, government, and institutional life. Prerequisites: three hours of behavioral science.

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. Prerequisites: three hours of behavioral science.

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. Prerequisite: three hours of sociology or approval of instructor.

321 Criminology (3)
The nature of crime, criminal statistics, causal factors, theories and procedures in prevention and treatment. Prerequisite: three hours of sociology or approval of instructor.

322 Juvenile Delinquency (3)
The nature of juvenile delinquency; factors contributing to delinquency; methods of diagnosis and treatment of delinquent behavior; prevention of delinquency. Prerequisite: three hours of sociology 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. Prerequisite: three hours of sociology or approval of instructor.

331 Social Psychology (3)
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. Prerequisite: three hours of behavioral science.

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. Prerequisite: three hours of behavioral science.

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. Prerequisite: three hours of behavioral science.

365 Sociology of Medicine and 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. Prerequisite: three hours of behavioral science.

391 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.

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. Prerequisites: Sociology 314; Mathematics 210 or Sociology 250 is required for all majors in the sociology concentration under the B.A. degree and for all taking the B.S. degree.

400r Urban Studies (3)
Topics in the analysis of urban structures, the content of urban cultures, and problems; the urbanization process; comparative studies of urban communities. Prerequisite: three hours of behavioral science or approval of instructor.

415 Urban Geography: Urban Land Development and Redevelopment (3)
See Geography 415.

422 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:
104—Theatre & Speech

three hours of behavioral science, philosophy or religion, or approval of instructor.

430 Dynamics of Intergroup Relations (3)
An advanced course in minority relationships focusing on social psychological aspects of prejudice and discrimination; analysis of the effects of strategies or movements aimed at change and unplanned consequences of shifting social, economic, or power relationships. Prerequisite: 305 or approval of instructor.

431 Advanced Social Psychology (3)
See Psychology 431.

440 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. Prerequisite: three hours of sociology or anthropology or approval of instructor.

450 Seminar in Socio-Cultural Theory (3)
Directed individual study in selected areas; reports, discussion, and emphasis on insights into major socio-cultural phenomena. Prerequisites: Anthropology 302 and Sociology 312 or approval of instructor.

455r Symposium on Urban Issues (3)
Participants responsible for conducting an in-depth analysis of some urban issue. Organization of a University-wide symposium to share the results. Participants in the symposium required to submit a paper from their work to be considered for inclusion in the symposium and to help in the implementation of the symposium. Prerequisite: approval of instructor.

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

495r Departmental Honors (1-3) See "Departmental Honors," page 32.

497r Research (1-4) Primarily for seniors. Prerequisite: permission under faculty direction.

498r Individual Studies (1-4)

499r Croup Studies (1-4) See Foreign Languages and literatures, page 65.

Spanish
See Foreign Languages and literatures, page 65.

Theatre and Speech

Associate Professor Behringer, Head
Associate Professor Wiley
Assistant Professors Lewis, Smotherman

Theatre and Speech (B.A.)

General Education (see pages 26-27 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 F
1 approved mathematics course (3 hours)

Category C
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

Major and related courses
42 hours Theatre and Speech including Theatre and Speech 101, 102, 105, 107
6 hours theatre history: 211, 212
6 hours acting: 227, 327
Art. 101
3 hours of design in the theatre: 333
6 hours of performance and production (under special circumstances, with permission of department head, 2 hours may be taken concurrently)
9 hours approved theatre and speech electives at 300 and 400 level
Minimum of 30 hours of 300 and 400 level courses

Elettes to complete 128 hours
typical course of study in theatre and speech (B.A.)

First Semester

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Second Semester

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Sophomore

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<td>Art. 101</td>
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Junior

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Senior

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Minor

Theatre:
21 hours including Theatre and Speech 101, 105 or 111 or 115, 211 or 212, and 227; 3 semesters of 200r or 400r; 6 hours of approved Theatre and Speech courses at the 300 level or above.
Theatre and Speech Courses

101 Theatre Theory and Practice: Scenery and Lighting (3)
Understanding of traditional forms and types of drama combined with the application of modern techniques of scenery and lighting to the production of University Theatre plays.

102 Theatre Theory and Practice: Costumes (3)
Relationship of the forms and types of dramatic art to theatrical costume; application of contemporary costuming techniques to University Theatre productions.

105 Play Analysis (3)
Nature of drama and theatre with emphasis upon analysis of playscript as basis for performance and creation of theatrical images.

107 Voice and Diction (3)
Systematic training of the speaking voice for controlled articulation, volume, and tone in interpersonal communication.

108 Oral Interpretation (3)
Systematic teaching of the principles and skills of effective oral reading with a continuing study of voice and diction.

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

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.

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.

198r Special Projects (1-4)
Individual or group projects. Maximum credit four 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. 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.

211 The Theatre to 1700 (3)
History of the theatre as an art and as an institution from its beginnings through the 17th century. Prerequisite: Theatre and Speech 105 or permission of instructor.

212 The Theatre from 1700 to the Present (3)
History of the theatrical arts in their social setting from the 18th century to the contemporary period. Prerequisite: Theatre and Speech 105 or permission of instructor.

215 Stage Lighting: Technology and Design (3)
Organization and responsibilities of the stage lighting crew, basic electricity, lighting instruments and optics; control and memory systems. Elements of lighting design and color theory; rehearsal and performance procedures.

227 Fundamentals of Acting (3)
Exercise in traditional and contemporary techniques of theatre speech, movement and gesture, character and scene analysis; emphasis upon ensemble acting. Prerequisite: 105.

280 Introduction to Film (3)
The history and language of motion pictures studied by viewing and analyzing selected film masterpieces.

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.

309 Contemporary Public Speech Communication: Concepts and Cases (3)
Study of rhetorical principles employed in addresses by contemporary leaders concerning significant current questions: practice in the application of rhetorical principles in speeches and oral reports.

311 Comedy (3)
Types of comedy, farce, satire, and related forms examined in theoretical studies and representative works. Emphasis on theatrical techniques of communicating the comic vision to the audience.

313 History of Costume (3)
Study of wearing apparel, principally in the western world from ancient Egypt to the present with a particular emphasis on clothing as a reflection of the cultural milieu.

317 Directing (3)
Close study of the basic elements of play direction and composition; staging or writing of a short play.

320 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.

327 Advanced Acting (3)
Continued development of vocal technique, movement, and character study through improvisation, selfexploration, and textual analysis. Emphasis on scene work drawn from the modern realist repertory. Prerequisite: 227 and permission of instructor.

333 Scene Design (3)
Introduction to the basic techniques and methods of modern scene design and graphics in interpretation of representative examples of dramatic literature. Prerequisites: 101, 105; Art 101; and permission of instructor.

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

400r Performance and Production (1)
Upper division laboratory course in all aspects of theatre performance and production. Projects assigned in departmental productions and workshops. Prerequisite: two semesters of 200r and permission of department head. Graded by faculty jury. May be repeated for credit.

412 Theatre for Youth (3)
All phases of producing plays for or by junior audiences examined, including the techniques of creative dramatics.

485 Film Topics (3)
Directors, genres, styles, or theories of film studied by viewing and analyzing representative films.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See “Departmental Honors,” page 32.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

University Studies
See Interdisciplinary Studies, page 77.
Brock Scholars are those students who have been awarded membership in the University's four-year honors program. The following University Honors courses are required of and restricted to Brock Scholars.

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. Satisfy general education requirement of Category A and Category B.

103, 104 Fine Arts I & II (3, 3)
Studies in the fine arts from antiquity to the present with attention to relevant aesthetic theory. Emphasis on major works of music and the visual arts. Museum visits and attendance at performances required.

105 Critical Introduction to the Social Sciences (3)
The theoretical nature and meaning of central concepts and procedures. Emphasis on underlying implications, commonalities, and differences between disciplines of economics, politics, psychology, and sociology.

106 Critical Case Studies in the Social Sciences (3)
A critical application of theoretical critiques to selected case studies in economics, politics, psychology, and sociology. Broad and intensive analysis of such research areas as mental health, racial differences, propaganda, social planning, etc., in terms of implications of the commitments and data claims of the different social sciences. Prerequisite: 105.

107, 108 Science and Technology (4,4)
Selected topics and experiments in science and technology designed to illustrate the methods, purposes, philosophical foundation, and implications of scientific and technological research. Consideration of societal influences and restraints upon and cultural impact of science and technology. Seminar and lecture three hours, laboratory two hours. Prerequisite: admission to the UTC Honors Program.

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 environment, to effectively develop 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
- Marketing
- Office Management
- Secretarial Science

The school is organized into five departments, Accounting and Finance, Economics, Management, Marketing, and Office Administration/Business Education. 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, Marketing, Office Management, and Secretarial Science; Bachelor of Science with a major in Economics; and Master of Business Administration.

The design of the B.S. degree programs enables the graduate to move directly into the M.B.A. program with advanced status, thereby significantly shortening his or her M.B.A. program requirements.

The Bachelor of Science with a major in Business Administration is 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 Moon, Head
Professors Duke, Fulmer, Hale
Associate Professors Gavin, Griffin, McLaurin, Willis
Assistant Professors Abraham, Fletcher, Soroosh, Stewart, Walker

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 26-27 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 C
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity.

Major and related courses
Six hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135, F136
Computer Science 210
One course from English 277, 300, 410, or Office Administration 219
(minimum of 8 hours in written communication including required courses in Category A)
37 hours common body of knowledge in the School of Business Administration including: Accounting 201, 202; Economics 101, 102; Finance 302; Management 211, 212, 311, 315, 440, 441; Marketing 313, 395

Accounting concentration:
Computer Science 123
18 hours from the School of Business Administration including: Accounting 303, 304, 305, 307, 405; Management 356
15 hours: 9-12 hours chosen from Accounting 306, 309, 401, 406, 407, 408, 409; 3-6 hours chosen from Finance 321, 322, 403; Marketing 336; Economics 301, 429
2.00 average in all accounting courses

A minimum of 54 hours of the 128 total must be taken at the 300-400 level
Electives to complete 128 hours
Maximum of 72 hours total accepted in School of Business Administration

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>
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<tr>
<td>Economics 101</td>
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<tr>
<td>Mathematics 135&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
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<td>General Education Categories&lt;sup&gt;2&lt;/sup&gt;</td>
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Second Semester

<table>
<thead>
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<tr>
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<td>Computer Science 210</td>
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Sophomore

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<tr>
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Third Semester

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<td>B Finance 302</td>
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<td>B Management 311</td>
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<tr>
<td>B Marketing 313</td>
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Fourth Semester

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<tr>
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<tr>
<td>B Accounting 309</td>
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<tr>
<td>B Accounting 401</td>
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</tr>
<tr>
<td>B Accounting 406</td>
<td>3</td>
</tr>
<tr>
<td>B Accounting 407</td>
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<tr>
<td>B Accounting 408</td>
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<tr>
<td>B Accounting 409</td>
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<td>Electives</td>
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Accounting Electives (9-12 Hours):

<table>
<thead>
<tr>
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<tbody>
<tr>
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<tr>
<td>B Accounting 309</td>
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<tr>
<td>B Accounting 401</td>
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<tr>
<td>B Accounting 406</td>
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</tr>
<tr>
<td>B Accounting 407</td>
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<tr>
<td>B Accounting 408</td>
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<tr>
<td>B Accounting 409</td>
<td>3</td>
</tr>
<tr>
<td>B Finance, B Management, B Marketing, Economics Electives (3-6 Hours):</td>
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</tr>
<tr>
<td>B Finance 321</td>
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</tr>
<tr>
<td>B Finance 322</td>
<td>3</td>
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<td>B Marketing 336</td>
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<td>B Finance 403</td>
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<td>Economics 301</td>
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<tr>
<td>Economics 429</td>
<td>3</td>
</tr>
</tbody>
</table>

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

1<sup>st</sup> exempted, student may take Mathematics F136.
2Six hours must be selected from Political Science C101, Psychology C101, or Sociology C151.

Business Administration (B.S.): Finance concentration

General Education (see pages 26-27 for list of approved courses)

Category A
2 approved courses in written communication in the English language (6 hours)
## Major and related courses

Six hours selected from Political Science C101, Psychology C101, or Sociology C151.

Mathematics 135, F136

Computer Science 210

One course from English 277, 300, 410, or Office Administration 219 (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; Economics 101, 102; Finance 302; Management 211, 212, 311, 315, 440, 441; Marketing, 313, 335

Finance concentration:

12 hours including Finance 321, 322, 422, 423
6 hours including Economics 325, 429
3 hours chosen from Finance 284, 337
9 additional hours chosen from Accounting 305; Finance 284, 337, 403, 424; Marketing 336; Management 356; Economics 304, 306

2.00 average in all finance courses

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

Electives to complete 128 hours

Maximum of 72 hours accepted in the School of Business Administration

## 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.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>Second Semester</strong></td>
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<tr>
<td>Economics 101</td>
<td>Economics 102</td>
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<tr>
<td>Mathematics 135</td>
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<td>General Education Categories</td>
<td>General Education and Electives</td>
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<td>[3-6]</td>
<td>[3-6]</td>
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<tr>
<td><strong>13-16</strong></td>
<td><strong>16-19</strong></td>
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<tr>
<td><strong>Sophomore</strong></td>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>B Accounting 201</td>
<td>B Accounting 202</td>
</tr>
<tr>
<td>B Management 211</td>
<td>B Management 212</td>
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<td>General Education Category D</td>
<td>English 277, 300, 410, or Office Administration 219</td>
</tr>
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<td>General Education Categories</td>
<td>General Education and Electives</td>
</tr>
<tr>
<td>[3-9]</td>
<td>[6-9]</td>
</tr>
<tr>
<td><strong>13-19</strong></td>
<td><strong>15-18</strong></td>
</tr>
</tbody>
</table>

### Accounting Courses

#### 201, 202 Principles of Accounting (3,3)

Accounting principles underlying the balance sheet and the income statement as they apply to proprietorships, partnerships, and corporations. **201 is prerequisite to 202.**

#### 303 Intermediate Accounting (3)

The theoretical foundations and structure of accounting as they relate to the presentation of financial statements. Emphasis is on current generally accepted accounting principles. **Prerequisites: 202, Management 211.**

#### 304 Intermediate Accounting (3)

A continuation of the theoretical foundations and structure of accounting as they relate to the presentation of financial statements. Emphasis is on current generally accepted accounting principles. **Prerequisites: 303, Management 212.**

#### 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. **Prerequisite: 202.**

#### 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. **Prerequisite: 202.**

#### 307 Federal Tax Accounting (3)

Fundamentals of federal income tax with major emphasis upon tax law and regulations applicable to individuals. **Prerequisite: 202.**

#### 309 Advanced Tax Accounting (3)

Continuation of 307 with attention given to the study of the federal income tax problem areas of various accounting and legal entities. **Prerequisite: 307.**

#### 401 Advanced Accounting (3)

Accounting for partnerships, consignments, insurance, installment sales, receivership, branches, estates and trusts, and public accounts. Application of accounting principles to consolidations. **Prerequisite: 304.**
405 Auditing (3)
Kinds of audits, systems of accounts, and methods of conducting audits. Preparation of working papers and reports. Prerequisite: 304.

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. Prerequisites: 305; Finance 302; Management 356; Computer Science 123.

407 Governmental Accounting (3)
Accounting systems of institutions and various governmental units. Fund transactions, revenues and expenditures, appropriations, and form and content reports. Prerequisite: senior standing or permission of instructor.

408 Accounting Information Systems (3)
Review of the strategies, goals, and methodologies available for designing, installing, and evaluating accounting information systems. Prerequisites: 304, 305; Computer Science 123; Management 356.

409 Accounting Problems (3)
Advanced accounting problems including areas covered by the C.P.A. examination. Prerequisite: 405.

459r Business Intern Program (3)
Opportunity to integrate and apply specialized disciplinary skills to practical business problems of company-wide scope. Student interns are assigned as consultants to assist businesses under supervision of a faculty member. Prerequisites: completion of Finance 302; Management 311, 315; and Marketing 313. A maximum of six hours credit in any internship courses (Accounting 459r, Finance 459r, Management 459r, Marketing 459r, Office Administration 350) may be taken within the School of Business Administration.

495r Departmental Honors (1-3 terms) See "Departmental Honors," page 32.

497r Research (1-3)

498r Individual Studies (1-3)

499r Group Studies (1-3)

Finance Courses

281 Real Estate Fundamentals (3)

282 Real Estate Law (3)
Acquisition and transfer of property; rights of adjoining owners; mortgages and liens; abstracts of title; recording; drafting of deeds; leases, options, and other legal aspects of property.

283 Real Estate Appraisal (3)
The fundamentals of appraising various types of real estate; the concept of value; the influence of architecture and construction; depreciation; analysis of city and neighborhood; different approaches to real estate property valuation.

284 Real Estate Finance (3)
Elements of mortgage finance; source of mortgage funds; construction loans; interest rates; servicing mortgages; V.A., F.H.A., conventional, and other loans.

301 Personal Finance (3)
Designed to help the individual and family make intelligent, informed decisions on personal financial management.

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. Prerequisites: Accounting 202; Economics 101, 102; Management 212; junior standing.

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. Prerequisites: Accounting 202; Economics 101,102; Finance 302; junior standing.

322 Commercial Banking (3)
A course designed to introduce the student to the decisions facing a commercial banker. Topics covered include banking history, role of money in the economy, the commercial banking system, Federal reserve rules, regulations and monetary management, and special topics such as credit analysis, installment lending, management of a bank’s cash balances, loan policy, and money management services. Prerequisites: Accounting 202; Economics 101, 102.

337 Principles of Insurance (3)
Types of insurance, insurance coverage, policy protection, and company organization and regulation. Prerequisites: Economics 101, 102.

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. Prerequisites: 302, Accounting 202, senior standing, and permission of instructor.

422 Financial Institutions (3)
Capital markets and institutions; sources and uses of capital funds; impact of changes in flow of funds on the economy. Prerequisites: Accounting 202; Economics 101, 102; senior standing or permission of instructor.

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 302 using the case discussion approach. Prerequisite: 302.

424 Theory of Finance
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. Prerequisites: 302, 321.

459r Business Intern Program
Opportunity to integrate and apply specialized disciplinary skills to practical business problems of company-wide scope. Student interns are assigned as consultants to assist businesses under supervision of a faculty member. Prerequisites: completion of Finance 302, Management 311, 315, and Marketing 313. A maximum of six hours credit in any internship courses (Accounting 459r, Finance 459r, Management 459r, Marketing 459r, Office Administration 350) may be taken within the School of Business Administration.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms) See "Departmental Honors," page 32.

497r Research (1-3)

498r Individual Studies (1-3)

499r Group Studies (1-3)

Economics

Professor Keillany, Head
Professors Armstrong, Peterson
Associate Professors Giffin, Pratt, Rabin
Assistant Professors Hutchinson, Taluy, White
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 26-27 for list of approved courses)

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

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

**Category C**
2 approved behavioral or social science courses other than economics (6 hours)

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

**Category F**
1 approved mathematics course (3 hours; approved related courses below will apply)

**Category C**
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Foreign language through second college year

**Major**
Management 211 and 212 or Mathematics F210
24 hours economics including 101, 102, and electives
2.00 average in all economics courses

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Maximum of 72 hours accepted in School of Business Administration with maximum of 42 hours in economics

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

<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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<td>General Education</td>
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<td>13-17</td>
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<tr>
<td><strong>Sophomore</strong></td>
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</tr>
<tr>
<td>Mathematics F210 or B Management 211</td>
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<tr>
<td>Foreign Language</td>
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<tr>
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<tr>
<td>Electives</td>
<td>12-18</td>
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</tbody>
</table>

*Prerequisite to Management 211 is Mathematics 135, and prerequisite to Management 212 is Mathematics F136.

**Economics (B.S.)**

**General Education** (see pages 26-27 for list of approved courses)

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

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

**Category C**
2 approved behavioral or social science courses other than economics (6 hours)

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

**Category F**
1 approved mathematics course (3 hours; approved related courses below will apply)

**Category C**
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**
Mathematics 135 and F136 or Mathematics F145 and Mathematics F150
Accounting 201
Management 211 and 212
Computer Science 210
15 hours core courses including Economics 101, 102, 301, 324, 325
15 hours from the following: Economics 304,306,317,425,426,429,444, 450, 453, 455, 460, 465, 470, 480, 498r, 499r; Accounting 202; Finance 302 (other courses may be substituted with approval of department)
2.00 average in all economics courses

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Maximum of 72 hours accepted in School of Business Administration

**Typical course of study in economics (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>Economics 101</td>
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<td>Electives</td>
<td>12-18</td>
</tr>
</tbody>
</table>

*Prerequisite to Management 211 is Mathematics 135, and prerequisite to Management 212 is Mathematics F136.*
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.

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.

199r Special Projects (1-3)
Individual or group projects. Maximum credit three 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. Prerequisites: 101, 102.

304 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 policies. Prerequisites: 101, 102.

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

317 Labor Economics and the Labor Process (3)
Wage and employment theories, labor law, and history of the labor movement. 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. 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. Prerequisites: 101, 102.

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

426 Comparative Economic Systems (3)
Communism in Russia, socialism in England, and capitalism in the United States; fascism and other economic systems. Prerequisites: 101, 102, or graduate standing.

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

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. Prerequisites: 101, 102, or graduate standing.

450 Marxian Political Economy (3)
An introduction to Marxian thought in general and Marxian economic theory in particular. Marxian analysis of theories of value and distribution, including modern radical economics. Prerequisites: 101, 102.

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. 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. 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. Prerequisites: Management 212; Economics 101, 102, or equivalent.

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

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.

480 Philosophy of Enterprise (3)
Course seeks out the philosophical roots and bases of the capitalistic order, examines the derivation of entrepreneurship, private property, limited government and the market system, and weighs economic public policy in terms of cost-benefit criteria. Prerequisites: 101, 102, or equivalents.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See “Departmental Honors,” page 32.

497r Research (1-3)

498r Individual Studies (1-3)

499r Group Studies (1-3)

Management

Professor Ettkin, Head
Professors Cook, Cudd, Geraghty, Hammer, Lingaraj
Associate Professors Ahmadi, Macomber
Assistant Professors Moll, Raiszadeh, White

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 general management or industrial management.
Business Administration (B.S.): General Management concentration

General Education (see pages 26-27 for list of approved courses)

Category A
2 approved courses in written communication in the English language (6 hours; approved related courses below will apply)

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)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
Six hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135, F136
Computer Science 210

One course from English 277, 300, 410, or Office Administration 219
(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; Economics 101, 102; Finance 302; Management 211, 212, 311, 315, 440, 441; Marketing 313, 335

General management concentration:
15 hours including Management 330, 332, 356, 434; Economics 301
9 hours chosen from Management 410, 435, 438, 454, 456, 459r, 460
2.00 average in all management courses

A minimum of 54 hours of the total 128 must be taken at the 300-400 level
Electives to complete 128 hours
Maximum of 72 hours total accepted in School of Business Administration

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.

First Semester

<table>
<thead>
<tr>
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<td>Mathematics 135</td>
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</tr>
<tr>
<td>Physical Education 021</td>
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Second Semester

<table>
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<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Mathematics F136</td>
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<td>General Education Category A</td>
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</tr>
<tr>
<td>Computer Science 210</td>
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<td>Physical Education Activity</td>
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<td>General Education and Electives</td>
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13-16

16-19

Sophomore

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<tr>
<td>B Management 211</td>
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<tr>
<td>General Education Category D</td>
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<td>General Education Categories</td>
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13-19

15-18

Junior

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<th>Course</th>
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<td>Economics 301</td>
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<tr>
<td>B Management 330</td>
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<tr>
<td>B Management 332</td>
<td>3</td>
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<tr>
<td>B Management 335</td>
<td>3</td>
</tr>
<tr>
<td>B Marketing 313</td>
<td>3</td>
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</tbody>
</table>

Electives | 3-9

15-18

Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tr>
<td>B Management 434</td>
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<tr>
<td>General Management</td>
<td>1</td>
</tr>
<tr>
<td>Electives</td>
<td>3-9</td>
</tr>
</tbody>
</table>

12-18

13-19

General Management Electives (any 9 hours):
B Management 410          | 3     |
B Management 435          | 3     |
B Management 438          | 3     |
B Management 454          | 3     |

A minimum of 54 hours of the total 128 must be taken at the 300-400 level if exempted, student may take Mathematics F136.
Six hours must be selected from Political Science C101, Psychology C101, or Sociology C151.

Business Administration (B.S.):
Industrial Management concentration

General Education (see pages 26-27 for list of approved courses)

Category A
2 approved courses in written communication in the English language (6 hours; approved related courses below will apply)

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)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
Six hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135, F136
Computer Science 210
One course from English 277, 300, 410, or Office Administration 219
(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; Economics 101,102;
Finance 302; Management 211, 212,311,315,440,441; Marketing 313,
335

Industrial management concentration:
18 hours including Accounting 305; Management 356, 451, 452, 460;
Engineering 458
9 hours chosen from Management 332,410,434,435,454,456; Marketing
319; Economics 429; Engineering 452, 454, 455, 457
2.00 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 72 hours total accepted in School of Business Administra-
tion

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 | Second Semester
---|---
**Freshman**
Economics 101 | Economics 102
Mathematics 135 | Mathematics F136
General Education Category A | General Education Category A
Physical Education 021 | Computer Science 210
General Education Categories | Physical Education Activity
3-6 | General Education and
Electives | 3-6
13-16 | 16-19

**Sophomore**
B Accounting 201 | B Accounting 202
B Management 211 | B Management 212
General Education Category D | Office Administration 219
General Education Categories | or Equivalent
3-9 | General Education and
Electives | 3-6
13-19 | 15-18

**Junior**
B Finance 302 | B Accounting 305
B Management 311 | B Marketing 335
B Management 315 | B Management 356
B Marketing 313 | Electives
Electives | 6-9
3-6 | 15-18

**Senior**
Engineering 458 | B Management 440
B Management 451 | B Management 441
B Management 460 | B Management 452
Industrial Management | Industrial Management
Elective | Elective
Elective | 3-6
15-18 | 13-19

**Industrial Management Electives (any 9 hours):**
Economics 429 | B Management 410
Engineering 452 | B Management 434
Engineering 454 | B Management 435

**Management Courses**

103 Introduction to Business (3)
General characteristics of business enterprise and business terminology. junior and senior majors in business administration will not receive
credit for the course.

211 Statistical Methods for Business I (3)
Basic concepts of descriptive and inferential statistics including
frequency, probability, sampling distributions, estimation theory, and
introduction to hypothesis testing. Emphasis on business applications.
Prerequisite: Mathematics 135.

212 Statistical Methods for Business II (3)
Probability and statistical inference with emphasis on decision-making
in business. Computer application of statistical analysis. Prerequisites:
211; Mathematics 136.

311 Operations Management (3)
An introduction to the design, operation, and control of a product or
service oriented environment. Major emphasis is placed on the
following decision tools and models: forecasting, linear programming,
simulation, quality control, inventory control, network analysis, job
design, and standards. Prerequisites: 212; 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. Prerequisite: junior
standing.

330 Concepts in Organizational Behavior (3)
An examination of theory and research dealing with the behavior of
organizations with primary emphasis on individual and group behavior.
Topics covered include motivation, communication, group dynamics,
leadership, and change. Prerequisite: 315.

332 Personnel Management (3)
Principles and practices involved in the effective administration of
personnel. Prerequisite: 315.

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. Prerequisite: 311.

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. Prerequisite: 212.

410 Industrial Relations (3)
Union-management relations including the legal framework, the
techniques and practices used, and a bargaining simulation. Prerequisites:
332, senior standing.

434 Problems in Personnel Management (3)
A case course in human relations dealing with problems drawn from
actual business experience. Prerequisite: 332.
114—Marketing

435 Wage and Salary Administration (3)
Job evaluation using both quantitative and nonquantitative methods.
Control of wages and salaries. Wage incentive principles and systems.
Actual application of job evaluation techniques. Prerequisites: 315,
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. Prerequisite: 315, 315; senior standing, Finance 302; Marketing
313. May not be used for graduate credit.

440 Business Policy (3)
An integrating course using cases for management decision-making and
management simulation. A culminating educational experience for the
senior. Prerequisites: 311, 315; senior standing, Finance 302; Marketing
313. 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. Course
graded on a pass-fail basis. Prerequisite: senior standing.

451 Production Planning and Control (3)
A study of the principles and practices of production; planning and
control covering objectives, policies, and techniques. The planning and
control of production in a variety of manufacturing systems is examined.
Prerequisite: 311 or permission of instructor.

452 Problems in Production (3)
A case course designed to show the relationship of production problems
to other functions of business such as finance, personnel, and
marketing. Prerequisites: 311, Finance 302, senior standing 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.
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.
Prerequisites: 311, Finance 302, Marketing 313, or permission of
instructor.

459r Business Intern Program (3)
Opportunity to integrate and apply specialized disciplinary skills to
practical business problems of company-wide scope. Student interns are
assigned as consultants to assist businesses under supervision of a faculty
member. Prerequisites: completion of 311, 315; Finance 302; Marketing
313 and permission of instructor. Maximum credit six hours in any
internship courses (Accounting 459r, Finance 459r, Management 459r,
Marketing 459r, Office Administration 350) may be taken within the
School of Business Administration.

460 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; societal issues. Prerequisites: 311, Accounting 202,
Computer Science 210.

495r Department Honors (1-3 hours per terms, 4 hours for the two terms)
See "Departmental Honors," page 32.

497 Research (1-3)

498r Individual Studies (1-3)

499r Group Studies (1-3)

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**Marketing**

Professor Reid, Head
Associate Professor Casavant
Assistant Professors Reagan, Williams

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 26-27 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)

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**
Six hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135, F136
Computer Science 210
One course from English 277, 300, 410, or Office Administration 219
(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; Economics 101,102;
Finance 302; Management 211, 212,311,315,440,441; Marketing 313,
335

**Marketing concentration:**
18 hours including Management 356; Marketing 365, either 361* or 362*,
450, 461; Economics 425
6 hours chosen from Marketing 318, 319, 361, 362, 363, 364, 415, 417
2.00 average in all marketing courses
A minimum of 54 hours of the 128 total must be taken at the 300-400
level
Electives to complete 128 hours
Maximum of 72 hours total accepted in School of Business Administra-
tion

Either 361 or 362 is required. The course not chosen to meet this
requirement may be taken as an elective.

**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>
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<tbody>
<tr>
<td>Economics 101</td>
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<td>Mathematics F136</td>
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<td>General Education Category A</td>
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<td>Physical Education 021</td>
<td>Computer Science 210</td>
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<td>General Education and Electives</td>
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<tbody>
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<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>Office Administration 219</td>
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<td>General Education Categories</td>
<td>or Equivalent</td>
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<td>General Education and Electives</td>
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<td>B Management 356</td>
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<td>B Marketing 335</td>
<td>B Marketing 361 or 3621</td>
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<td>B Marketing 313</td>
<td>B Marketing 365</td>
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<td>B Management 441</td>
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<td>12-18</td>
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</tbody>
</table>

**Marketing Electives (any 6 hours):**

- B Marketing 319
- B Accounting 364
- B Marketing 361
- B Marketing 415
- B Marketing 362
- B Marketing 417
- B Marketing 363

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

*If exempted, student may take Mathematics F136.

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

*Either Marketing 361 or 362 is required. The course not chosen to meet 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. **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. **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 point to consumer. **Prerequisite:** 313.

#### 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.

#### 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.

#### 355 Fundamentals of Purchasing (3)

The role of purchasing and materials management in modern business organizations; planning, policies, procedures, and control of purchasing operations; inventories and their control; buying for institutions and government purchasing. **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. **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. **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. **Prerequisite:** 313.

#### 364 Retailing (3)

Organizing, financing, staffing, and operating retail institutions. **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. **Prerequisites:** 313, junior standing.

#### 415 Industrial Marketing (3)

Determination of market opportunity; planning of marketing effort; industrial product pricing; financing; managing the industrial sales force; legal aspects. **Prerequisite:** 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. **Prerequisite:** 313.

#### 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. **Prerequisites:** 313, Management 212.

#### 459 Business Intern Program (3)

Opportunity to integrate and apply specialized disciplinary skills to practical business problems of company-wide scope. Student interns are
assigned as consultants to assist businesses under supervision of a faculty member. Prerequisites: completion of Finance 302; Management 311, 315; and Marketing 313. A maximum of six hours credit in any internship courses (Accounting 459r, Finance 459r, Management 459r, Marketing 459r, Office Administration 350) may be taken within the School of Business Administration.

The office administration curriculum leading to the Bachelor of Science degree is designed to prepare students for careers as secretaries or office managers in business. The curricula provide essential skills for employment opportunities in either of the following concentrations: Office Management; Secretarial Science.

### Business Administration (B.S.): Office Management concentration

**General Education** (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category A</th>
<th>2 approved courses in written communication in the English language (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category B</td>
<td>3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)</td>
</tr>
<tr>
<td>Category C</td>
<td>2 approved behavioral or social science courses other than economics (6 hours; approved related courses below will apply)</td>
</tr>
<tr>
<td>Category D</td>
<td>1 approved physical or natural science course with laboratory (4 hours)</td>
</tr>
<tr>
<td>Category F</td>
<td>1 approved mathematics course (3 hours: approved related course below will apply)</td>
</tr>
<tr>
<td>Category G</td>
<td>1 approved perspectives course (3 hours)</td>
</tr>
</tbody>
</table>

Health and Physical Education 021 plus one additional semester physical education activity

### Business Administration (B.S.): Secretarial Science concentration

**General Education** (see pages 26-27 for list of approved courses)

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

^CT score must be 19 or greater in order to waive Mathematics 107. Placement test required.
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 C
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
Six hours selected from Political Science C101, Psychology C101, or Sociology C151
Mathematics 135, F136
Computer Science 210
37 hours common body of knowledge from the School of Business Administration including Economics 101, 102; Accounting 201, 202; Finance 302; Management 211, 212, 311, 315, 440, 441; Marketing 313, 335
25-30 hours office administration including 121, 125, 219, 223, 227, 228, 229, 309, 350r, and 400
Students who have had previous training in shorthand or typewriting may be exempted from Office Administration 121, 125.
2.00 average in all office administration courses

Minimum of 30 hours of 300 and 400 level courses
Maximum of 72 hours accepted in School of Business Administration Electives to complete 128 hours

Typical course of study for business administration (B.S.): secretarial science concentration

First Semester Second Semester
Freshman
General Education Category A 3 General Education Category A 3
Economics 101 3 Economics 102 3
Mathematics 107 3 Mathematics 135 3
Office Administration 125 3 Office Administration 227 3
Physical Education 021 1 Physical Education Activity 1
Humanities Elective 3 Fine Arts Elective 3
  15 16
Sophomore
Mathematics F136 3 B Management 211 3
Office Administration 228 3 B Accounting 202 3
Office Administration 121 3 Computer Science 210 3
B Accounting 201 3 Office Administration 223 3
Behavioral/Social Science Elective 3 Humanities/Fine Arts Elective 3
Elective 3 3
  17 18
Junior
B Management 212 3 Office Administration 309 3
Office Administration 219 3 B Marketing 335 3
Office Administration 229 3 B Marketing 313 3
Behavioral/Social Science Elective 3 B Management 311 3
Physical/Natural Science Elective 4 3
  16 15

Senior
Office Administration 400 3 B Management 440 3
B Management 315 3 B Management 441 3
B Finance 302 3 Perspectives Elective 3
Office Administration 350r 4 Electives 9
Elective 3 3
  16 16

*ACT score must be 19 or greater in order to waive Mathematics 107. Placement test required.

Office Administration/Business Education Courses

109 Business Mathematics (3)
Fundamental fractions, percentage, interest, bank discount, insurance, graphs, square root, and other aspects of mathematics important in business control and statistical research.

121 Elementary Typewriting (3)
Includes learning the keyboard, operating the parts of the machine, writing of different styles of business letters, manuscript copy, and tabulation. Class three hours, laboratory two hours. Terminal speed required is 30 wpm/three minute timing with three errors.

125 Elementary Shorthand (3)
A study of Gregg shorthand theory with emphasis on reading and dictation from the beginning. Class four hours. Prerequisites: typing speed of 30 net words a minute or corequisite: 121.

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

219 Business Communication (3)
An introduction and basic overview of communication, including verbal and nonverbal communication. A review of clear writing, grammar, diction, and rhetoric. A study of the mechanics and psychology of business letters. Pre- or corequisite: English 101.

220 Office Machines (3)
Designed to familiarize students with office equipment to include duplicating machines, word processing equipment, and transcribing machines. Class three hours, laboratory two hours. Prerequisite: 121 or one year of high school typewriting.

223 Secretarial Office Typewriting (3)
A thorough review of writing business letters, manuscript copy, tabulation, business reports, legal documents. Emphasis on speed development and production. Class three hours, laboratory two hours. Prerequisite: 121 or one year of high school typewriting. Terminal speed required is 45 wpm/five minute timing with five errors.

227 Intermediate Shorthand (3)
Dictation and transcription with a review of theory and with a speed of 90 words a minute on new material with 95 percent accuracy required. Class three hours. Prerequisites: 121, 125, or two years of high school typewriting and shorthand.

228 Transcription (3)
Dictation and transcription with a further review of theory and vocabulary; speed of 100 words a minute on new material with 95 percent accuracy required. Prerequisites: 223 and 227.

229 Office Procedures (3)
The role of the office employee in facilitating managerial operations. Considerations include improving human relations, information retrieval systems, handling correspondence, arranging schedules and itineraries, using communication media effectively, and simplification of office tasks. Prerequisites: 121, 220.

309 Records and Information Management (3)
Study of problems related to the selection of equipment and systems used for information storage and retrieval, including automated and nonautomated filing; microfilming systems; tape processing; forms
design; retention and disposal of records; and supervision, standards and work measurement. Spring only, offered alternate years.

350r Office Administration Internship (1-4)
A supervised work experience program designed to strengthen the student's technical competencies and fundamental knowledge in Office Administration. Repeatable up to four hours. Prerequisite: permission of department head.

400 Office Management (3)
Office management and organization; office controls; forms and layout; management supervision of personnel and service units. Prerequisite: 219 or permission of instructor. Fall only, offered alternate years.

410 Administrative Communications (3)
Study of business communications including inter-office memos; minutes of meetings; newspaper articles; oral presentations; and report writing, including tabular and graphic presentation of data essential to writing formal business reports. Spring only, offered alternate years.

450 Office 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. Prerequisite: 309 or permission of instructor. Fall only, offered alternate years.

460 Seminar: Problems in Office Management (3)
Selected topics from the following: systems analysis, form design, records, mechanization, correspondence, supervision, work simplification, training work measurement. Prerequisite: 400 or permission of instructor. Spring only, offered alternate years.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)
School of Education

Professor Stinnett, Dean
Associate Professor D. Baker, Director of Student Teaching and Certification Officer

The primary goal of the School of Education is to prepare qualified people to be professional educational leaders in various roles within educational institutions and similar agencies, both public and private.

All teacher certification 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 requirements of any undergraduate program administered by the School of Education, excluding the recreation specialist, qualifies the graduate for initial certification in Tennessee.

The School of Education is organized into four departmental units for academic programming, communications, and administrative accountability. Each unit has a department head who serves as the official spokesperson, academic leader, 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
Associate Professor Bartoo, Head
Professors B. Benson, T. Bibler
Associate Professors W. Butterfield, A. Hunt, Kingdon, Renniesen
Assistant Professors Area, Snyder, Wofford

Educational Administration and Supervision
Associate Professor C. Whitaker, Head
Professors R. Benson, L. Davis, W. Hales, Hyder, C. Temple, Whittacre
Associate Professors D. Baker, D. Quarles
Assistant Professors True

Health, Physical Education and Recreation
Associate Professor Norred, Head
Professor Stinnett
Associate Professors Ezell, L. Fanning, L. Ford
Assistant Professors Norris, Wood
Instructor Jadin

Special Education and Counseling
Professor E. Davis, Head
Professor DeVivo
Associate Professors DeVivo, Fowler, T. Miller
Assistant Professors J. Davis, Marotz
Instructor Taylor

Courses of Study
Undergraduate—The School of Education offers approved undergraduate programs leading to the Bachelor of Science degree with a major in Education and to eligibility for teacher certification in Tennessee and in those states which grant reciprocity privileges to graduates of institutions accredited by NCATE. Courses of study include:

- Early childhood education
- Elementary education
- Music education
- Special education (non-categorical)

Secondary education—art education (BFA), biology, business, chemistry, earth and space science, economics, English, foreign languages (French, Latin, Spanish), health and physical education, history, home economics, mathematics, physics, political science, psychology, and sociology.

In addition to initial certification, the school offers the following certificate endorsement areas:

- Art education; elementary education; early childhood education; music education; special education; secondary education: biology, chemistry, earth and space science, economics, English, foreign language (French, Latin, Spanish), general science, health (K-12), physical education (grades 1-9), history, home economics, mathematics, physical education (grades 1-9), physics, political science, psychology, sociology, social science. Contact the certification officer for details.

Graduate—The School of Education, through the UTC Graduate Division, offers NCATE accredited and Tennessee approved programs which lead to the Master of Education degree (M.Ed.). For further information refer to the UTC 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 Master of Education (Ed.D.) or the Educational Specialist degree (Ed.S.) granted by The University of Tennessee, Knoxville, may complete all degree requirements at the UTC campus. For further information contact the director of the UTK Graduate Education Center located in 105 Hunter Hall.

Admission to Teacher Education Program (TEP)

Applicants who give 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 be withdrawn from all 400-level professional education courses for which he or she is enrolled. Freshman and sophomore students, prior to formal application to the teacher education program, must consult with an adviser in the School of Education to plan their programs. This procedure also applies to every student seeking teacher certification.

A post-baccalaureate or transfer student must meet the regular admission standards set by UTC and those School of Education requirements for admission to TEP as stated in the catalog. A student who has earned a degree 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 certification 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 particular department in which the program of study being pursued is located to ensure that the appropriate course work and admission criteria have been completed.

To be admitted to the TEP, a student must have met the following requirements:

1. Filed a formal application signed by a School of Education faculty adviser. Application forms may be obtained from the TEP office.
2. Filed a medical certification record signed by a licensed physician. Form may be obtained from the TEP office.
3. Earned a 2.25 cumulative grade point average and a 2.25 average on all courses taken at UTC.
4. Demonstrated competency in basic English communication skills. Evidence of competency is verified by the applicant’s writing an acceptable essay on a topic assigned by the TEP office and evaluated by a faculty committee. Essays may be written on any Friday from 8:30 A.M.-4:00 P.M. in the TEP office.
5. 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.
6. Demonstrated competency in reading skills. Verification of this competency is met by the student passing the Nelson-Denny Reading Test at the 12th grade level. A transfer student, a post-baccalaureate student, or any student who has not taken this test while enrolled in one of the 100- or 200-level professional education courses should refer to the TEP office for an appointment to complete the test.
7. 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 for this service by the Chattanooga Speech and Hearing Center.
8. Completed the California Achievement Test Battery (basic skills in language arts, reading, and mathematics) 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. Any student who verifies that he or she achieved a minimum composite score of 17 on the ACT or 765 on the CEEB is not required to take the CAT. Either the ACT or CEEB minimum score will satisfy this requirement.

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 degree being sought by the applicant) of the action taken 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 rejected 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.

The teacher education program (TEP) office is located in 212 Hunter Hall.

State Board of Education

Effective November, 1978, the Tennessee State Board of Education mandated that all students preparing for a teaching career in Tennessee must pass a standardized test of basic skills (mathematics, reading, and language) prior to official admission to the teacher education program. UTC will administer this specified battery of tests at the beginning of each semester to permit students planning to enter teacher education programs to fulfill this certification requirement set forth by the state Board of Education.

Furthermore, the state board mandated retesting criteria for applicants taking the standardized test of basic skills:

1. If an applicant for candidacy to the TEP fails to pass any required area of the standardized test battery, the test for that area may be retaken after remediation for at least one semester following the initial testing.
2. If an applicant fails any part of the required test battery on the second testing, then at least one academic year (two consecutive semesters) must be spent in remediation before retesting is permitted. Candidates retaking any portion of the test must attain cut-off scores in effect at the time retesting occurs.
3. Candidates failing to meet the standards after three attempts shall not be admitted to TEP candidacy. However, after a period of at least three years the student may again start the series of tests.

UTC is committed to strict adherence to these state Board of Education policies regarding these criteria!

And finally, the state Board of Education made
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) no later than six months preceding the actual experience. For example, if a student plans to student teach during the spring semester of the 1983-84 academic year, the application must be completed and on file no later than July 1, 1983. For the fall semester of the 1984-85 academic year, the application should be completed and on file no later than February 25, 1984.

Application for student teaching is not necessarily contingent upon official admission to 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 fulfilled all requirements for admission to the TEP.

Before gaining admission to the student teaching semester, 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 core 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 School of Education will make the decision.
5. Received recommendation of the major departments (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 2.25 on courses completed at UTC and a cumulative 2.25 grade point average along with 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 EDCI 320).
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—EDCI 407, 419, 423
- Special Education—EDSP 440, 461, 465, 469
- Secondary Education—EDCI 436, 437, 438

All education majors, excluding those concentrating in special education, 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.

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. A student is never placed in the school from which he or she 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 required to attend these scheduled conferences. 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 Certification

The School of Education will recommend certification for only those students who have successfully completed...
one or more of the UTC initial certification 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 State regulations stipulate that the applicant for a professional certificate must be recommended by the designated certifying officer or dean of an approved teacher training institution. To receive this recommendation, the applicant must have fulfilled the following requirements:

1. A minimum cumulative grade point average of 2.0;
2. Satisfactory student teaching performance;
3. A minimum grade point average of 2.0 in the teaching fields and in all professional education courses;
4. 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); and
5. Completion of the National Teachers Examinations (NTE) (administered by the UTC Counseling Center—score must be sent to UTC and Office of Certification, Tennessee State Department of Education).

These requirements apply to both undergraduate (B.A. and B.S.) and post-baccalaureate students desiring a certification recommendation from UTC.

The final responsibility for satisfying each and all of these requirements for certification 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 must satisfactorily complete a UTC approved endorsement program to earn the official UTC recommendation for certification. To learn of the particular endorsement requirements, a student should inquire through the appropriate departmental office 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 certification 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 alone from a master’s degree program at UTC does not guarantee certification. All certification requirements of the particular state awarding the license must be fulfilled also. In some instances a student may satisfy all of the requirements for the certification endorsement by completion of a state approved master’s degree program at UTC.

**Application for Teacher Certification**

An application for all teacher certification, adding a teaching area, and professional school service personnel endorsement may be obtained from the Office of Records, 128 Hooper Hall. The state Department of Education, Office of Teacher Certification, requires that an application for any type of 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 certification requirements at the time the person applies for certification. This means that UTC will recommend only those applicants who have met all of the certification requirements effective at the time of recommendation.

In view of this Tennessee mandate, a student or any other person seeking teacher certification 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 state Department of Education, Office of Teacher Certification. The teacher’s professional certificate is valid for ten years and is renewable.

Clarification of any of these above mentioned requirements should be referred to the appropriate department head and, finally, to the certification officer, if necessary.

**Career Education Resource Center**

The Career Education Resource Center contains various types of materials for use by students in counseling, practitioners in the field, and teachers who are implementing career education in their curriculum. The center contains career games, sound filmstrips, the complete Information Needed for Occupational Entry system, numerous cassettes, and other pertinent career publications and materials. Materials are geared for grades K-12. The center is located in Hunter Hall and operated under the direction of the Special Education and Counseling 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 programs. Instructional resource materials focusing on environmental and energy education along with professional consultants are also available. The center is located in Hunter Hall on campus.

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, will also provide some assistance in processing certification applications to states other than Tennessee.

Clearinghouse on Metric Education for Tennessee (COMET)
The School of Education through COMET provides information, materials, and services to organizations planning metric education programs in Tennessee. The clearinghouse is housed in Hunter Hall and has instructional facilities and resource materials for conferences and workshops. Phone requests for materials can be made by calling 755-4237.

Learning Resource Materials Center
The School of Education makes available to any regularly enrolled student the services of the Learning Center. Students are provided free instruction in the areas of reading skills, vocabulary development, comprehension, study skills, writing skills, and penmanship (teaching in the elementary school). The center operates daily and on an appointment basis and provides initial diagnostic services to identify weaknesses.

Art Education (B.F.A.)

General Education (see pages 26-27 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), plus courses in humanities/fine arts to total 12 hours in three fields other than history and art

Category C
2 approved behavioral or social science courses (6 hours plus one course to total 9 hours behavioral or social science 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 science (one course must be approved laboratory science)

Category F
Mathematics F120

Category C
1 approved perspectives course (3 hours)

1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
51 hours Art including 101,103,105,106; 205r or 206r, 207,208,227,305r, 323, 324, 333, 343,490r; 6 hours from 211, 212,431,432; 3 hours from 213, 414

Participation in senior art show
30 hours from the School of Education including Curriculum and Instruction 200,201,204,205,431,433,436r,437,438; Special Education 333

2.25 average both in teaching fields and in School of Education courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

Typical course of study in art education (B.F.A.)

First Semester | Second Semester
---|---
Freshman | General Education Category A 3 | General Education Category A 3
Mathematics F120 | 3 | ED Curr. & Instr. 200 1
Science Elective, Category D | 4 | ED Curr. & Instr. 201 3
Physical Education 021 | 1 | Science Elective 4
Art 103 | 3 | Physical Education Activity 1
Art 105 | 3 | Art 101 3
Art 207 | 3 | Art 106 3
| 17 | 18

Sophomore | Apply for admission to TEP
General Education Category B | General Education Category B
ED Curr. & Instr. 204 3 | Humanities/Fine Arts 3
ED Curr. & Instr. 205 1 | General Education Category C 3
Art 205r or 206r 3 | General Education Category C 3
Art 207 | 3 | Art 208 3
Art 227 | 3 | Art History 3
| 16 | 18

Junior | Art 324 3
Apply for student teaching | 3
General Education Category G | 3 | Social Science Elective 3
ED Special Education 333 | 3 | General Education Category B
Humanities/Fine Arts Elective | 3 | Fine Arts 3
Art 323 | 3 | Art History 3
Art 333 | 3 | ED Curr. & Instr. 431 2
Art History | 3 | ED Curr. & Instr. 433 4
| 18 | 18

Senior | Art 305r 3
ED Curr. & Instr. 436 2 | 3
ED Curr. & Instr. 437 | 2 | Art 490 3
ED Curr. & Instr. 438 9 | Art 343 3
| Elective 4
| 13 | 13

Early Childhood Education (B.S.)

General Education (see pages 26-27 for list of approved courses)

Category A
2 approved courses in written communication in the English language (6 hours; approved courses below will apply)

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 course below will apply)

Category D
1 approved physical or natural science course with laboratory (4 hours; approved course below will apply)
Written and oral communication: total of 12 hours required including 6 hours of English A101, A102

One course from Theatre and Speech 107, 108, 109,115

Humanities: total of 12 hours required including 6 hours in English, American, or World Literature
Art 222 and 223
Music 110 and 321

Behavioral and social sciences (not necessarily corresponding to UTC's general education Category C): 12 hours required including Human Services C101

1 approved Category C course
One course from Geography 101,104, or 209
6 hours of History B203 and B204

Natural science: 12 hours with laboratory required including 4 hours of biology including Biology D121
4 hours from physics, chemistry, geology, general science
4 hours of any laboratory science (may include Environmental Studies D150)

Mathematics: 6 hours required including Mathematics F115,116

Health and physical education: 10 hours required including Health courses: HPER 154 and HPER 302
Physical education courses (6 hours required) including: HPER 224 and HPER 330 plus a minimum of 2 lifetime activities (may include HPER 021)

Professional education: 40 hours required from the School of Education including Curriculum and Instruction 200,201,203,206,320,401,402,403,404,407,410,419,423, and Special Education 332

2.25 average in all School of Education courses

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

Typical course of study in early childhood education (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 A101</td>
<td>English A102</td>
</tr>
<tr>
<td>Biology D121</td>
<td>Laboratory Science</td>
</tr>
<tr>
<td>HPER 154</td>
<td>ED Curr. &amp; Instr. 200</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>ED Curr. &amp; Instr. 201</td>
</tr>
<tr>
<td>Fine Arts Elective</td>
<td>Mathematics F115</td>
</tr>
<tr>
<td>Human Services CI 01</td>
<td>Social Science Elective</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>English 228</td>
<td><strong>Apply for admission to TEP</strong></td>
</tr>
<tr>
<td>Art 222</td>
<td>Speech</td>
</tr>
<tr>
<td>Art 223</td>
<td>ED Curr. &amp; Instr. 320</td>
</tr>
<tr>
<td>Mathematics 116</td>
<td>ED Special Education 332</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 203</td>
<td>Music 110</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 206</td>
<td>Music 321</td>
</tr>
<tr>
<td>History B203</td>
<td>History B204</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td></td>
</tr>
<tr>
<td>Apply for student teaching</td>
<td>Health Education 302</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 401</td>
<td>ED Curr. &amp; Instr. 403</td>
</tr>
<tr>
<td>Physical Education 330</td>
<td>ED Curr. &amp; Instr. 404</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 402</td>
<td>ED Curr. &amp; Instr. 410</td>
</tr>
<tr>
<td>Geography</td>
<td>Literature</td>
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<tr>
<td>HPER 224</td>
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<tr>
<td>Physical Education Activity</td>
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<td><strong>Senior</strong></td>
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<tr>
<td>ED Special Education 407</td>
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<tr>
<td>ED Curr. &amp; Instr. 423</td>
<td>Laboratory Science</td>
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<td>ED Curr. &amp; Instr. 419</td>
<td>General Education Category G</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
</tr>
</tbody>
</table>

Elementary Education (B.S.)

General Education (see pages 26-27 for list of approved courses)

Category A
2 approved courses in written communication in the English language (6 hours; approved courses below will apply)

Category B
3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each; approved courses below will apply)

Category C
2 approved behavioral or social science courses (6 hours; approved course below will apply)

Category D
1 approved physical or natural science course with laboratory (4 hours; approved course below will apply)

Category F
Mathematics F115

Category C
1 approved perspectives course (3 hours)

Health and physical education: 10 hours required including Health courses: HPER 154 and HPER 302

Written and oral communication: total of 12 hours required including 6 hours of English A101, A102

One course from Theatre and Speech 107, 108, 109,115

Humanities: total of 12 hours required including 6 hours in English, American, or World Literature
Art 222 and 223
Music 110 and 321

Behavioral and social sciences (not necessarily corresponding to UTC's general education Category C): 12 hours required including Human Services C101

1 approved Category C course
One course from Geography 101,104, or 209
6 hours of History B203 and B204

Natural science: 12 hours with laboratory required including 4 hours of biology including Biology D121
4 hours from physics, chemistry, geology, general science
4 hours of any laboratory science (may include Environmental Studies D150)

Mathematics: 6 hours required including Mathematics F115,116

Health and physical education: 10 hours required including Health courses: HPER 154 and HPER 302
Physical education courses (6 hours required) including: HPER 224 and HPER 330 plus a minimum of 2 lifetime activities (may include HPER 021)

Professional education: 40 hours required from the School of Education including Curriculum and Instruction 200,201,203,206,320,401,402,403,404,407,410,419,423, and Special Education 332
2.25 average in all School of Education courses

Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours
Physical education courses (6 hours required) including: HPER 224 and HPER 330 plus a minimum of 2 lifetime activities (may include HPER 021)

Professional education: 40 hours required from the School of Education including Curriculum and Instruction 200, 201, 203, 206, 320, 401, 402, 403, 404, 405, 407, 423, and Special Education 332

2.25 average in all School of Education courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

Typical course of study in elementary education (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 A101</td>
<td>3</td>
</tr>
<tr>
<td>Biology D121</td>
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<td>HPER 154</td>
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</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Human Services C101</td>
<td>3</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>English 228</td>
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</tr>
<tr>
<td>Art 222</td>
<td>3</td>
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<tr>
<td>Mathematics 116</td>
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<td>ED Curr. &amp; Instr. 203</td>
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</tr>
<tr>
<td>ED Curr. &amp; Instr. 206</td>
<td>1</td>
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<tr>
<td>History B203</td>
<td>3</td>
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<tr>
<td><strong>Junior</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Apply for student teaching</strong></td>
<td>3</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 401</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 330</td>
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</tr>
<tr>
<td>ED Curr. &amp; Instr. 402</td>
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<td>Physical Education Activity</td>
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<td><strong>Senior</strong></td>
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</tr>
<tr>
<td>ED Special Education 407</td>
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<tr>
<td>ED Curr. &amp; Instr. 423</td>
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<tr>
<td>ED Curr. &amp; Instr. 405</td>
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<tr>
<td><strong>Music Education (B.S.)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Education (see pages 26-27 for list of approved courses)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Category A</strong></td>
<td></td>
</tr>
<tr>
<td>2 approved courses in written communication in the English language (6 hours)</td>
<td></td>
</tr>
<tr>
<td><strong>Category B</strong></td>
<td></td>
</tr>
<tr>
<td>3 approved courses other than music: one from humanities, one from fine arts, and one from either (3 hours each), plus courses in humanities/fine arts to total 12 hours in three fields other than history</td>
<td></td>
</tr>
<tr>
<td><strong>Category C</strong></td>
<td></td>
</tr>
<tr>
<td>2 approved behavioral or social science courses plus one course to total 9 hours behavioral or social science in two fields other than education; for certification purposes, 3 of the hours may be in history</td>
<td></td>
</tr>
<tr>
<td><strong>Category D</strong></td>
<td></td>
</tr>
<tr>
<td>2 natural science courses to total 8 hours in natural sciences (one course must be approved laboratory science)</td>
<td></td>
</tr>
<tr>
<td><strong>Category F</strong></td>
<td></td>
</tr>
<tr>
<td>Mathematics F120</td>
<td></td>
</tr>
</tbody>
</table>
### Secondary Education: Biology (B.S.)

**General Education** (see pages 26-27 for list of approved courses)

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

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
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<tbody>
<tr>
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<td>ED Curr. &amp; Instr. 201 3</td>
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<td></td>
<td>Music 000 0</td>
<td>Physical Education 021 1</td>
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<td></td>
<td>Choral Ensemble 1</td>
<td>Music 000 0</td>
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<tr>
<td></td>
<td>Applied Music (Primary) 1</td>
<td>Choral Ensemble 1</td>
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<td></td>
<td>Music 133 1</td>
<td>Applied Music (Primary) 1</td>
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<tr>
<td></td>
<td>Music 207 4</td>
<td>Music 134 1</td>
</tr>
<tr>
<td></td>
<td>Music 222 3</td>
<td>Music 142 1</td>
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<td></td>
<td>General Education Category D 4</td>
<td>Music 208 1</td>
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<tr>
<td></td>
<td>Music 221 2</td>
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<td>Apply for admission to TEP</td>
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<td></td>
<td>Music 000 0</td>
<td>ED Curr. &amp; Instr. 204 3</td>
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<td>Choral Ensemble 1</td>
<td>ED Curr. &amp; Instr. 205 1</td>
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<td>Music 133 1</td>
<td>Music 000 0</td>
</tr>
<tr>
<td></td>
<td>Music 141 1</td>
<td>Choral Ensemble 1</td>
</tr>
<tr>
<td></td>
<td>Music 207 4</td>
<td>Applied Music (Primary) 1</td>
</tr>
<tr>
<td></td>
<td>Music 222 3</td>
<td>Music 134 1</td>
</tr>
<tr>
<td></td>
<td>General Education Category D 4</td>
<td>Music 142 1</td>
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<tr>
<td></td>
<td>Music 221 2</td>
<td>Music 208 1</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td>Apply for student teaching</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Science 4</td>
<td>General Education Category B 3</td>
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<td>Choral Ensemble 1</td>
<td>Choral Ensemble 1</td>
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<td>Music 000 0</td>
<td>Applied Music (Primary) 1</td>
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<td>Applied Music (Primary) 1</td>
<td>Music 210 1</td>
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<td>Music 209 1</td>
<td>Music 316 3</td>
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<td>Music 309 2</td>
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<td>Music Elective 1</td>
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<td><strong>Senior</strong></td>
<td>ED Curr. &amp; Instr. 432 3</td>
<td>ED Curr. &amp; Instr. 439 3</td>
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<td>ED Curr. &amp; Instr. 438r 2</td>
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<td>ED Curr. &amp; Instr. 437 2</td>
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<td></td>
<td>Applied Music (Primary) 2</td>
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</tbody>
</table>

#### 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

#### 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
1 approved physical or natural science course other than biology with laboratory (4 hours; approved related courses below will apply)

#### Category F
1 approved mathematics course (3 hours; approved related courses below will apply)

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

#### Health and Physical Education
Health and Physical Education 021 plus one additional semester physical education activity

#### Major and related courses
Mathematics 135, F136 or F145, F150; Recommended: F145, F150 for prospective graduate students

16 hours chemistry including D121, 122, 351, and elective

Recommended: two semesters organic chemistry

Physics D103, 104 or Geology D111, 112

Recommended: Computer Science 121 or 210

26 hours of biology including D121, D122; 8 hours at the 300 level or above, at least 3 hours must be at the 400 level, and one course from each of the following areas—

Organismic biology: 207, 225, 226, 311, 342

Physiology: 192, 304, 328, 405, 421, 435, 469, 470; Chemistry 466

Population interaction: 306, 352, 416, 450

Genetics and development: 301, 315, 325, 425, 426

33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333

2.25 average both in teaching fields and in School of Education courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

#### Typical courses of study in secondary education: biology (B.S.)

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td>General Education Category A 3</td>
<td>General Education Category A 3</td>
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<tr>
<td></td>
<td>Biology 121 4</td>
<td>Biology 122 4</td>
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<tr>
<td></td>
<td>Physics D103 or Geology D111 4</td>
<td>Physics 104 or Geology 112 4</td>
</tr>
<tr>
<td></td>
<td>Physical Education 021 1</td>
<td>Physical Education Activity 1</td>
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<tr>
<td></td>
<td>Humanities Elective 3</td>
<td>Fine Arts Elective 3</td>
</tr>
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<tr>
<td><strong>Sophomore</strong></td>
<td>Mathematics 135 or F145 3-4</td>
<td>Apply for admission to TEP</td>
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<tr>
<td></td>
<td>Chemistry D121 4</td>
<td>Mathematics F136 or F150 3-4</td>
</tr>
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<td>ED Curr. &amp; Instr. 200 1</td>
<td>Chemistry 122 4</td>
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<tr>
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<td>ED Curr. &amp; Instr. 204 3</td>
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<td>ED Curr. &amp; Instr. 205 1</td>
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<td>Behavioral Science Elective 3</td>
<td>Biology (Physiology) 3-4</td>
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<td>13</td>
<td>Humanities/Fine Arts Elective 3</td>
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<td>17-19</td>
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<tr>
<td><strong>Junior</strong></td>
<td>Apply for Student Teaching</td>
<td>ED Curr. &amp; Instr. 321 3</td>
</tr>
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<td></td>
<td>Biology (Population Interaction) 3-4</td>
<td>ED Curr. &amp; Instr. 431 2</td>
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<td></td>
<td>Chemistry 351 4</td>
<td>ED Curr. &amp; Instr. 433 4</td>
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<td>17-19</td>
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</tbody>
</table>
Secondary Education: Business (B.S.)

**General Education** (see pages 26-27 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

**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 (approved related courses below may apply); 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 C**
1 additional perspectives course (3 hours)

1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**
Home Economics 328
Economics C101, C102
Business: Management 103, 335; Business: Accounting 201, 202
Office Administration 109, 121, 219, 223
One of the following areas:
1. Office Administration 125, 220, 227, 228, 229
2. Two additional accounting courses for minimum of 10 hours in accounting. Marketing 336, 3 hours economics elective (hours in economics must total 12 for endorsement in this area)
3. 33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333
4. 2.25 average both in teaching fields and in School of Education courses

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

**Typical course of study in secondary education: business (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>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th><strong>Sophomores</strong></th>
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<tbody>
<tr>
<td>Office Admin. Class 233</td>
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<tr>
<td>ED Curr. &amp; Instr. 201</td>
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</tr>
<tr>
<td>Office Admin. Class 125</td>
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</tr>
<tr>
<td>Office Admin. Class 219</td>
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<tr>
<td>ED Curr. &amp; Instr. 200</td>
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<tr>
<td>Elective 3</td>
<td></td>
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</tbody>
</table>

**Senior**
Office Admin. Class 229 | ED Curr. & Instr. 436r 2
ED Curr. & Instr. 431 | ED Curr. & Instr. 437 2
ED Curr. & Instr. 433 | ED Curr. & Instr. 438 9
Electives 9 |                     |

Secondary Education: Chemistry (B.S.)

**General Education** (see pages 26-27 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

**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**
1 approved physical or natural science course other than chemistry with laboratory (4 hours; approved related course below will apply)

**Category F**
1 approved mathematics course (3 hours; approved related courses below will apply)

**Category C**
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**
Mathematics F145, F150, 160
8 hours sequence in biology or geology (must have 8 hours biology for general science certification)
8 hours physics: D103, 104
24 hours chemistry including 121, 122, 341, 351, 352, 371
Recommended electives: Computer Science 121 or 210; Chemistry 443, 466
Typical course of study in secondary education: chemistry (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>General Education Category A</td>
<td>Mathematics F145</td>
</tr>
<tr>
<td>Humanities Electives</td>
<td>Chemistry 351</td>
</tr>
<tr>
<td>Physics D103</td>
<td>Biology D121/Geology D111</td>
</tr>
<tr>
<td>Chemistry 121</td>
<td>ED Curr. &amp; Instr. 201</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>ED Curr. &amp; Instr. 200</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td><strong>Senior</strong></td>
</tr>
<tr>
<td>Apply for Student Teaching</td>
<td>ED Curr. &amp; Instr. 431</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 434</td>
<td>ED Curr. &amp; Instr. 437</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 438</td>
<td>Behavioral Science Elective</td>
</tr>
<tr>
<td><strong>Elective</strong></td>
<td><strong>Elective</strong></td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 436</td>
<td>Chemistry 371</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 437</td>
<td>ED Curr. &amp; Instr. 438</td>
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<tr>
<td>ED Curr. &amp; Instr. 438</td>
<td>Behavioral Science Elective</td>
</tr>
</tbody>
</table>

Secondary Education: Earth and Space Sciences (B.S.)

**General Education** (see pages 26-27 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

**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 or geography; for certification purposes, 3 of the hours may be in history

**Category D**
1 approved physical or natural science course other than geology 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)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
6-8 hours mathematics from 135, F136 or F145, F150
16 hours biology, physics, or chemistry with at least two areas represented (at least 6 hours biology required for general science endorsement)
4 hours from Astronomy 101 or 102
12 hours Geology including 111 and 225
12 hours Geography 101, 206, 221, 407
Recommended Geology electives: 112, 303, 321, 341
Recommended elective: Computer Science 121 or 210
33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438 Special Education 333
2.25 average both in teaching fields and in School of Education courses

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

Typical course of study in secondary education: earth and space sciences (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>General Education Category A</td>
<td>Geography 101</td>
</tr>
<tr>
<td>Biology D121 and 122 or Physics/or Chemistry</td>
<td>ED Curr. &amp; Instr. 201</td>
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<td>Physical Education 021</td>
<td>Geology 111</td>
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<td>Geology 225</td>
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<td>Behavioral Science Elective</td>
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Secondary Education: Economics* (B.S.)

**General Education** (see pages 26-27 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

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 and economics; 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 C
1 approved perspectives course (3 hours)
1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences
Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
24 hours economics including 101, 102, 301, 324, and Business Management 211
33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333
2.25 average both in teaching fields and in School of Education courses

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

• Students seeking teacher certification in Tennessee in the area of social studies must complete 6 semester hours in American history, 6 semester hours in European or world history, and 6 semester hours each in four of the following fields: economics, geography, political science, sociology, and psychology (must include Psychology 101 and 301 for psychology endorsement).

Typical course of study in secondary education: economics (B.S.)

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<tr>
<td>Mathematics F120 3</td>
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<td>Economics 101 3</td>
<td>Economics 102 3</td>
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<tr>
<td>Humanities/Fine Arts Elective 3</td>
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<td>Sophomore</td>
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<tr>
<td>Perspectives Elective 3</td>
<td>Apply for admission to TEP</td>
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<tr>
<td>Business Management 211 3</td>
<td>Economics 301 3</td>
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<tr>
<td>ED Curr. &amp; Instr. 200 1</td>
<td>ED Curr. &amp; Instr. 204 3</td>
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<td>ED Curr. &amp; Instr. 201 3</td>
<td>ED Curr. &amp; Instr. 205 1</td>
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<td>Humanities/Fine Arts Elective 3</td>
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<tr>
<td></td>
<td>Social Science Elective 3</td>
</tr>
<tr>
<td></td>
<td>16</td>
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<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Apply for student teaching</td>
<td>ED Curr. &amp; Instr. 431 2</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 321 3</td>
<td>ED Curr. &amp; Instr. 433 4</td>
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<td>Economics 324 3</td>
<td>Electives 9</td>
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<tr>
<td>ED Special Education 333 3</td>
<td>Economics Elective 3</td>
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</table>

Senior
ED Curr. & Instr. 436r 2  Economics Elective 3
ED Curr. & Instr. 437 2  Electives 12
ED Curr. & Instr. 438 9  15

Secondary Education: English (B.S.)

General Education (see pages 26-27 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 English

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 (3 hours)
1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences
Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
3 hours from Theatre and Speech 103, 107, 108, 109, 309
33 hours English including English 203, 207 (or 442r), 229; one course from English 211, 212; one course in American literature; one course from English 360, 361, or 460; English 410 and one course from 408, 412—one of which should be taken in the last term prior to student teaching; nine additional hours of English, six of which must be from 300 and 400 levels
33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333; one additional hour of reading
2.50 average in teaching field
2.25 average in School of Education courses

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

Typical course of study in secondary education: English (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
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<tr>
<td>General Education Category A 3</td>
<td>General Education Category A 3</td>
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<tr>
<td>Mathematics F120 3</td>
<td>Physical Education Activity 1</td>
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<tr>
<td>Physical Education 021 3</td>
<td>Science Elective 4</td>
</tr>
<tr>
<td>Theatre and Speech 103 or 107 or 108 or 109 3</td>
<td>Humanities/Fine Arts Elective 3</td>
</tr>
</tbody>
</table>
Secondary Education: Foreign Language (French, Latin, or Spanish) (B.S.)

General Education (see pages 26-27 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 C
1 approved perspectives course other than foreign languages (3 hours)
1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

Health and Physical Education 021 plus one additional semester physical education activity

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

Secondary Education: History* (B.S.)

General Education (see pages 26-27 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 from humanities/fine arts in three fields other than history

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 and history

Category D
2 natural science courses to total 8 hours in natural sciences (one course must be approved laboratory science)
American History

Typical course of study in secondary education: history (B.S.)

**First Semester**
- General Education Category A 3
- Mathematics F120 3
- Physical Education 021 1
- History 101 3
- Science Elective, Category D 4
- Humanities/Fine Arts Elective 3

**Second Semester**
- General Education Category A 3
- Physical Education Activity 1
- History 102 3
- Humanities/Fine Arts Elective 3
- Science Elective 4
- Social Science Elective 3

**Sophomore**
- American History
- ED Curr. & Instr. 201 3
- ED Curr. & Instr. 200 3
- Social Science Elective
- Humanities/Fine Arts Elective
- Perspectives Elective

**Second Semester**
- Apply for admission to TEP
- American History 3
- ED Curr. & Instr. 204 3
- ED Curr. & Instr. 205 1
- Social Science Elective 3
- Behavioral/Social Science Elective 3
- Humanities/Fine Arts Elective 3

**Junior**
- Apply for student teaching
- ED Curr. & Instr. 321 3
- History 301 3
- ED Special Education 333 3
- History 300-400 Elective 3
- Elective 3

**Senior**
- ED Curr. & Instr. 436r 2
- ED Curr. & Instr. 437 2
- ED Curr. & Instr. 438 3

**Typical course of study in secondary education: home economics (B.S.)**

**First Semester**
- Home Economics 101 3
- General Education Category A 3
- General Education Category B
  - Humanities 3
  - General Education Category C 3
  - General Education Category D
    - Chemistry D121 4
    - Physical Education 021 1

**Second Semester**
- Home Economics 104 3
- General Education Category A 3
- General Education Category B
- Home Economics 206 3
- Biology D121 4
- Mathematics F120 3
- ED Curr. & Instr. 200 1

**Secondary Education: Home Economics (B.S.)**

**General Education** (see pages 26-27 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

**Category C**
- 2 approved behavioral or social science courses other than education (6 hours): Economics C101, 3 hours sociology plus one course to total 9 hours behavioral or social sciences; for certification purposes, 3 of the hours may be in history

**Category D**
- 1 approved physical or natural science course with laboratory (4 hours; approved related courses below will apply)

**Category F**
- Mathematics F120

**Category C**
- 1 approved perspectives course (3 hours)

**Major and related courses**
- Biology D121,122, 210
- Chemistry D121,122
- 36 hours home economics including 101,104,105,201,206,207,300,301, 302, 303, 304, and electives
- 33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333
- 2.25 average both in teaching fields and in School of Education courses

**Junior**
- Apply for student teaching
- ED Curr. & Instr. 321 3
- History 301 3
- ED Special Education 333 3
- History 300-400 Elective 3
- Elective 3

**Senior**
- ED Curr. & Instr. 436r 2
- ED Curr. & Instr. 437 2
- ED Curr. & Instr. 438 3

Electives to complete 128 hours

**Minimum of 30 hours of 300 and 400 level courses**

Electives to complete 128 hours

**Minimum of 30 hours of 300 and 400 level courses**

Electives to complete 128 hours

**Typical course of study in secondary education: home economics (B.S.)**

**First Semester**
- Home Economics 105 3
- Apply for admission to TEP
- Home Economics 206 3
- Biology D121 4
- Mathematics F120 3
- ED Curr. & Instr. 200 1

**Second Semester**
- Home Economics 201 3
- Home Economics 207 3
- Economics C101 3
- Biology 122 4
- ED Curr. & Instr. 204 3
- ED Curr. & Instr. 205 1

**Minimum of 30 hours of 300 and 400 level courses**

Electives to complete 128 hours

**Typical course of study in secondary education: home economics (B.S.)**

**First Semester**
- Home Economics 105 3
- Apply for admission to TEP
- Home Economics 206 3
- Biology D121 4
- Mathematics F120 3
- ED Curr. & Instr. 200 1

**Second Semester**
- Home Economics 201 3
- Home Economics 207 3
- Economics C101 3
- Biology 122 4
- ED Curr. & Instr. 204 3
- ED Curr. & Instr. 205 1

**Minimum of 30 hours of 300 and 400 level courses**

Electives to complete 128 hours

**Typical course of study in secondary education: home economics (B.S.)**

**First Semester**
- Home Economics 105 3
- Apply for admission to TEP
- Home Economics 206 3
- Biology D121 4
- Mathematics F120 3
- ED Curr. & Instr. 200 1

**Second Semester**
- Home Economics 201 3
- Home Economics 207 3
- Economics C101 3
- Biology 122 4
- ED Curr. & Instr. 204 3
- ED Curr. & Instr. 205 1

**Minimum of 30 hours of 300 and 400 level courses**

Electives to complete 128 hours
Secondary Education: Mathematics (B.S.)

General Education (see pages 26-27 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

**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**
1 approved mathematics course (3 hours; approved courses below will apply)

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

1 additional course outside teaching field from communications, humanities, natural or behavioral sciences

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**

Computer Science 118
Mathematics (F145), F150,160,195, 250 and 260
18 hours 300 and 400-level mathematics courses including 321, 350 but excluding 415, 416.
2.00 average in all 300 and 400-level mathematics courses

Recommended elective: Mathematics 451, 452

33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333

2.25 average both in teaching fields and in School of Education courses

Minimum of 30 hours of 300 and 400 level courses

Electives to complete 128 hours

**Typical course of study in secondary education: mathematics (B.S.)**

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<th>Second Semester</th>
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<td>Freshman</td>
<td>General Education Category A</td>
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**Junior**

Apply for student teaching
Home Economics 304 3
Home Economics 303 3
ED Curr. & Instr. 321 3
Home Economics Elective 3
ED Special Education 333 3

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**Senior**

ED Curr. & Instr. 433 4
ED Curr. & Instr. 431 2
ED Curr. & Instr. 437 2
ED Curr. & Instr. 438 9
ED Special Education 333 3

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(Mathematics 160 in summer school — if needed.)

**Sophomore**

ED Curr. & Instr. 204 3
ED. Curr. & Instr. 205 1
Mathematics 195 3
Mathematics 250 4
Mathematics 300-400 Elective 3
Mathematics 300-400 Elective 3
Mathematics 300-400 Elective 3
Mathematics 300-400 Elective 3
Elective 4
Elective 4
Elective 4

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</table>

*Mathematics sequence may begin with 145 rather than 150 depending on preparation.

Secondary Education: Physics (B.S.)

General Education (see pages 26-27 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

**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**
1 approved physical or natural science course other than physics 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 C**
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**

Mathematics F145, F150,160 (250, 260 recommended)
Typical course of study in secondary education: physics (B.S.)

First Semester | Second Semester
--- | ---
**Freshman** | **Freshman**
General Education Category A | 3 | General Education Category A | 3
Physics 103 | 4 | Physics 104 | 4
Biology D121 or Geology D111 | 4 | Biology 122 or Geology 212 | 4
Physical Education 021 | 1 | Physical Education Activity | 1
Humanities Elective | 3 | Behavioral Science Elective | 3
Fine Arts Elective | 3 | 15 | 18

**Sophomore** | **Sophomore**
Physics 231 | 4 | Apply for admission to TEP
Mathematics F145 | 4 | Physics 232 | 4
ED Curr. & Instr. 201 | 3 | Mathematics F150 | 4
ED Curr. & Instr. 200 | 1 | ED Curr. & Instr. 204 | 3
Chemistry D121 | 4 | ED Curr. & Instr. 205 | 1
Chemistry 122 | 4 | 16 | 16

**Junior** | **Junior**
Apply for student teaching | &nbsp; | &nbsp;
Mathematics 160 | 4 | ED Curr. & Instr. 431 | 2
ED Curr. & Instr. 321 | 3 | ED Special Education 333 | 3
Behavioral Science Elective | 3 | ED Curr. & Instr. 333 | 3
Physics Elective | 4 | Perspectives Elective | 3
Elective | &nbsp; | &nbsp; | &nbsp; | &nbsp; | 17 | 15

**Senior** | **Senior**
ED Curr. & Instr. 436r | 2 | Physics Elective | 4
ED Curr. & Instr. 437 | 2 | Humanities/Fine Arts Elective | 6
ED Curr. & Instr. 438 | 9 | Behavioral Science Elective | 3
 | | Elective | 5 | 13 | 18

Secondary Education: Political Science* (B.S.)

**General Education** (see pages 26-27 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 or political science

**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 and political science; 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 political science (3 hours)
1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
Three hours from Political Science 101, 102
Political Science 201
Nine hours from political science courses at the 200 level (excluding 201)

Nine hours from political science courses at the 300 level
12 hours from political science courses at the 400 level, with no more than six hours from 461r, 462r, 463, 464, 471r

Three hours from Art Bill, B211, 212, 213; Modern Languages 100, 110, 120; or Classical Civilization 301, 302
Six hours of history electives approved by the department
Three hours from Philosophy 211, 230, 322
Three hours from Sociology 209, 317, 318, 340

33 hours from the School of Education including Curriculum and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333
2.25 average both in teaching fields and in School of Education courses

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

‘Students seeking teacher certification in Tennessee in the area of social studies must complete 6 semester hours in American history, 6 semester hours in European or world history, and 6 semester hours each in four of the following fields: economics, geography, political science, sociology, and psychology (must include Psychology 101 and 331 for psychology endorsement).

Typical course of study in secondary education: political science (B.S.)

First Semester | Second Semester
--- | ---
**Freshman** | **Freshman**
General Education Category A | 3 | General Education Category A | 3
Mathematics F120 | 3 | Science Elective | 4
Humanities/Fine Arts Elective | 4 | General Education Category C | 3
Behavioral Science Elective | 5 | Political Science 200 Elective | 3
Perspectives Elective | 3 | History Elective | 3
 | | Humanities/Fine Arts Elective | 3 | 16 | 16

**Sophomore** | **Sophomore**
ED Curr. & Instr. 201 | 3 | Apply for admission to TEP
ED Curr. & Instr. 200 | 1 | ED Curr. & Instr. 205 | 1
Political Science 201 | 3 | ED Curr. & Instr. 204 | 3
Humanities/Fine Arts Elective | 3 | General Education Category C | 3
Humanities/Fine Arts Elective | 3 | Political Science 200 Elective | 3
Perspectives Elective | 3 | History Elective | 3
 | | Humanities/Fine Arts Elective | 3 | 16 | 16

**Junior** | **Junior**
Apply for student teaching | &nbsp; | &nbsp;
ED Special Education 333 | 3 | ED Curr. & Instr. 431 | 2
ED Curr. & Instr. 321 | 3 | ED Curr. & Instr. 433 | 4
History Elective | 3 | Philosophy 211, 230 or 322
Political Science 200 Electives | 6 | Political Science 300 Electives | 3
Political Science 300 Elective | 3 | Political Science 400 Elective | 3
 | | &nbsp; | &nbsp; | &nbsp; | 18 | 18
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### Secondary Education: Psychology* (B.S.)

**General Education** (see pages 26-27 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

- **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 and psychology; for certification purposes, 3 of the hours may be in history

- **Category D**
  - 2 natural science courses to total 8 hours in natural science (one course must be approved laboratory science)

- **Category F**
  - Mathematics F120

- **Category C**
  - 1 approved perspectives course (3 hours)

  - 1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

**Health and Physical Education 021** plus one additional semester physical education activity

**Major and related courses**

- 27 hours psychology including 101, 201 (or equivalent), 202 or 203, 251, 331,345 (if a statistics course outside psychology is taken an additional psychology elective must be completed)

- 33 hours from the School of Education including Curricular and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333

- 2.25 average both in teaching fields and in School of Education courses

**Minimum of 30 hours of 300 and 400 level courses**

**Electives** to complete 128 hours

- Students seeking teacher certification in Tennessee in the area of social studies must complete 6 semester hours in American history, 6 semester hours in European or world history, and 6 semester hours each in four of the following fields: economics, geography, political science, sociology, and psychology (must include Psychology 101 and 331 for psychology endorsement).

### Typical course of study in secondary education: psychology (B.S.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
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<td>Freshman</td>
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<tr>
<td>General Education Category A</td>
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<tr>
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<tr>
<td>Psychology 101</td>
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<td>Science Elective, Category D</td>
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<tr>
<td>Humanities/Fine Arts Elective</td>
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<table>
<thead>
<tr>
<th>Senior</th>
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<tbody>
<tr>
<td>ED Curr. &amp; Instr. 436r</td>
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<tr>
<td>ED Curr. &amp; Instr. 437</td>
<td>2</td>
</tr>
<tr>
<td>ED Curr. &amp; Instr. 438</td>
<td>9</td>
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<tr>
<td>Sociology 209, 317, 318 or 340</td>
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</tr>
<tr>
<td>Political Science 400 Electives</td>
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</tr>
<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td>13</td>
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</table>

**Sophomore**

| General Education Category C | 3 |
| Psychology 202 or 203 | 3 |
| Humanities/Fine Arts Electives | 6 |
| Perspectives Elective | 3 |
| 16        | 16              |

**Junior**

| General Education Category C | 3 |
| ED Curr. & Instr. 321 | 3 |
| ED Special Education 333 | 3 |
| Psychology 331 | 3 |
| Social Science Elective | 3 |
| Electives | 6 |
| 18        | 18              |

**Senior**

| General Education Category C | 3 |
| ED Curr. & Instr. 436r | 2 |
| ED Curr. & Instr. 437 | 2 |
| ED Curr. & Instr. 438 | 9 |
| Psychology Elective | 3 |
| Electives | 12 |
| 13        | 15              |

### Secondary Education: Sociology* (B.S.)

**General Education** (see pages 26-27 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

- **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, sociology, and anthropology; for certification purposes, 3 of the hours may be in history

- **Category D**
  - 2 natural science courses to total 8 hours in natural science other than anthropology (one course must be approved laboratory science)

- **Category F**
  - Mathematics F120

- **Category C**
  - 1 approved perspectives course other than anthropology (3 hours)

  - 1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

**Health and Physical Education 021** plus one additional semester physical education activity

**Major and related courses**

- 33 hours sociology and anthropology including Sociology 151,314, 394 or 450; Anthropology 152 or 208; Anthropology 302 or Sociology 312; plus 18 hours of sociology/anthropology electives of which 9 hours are at the 300-400 level

- 33 hours from the School of Education including Curricular and Instruction 200, 201, 204, 205, 321, 431, 433, 436r, 437, 438; Special Education 333

- 2.25 average both in teaching fields and in School of Education courses

**Minimum of 30 hours of 300 and 400 level courses**

**Electives** to complete 128 hours

- Students seeking certification in Tennessee in the area of social studies must complete 6 semester hours in American history, 6 semester hours in European or world history, and 6 semester hours each in four of the following fields: economics, geography, political science, sociology, and psychology (must include Psychology 101 and 331 for psychology endorsement).
must complete 6 semester hours in American history, 6 semester hours in European or world history, and 6 semester hours each in four of the following fields: economics, geography, political science, sociology, and psychology (must include Psychology 101 and 331 for psychology endorsement).

**Typical course of study in secondary education: sociology (B.S.)**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>General Education Category A</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Mathematics F120</td>
<td>Mathematics F120</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>Physical Education 021</td>
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<tr>
<td>Sociology 151</td>
<td>Anthropology 152 or 208</td>
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<tr>
<td>Science Elective, Category D</td>
<td>Science Elective</td>
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<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Elective</td>
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<tr>
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<tbody>
<tr>
<td>ED Curr. &amp; Instr. 200</td>
<td>ED Curr. &amp; Instr. 204</td>
</tr>
<tr>
<td>Humanities/Fine Arts Electives</td>
<td>General Education Category C</td>
</tr>
<tr>
<td>Sociology/Anthropology Elective</td>
<td>Sociology/Anthropology Elective</td>
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<tr>
<td>Perspectives Elective</td>
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<table>
<thead>
<tr>
<th><strong>Junior</strong></th>
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<tbody>
<tr>
<td>Apply for student teaching</td>
<td>Apply for admission to TEP</td>
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<tr>
<td>ED Curr. &amp; Instr. 321</td>
<td>ED Curr. &amp; Instr. 325</td>
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<tr>
<td>ED Special Education 333</td>
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<td>Social Science Elective</td>
<td>Sociology/Anthropology Elective</td>
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<tr>
<td>Sociology 314</td>
<td>Sociology 314</td>
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<td>Anthropology 302 or Sociology 312</td>
<td>Sociology/Anthropology Elective</td>
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<tr>
<td>Elective</td>
<td>Sociology/Anthropology 302 or Anthropology 302</td>
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<thead>
<tr>
<th><strong>Senior</strong></th>
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<tbody>
<tr>
<td>ED Curr. &amp; Instr. 436</td>
<td>ED Curr. &amp; Instr. 437</td>
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<tr>
<td>ED Curr. &amp; Instr. 438</td>
<td>Sociology/Anthropology</td>
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<tr>
<td>Sociology 300-400 Elective</td>
<td>Sociology/Anthropology Elective</td>
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<td>Elective</td>
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**Special Education: General (B.S.)**

**General Education** (see pages 26-27 for list of approved courses)

**Category A**
2 approved courses in written communication in the English language (6 hours), plus English 228 to total 9 hours

**Category B**
3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each), plus Art 222 to total 12 hours humanities/fine arts in three fields other than history

**Category C**
2 approved behavioral or social science courses (6 hours) plus one course to total 9 hours behavioral sciences in two fields other than education (approved related courses below may apply); for certification purposes, 3 of the hours may be in history

**Category D**
2 natural science courses to total 8 hours natural sciences (one course must be approved laboratory science)

**Category F**
Mathematics F115, F116

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

Health and Physical Education 021 plus one additional semester physical education activity

**Major and related courses**
6 hours from Psychology C101 (required), 251, 311, 312, 313
8 hours Health and Physical Education 302 and 436 required and courses from 100, 154, 303 (the 2 hours of required physical education activity may count)
12 hours from the School of Education including Curriculum and Instruction 200, 201, 203, 301, 302, 401 or 402, 403, 404, 423, and Special Education 100, 250, 255, 320, 330, 350 or 486; 415, 440, 453, 460, 461, 465, 469
2.25 average in School of Education courses

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

**Typical course of study in special education: general (B.S.)**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>Category A (English 101)</td>
<td>Category A (English 102)</td>
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<tr>
<td>Mathematics F115</td>
<td>Mathematics F115</td>
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<tr>
<td>Category C (Psychology 101)</td>
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<td>Category D</td>
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<tbody>
<tr>
<td>ED Special Education 100</td>
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<tr>
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<td>ED Special Education 250</td>
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<tr>
<td>ED Curr. &amp; Instr. 203</td>
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<td>English 228</td>
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<td>Category B (Art 111)</td>
<td>Category C</td>
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<td>Category C</td>
<td>HPER Activity</td>
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<td>ED Curr. &amp; Instr. 320</td>
<td>ED Curr. &amp; Instr. 320</td>
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<tr>
<td>ED Special Education 350 or 486</td>
<td>ED Special Education 350 or 486</td>
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<tr>
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<td>Category B</td>
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<td>Elective (ED Counseling 401)</td>
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<tbody>
<tr>
<td>HPER 436</td>
<td>Professional Semester</td>
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<td>ED Curr. &amp; Instr. 403 or 404</td>
<td>ED Special Education 440</td>
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<tr>
<td>ED Curr. &amp; Instr. 423</td>
<td>ED Special Education 461</td>
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<td>ED Special Education 453</td>
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<tr>
<td>ED Special Education 460</td>
<td>ED Special Education 460</td>
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<tr>
<td>Elective</td>
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**Curriculum and Instruction Courses**

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.
199r Special Projects (1-4)
Individual projects and field components; maximum credit four hours. Prerequisite: transfer student and approval of dean. School of Education.

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 that institution. At least 15 hours of experiences at school sites required. Corequisite: 201.

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. Corequisite: 200.

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. 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. 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. Credit not allowed in both Curriculum and Instruction 204 and Psychology 222. Corequisite: 205.

205 Investigations of the Adolescent in the Classroom (1)
Structured observation and experience in the secondary school classroom. Case studies of adolescents and analyses of classroom practice will be completed by the student. A minimum of 15 hours of field work is expected with the balance devoted to on-campus seminars. Corequisite: 204.

206 Investigations of the Child in the Classroom (1)
A one semester hour laboratory course designed to provide Early Childhood/Elementary Education students with a cross-section of generic educational experiences that will be applied in subsequent course work in their teacher education programs. The course stresses teacher aide work in an elementary (K-6) classroom under the supervision of a master teacher. Corequisite: 203.

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.

215r Workshop and Seminar (2-4)
Current topics in education. Special programs and in-service courses. Prerequisite: approval of department head.

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.

320 The Teaching of Reading in the Elementary School (3)
Survey of methods, strategies, diagnostic-prescriptive procedures, and materials for teaching reading. Field component required.

321 The Teaching of Reading in the Secondary School (3)
Integrating reading skills and teaching strategies with the teaching of content area subjects. Required of all Secondary Education majors except HPER, Music, and Art.

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. Prerequisite: admission to teacher education program. May not be used for graduate credit.

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 the elementary school curricula. Includes instructional use of educational media including the microcomputer. Prerequisite: admission to teacher education program. May not be used for graduate credit.

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, creatively, and to communicate effectively. 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. 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 in different grade levels, as well as inner city and suburban or rural schools. 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. 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. Prerequisite: admission to teacher education program. May not be used for graduate credit.

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. 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.

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. 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. Prerequisites: 320 or equivalent, or permission of instructor; admission to teacher education program. May not be used for graduate credit.

431 Teaching Strategies and Materials in the Disciplines (2)
Curricular and media developments appropriate for the respective discipline. Must be taken prior to student teaching. Prerequisites: 204, 205, 200, 201; application approved 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. Prerequisite: admission to teacher education program. May not be used for graduate credit. Spring semester only.

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. 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. Prerequisite: undergraduate students must be admitted to teacher education program. Corequisite: 438. Not required for HPER 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. 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 ensure experience in inner city and suburban or rural schools and junior and senior high schools where possible. 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. Prerequisites: 432, Music 321, admission to teacher education program. Corequisites: 436r, 437. Spring only.

480 Teaching Media (3)
The selection, use, and evaluation of technological innovations in audiovisual media; emphasis on laboratory experiences in communication media.

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.

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.

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. Prerequisite: one year full-time teaching in certifiable area; approval of dean, School of Education.

490r Workshop and Seminar (2-4)
Special problems and discussion of current topics in education. Prerequisite: senior or graduate standing.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)
Prerequisites: approval of the dean, School of Education.

498r Individual Studies (1-4)
Prerequisite: approval of department head.

499r Group Studies (1-4)
Prerequisite: approval of department head.

Special Education and Counseling 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 twenty hours of observation is required.

19r Special Projects (1-4)
Individual projects and field components; maximum credit four hours. Prerequisites: transfer student and approval of dean, School of Education.

215r Workshop and Seminar (2-4)
Current topics in education. Special programs and in-service courses.

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 leaderships; and the global characteristics of the target population. Special education majors only.

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.

320 Education Exceptionalities (3)
A study of the psycho-social-educational treatment systems used with educational exceptionalities. Prerequisite: 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. 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. 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.

350 Characteristics and Techniques for the Moderately Handicapped Student (3)
The in-depth study of the characteristics and needs of moderately handicapped students includes the various academic and behavioral interventions utilized in resource settings and other placements.

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.

415 The Adolescent Exceptional Student (3)
An examination of the unique needs and particular issues which are specific to adolescent exceptional students. The course emphasizes approaches and methodology concerning corrective and compensatory instruction.

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. 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
Health, Physical Education & Recreation (HPER)

Associate Professor Norred, Head
Professor Stinnett
Associate Professors Ezell, Fanning
Assistant Professors Ford, Norris, Wood
Instructor Jadin

Coordinator of Intramural Activities Underwood

Programs and activities within the scope of the Health, Physical Education, and Recreation Department are administered through the School of Education.

A major thrust of HPER is the provision of two distinct academic career program tracks:

1. Secondary Education-Health and Physical Education
2. Recreation Specialist

In addition, HPER offers a diversified service program of physical recreation activities primarily for the undergraduate student. Activity courses from this program may be used to meet the University requirement of two (2) semester hours.

Furthermore, HPER provides a well-rounded seasonal intramural activities program and general recreation for the University community.

Secondary Education: Health and Physical Education

This career program is designed for any student who desires to gain certification in both health instruction (K-12) and secondary physical education (7-12). The curriculum focuses on professional career development in both health and physical education, yet permits a student to gain cultural breadth through completing general educational components which comprise at least one-third of the total number of hours in the program.

Since graduates of this specialization are often employed in the capacity of teacher-coach, a partial segment of the curriculum is devoted to content and laboratory experiences designed to educate the student in becoming an effective coach for athletic and intramural sports.

Graduate concentrations in either health education or physical education are possible while earning the Master of Education in secondary education. Refer to the Graduate Bulletin for information concerning this program.

Admission to Teacher Education Program (TEP) for Health and Physical Education

In addition to meeting criteria for admittance to TEP, a student desiring certification in health and physical education will be expected to meet these criteria:

1. Have a minimum grade point average of 2.40 in professional health, physical education and recreation course work. Successfully complete six hours from professional activity courses and nine hours from theory courses within the Health, Physical Education, and Recreation Department.
2. Successfully complete an interview with his or her TEP department committee.

Any student enrolled within the teacher certification curriculum is expected to maintain and demonstrate standards of ethics reasonably attributed to an educator who holds a professional teacher certification.

Further, any student who plans to teach outside of Tennessee is strongly urged to check certification requirements with the appropriate state department of education before the end of the sophomore year in order to plan his or her program appropriately.

Secondary Education: Health and Physical Education (B.S.)

General Education (see pages 26-27 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.

Category C
2 approved behavioral or social science courses including Sociology C215 (6 hours), plus one course to total 9 hours behavioral or social sciences; for certification purposes, 3 of the hours may be in history.

Category D
2 approved natural science courses including Biology D121,122 to total 8 hours in natural sciences.

Category F
Mathematics F120

Category C
1 approved perspectives course (3 hours)
1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences.

Health and Physical Education 021 plus one additional semester physical education activity.

Major and related courses
21 hours in Health: Health Education 100, 154, 302, 303, 317, 456, plus approved electives such as Health Education 320, 450, 451, 452, 455; Biology 191, 192; Home Economics 105 (completion of these 21 semester hours will grant endorsement in health instruction, kindergarten through grade 12)
36 hours in physical education including Physical Education 201, 318, 211, 231, 232, 233, 237 and a minimum of 12 hours in professional activities as follows:
6 hours from Physical Education 222, 224 or 225, 228, 235
4 hours from Physical Education 211, 231, 232, 233, 237
2 hours from Physical Education 212, 214, 234
25 hours education including Curriculum and Instruction 200, 201, 204, 205, 431, 433, 437, 438
2.40 average in teaching fields
2.25 average in education courses

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

Typical course of study in secondary education: health and physical education (B.S.)

First Semester
Freshman
General Education Category A 3
Biology D121 4
HPER Health Education 100 3
Humanities, Fine Arts 3
Behavioral Science Category C 3
HPER Physical Education 021 Elective 1

Second Semester
Junior
HPER Health Education 317

Sophomore
Mathematics F120
Humanities, Fine Arts Category B
Behavioral Science (Sociology 215) Category C 3
HPER Health Education 302 3
HPER Professional Activities 2
ED Curr. & Instr. 201 3
ED Curr. & Instr. 200 1

Senior
HPER Physical Education 401 3
HPER Physical Education 436 3
HPER Health Education 3 Elective 3
ED Curr. & Instr. 433 4
ED Curr. & Instr. 431 2

Elective outside of major

HPER—Health Education Courses

100 Personal Hygiene (3)
Significant data and facts helpful in making intelligent decisions about personal health; crucial issues of personal, family, and social living.

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.

199 Special Projects (1-4)
Individual or group projects. Maximum credit four hours. Prerequisite: approval of HPER department head.

302 Health Care of Children (3)
In-depth consideration of health problems confronting the classroom teacher. Prerequisite: HPER 100 or teaching candidate or approval of instructor.

303 School, Community, and Environmental Health (3)
Interrelationship studies involving home, school, public health, non-official organizations for improved public health; elements of structuring health education curricula.

317 Anatomy and Physiology of Exercise (3)
Intensive study of various physiologic processes related to exercise. Prerequisite: Biology 121 or equivalent.

320 Environmental Health (3)
Major ecological problems relative to individuals, schools, and communities with emphasis upon the teaching-learning process.

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. Prerequisite: approval of instructor, senior or graduate standing.

451 Curricular Designs: Human Sexuality, Drug Abuse (3)
Extended study of problems related to human sexuality and drug abuse education; development of teaching units for schools. Prerequisite: approval of instructor, senior or graduate standing.

452 Problems in Health: Gerontology, Death Education, Human Diseases (3)
Analysis of concepts and attitudes toward aging, death, bereavement, prevention and control of communicable and degenerative diseases. Prerequisite: equivalent of HPER 100, 302, 303; senior or graduate standing or approval of instructor.

455 Methods and Strategies in School Health Education (3)
Investigation of current curricula and teaching strategies employed in health education. Prerequisite: approval of instructor, senior or graduate standing.

456 Research and Current Topics in Health Education (3)
Study of health problems and current professional literature; review of new approaches in techniques and methodology used in health
research. Prerequisite: approval of instructor or HPER senior or graduate standing.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)
Prerequisite: approval of HPER department head.

498r Individual Studies (1-4)
Prerequisite: approval of HPER department head.

499r Group Studies (1-4)
Prerequisite: approval of HPER department head.

HPER: Physical Education Courses

199r Special Projects (1-4)
Individual or group projects. Maximum credit four hours. Prerequisite: approval of HPER department head.

201 Introduction to Physical Education (3)
Role of physical activity in American education based upon the historical, social, economic, and political forces affecting physical education in schools; philosophy and principles of profession.

317 or 318; 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. Prerequisite: equivalent of Biology 121 and HPER 317.

330 Physical Education in the Elementary School (3)
Practical aspects of planning, organizing, administering, and evaluating programs and playgrounds; theories of play; principles of body mechanics; activities corresponding to level of growth and development; materials and methods of teaching. Required for elementary education majors.

332 Organization and Administration of Physical Education (3)
Critical elements in planning, organizing, directing, and evaluating school problems, curriculum structuring, teacher-coach relationships involving students, faculty, administration and community; field assignments. Prerequisite: 201 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. Prerequisites: 317 or 318; or approval of instructor.

400 Current Topics and Problems in Physical Education (3)
Exploration of current topics and problems in physical education significant to teachers, coaches, and administrators in schools and agencies providing services in physical education or related fields. Prerequisite: senior level and approval of instructor; or graduate standing.

401 Tests and Measurements in Health and Physical Education (3)
Assessment of motor traits, organic development, neuromuscular development, sports knowledge, and attitudes related to health and physical education; basic statistics essential to measurement theory. Prerequisites: equivalent of HPER 201, 332; Mathematics 120; senior level and approval of instructor; or graduate standing.

402 Philosophical Foundations of Physical Education and Sport (3)
Identification and implications of several philosophical approaches to play, games, dance, sport, physical education, recreation, and athletics. Prerequisite: senior level or graduate standing.

404 Dynamics of Motor Learning (3)
Psychological aspects of learning, experimental growth, and development as affected by human movement patterns, perceptual mechanisms, and cognitive processes. Prerequisite of 317 or senior level; or graduate standing.

405 Administration of Interscholastic Athletics and Intramurals (3)
Conceptual development of sound programs; common problems, responsibilities, and personnel relationships involving school and community relative to athletics and intramurals. Prerequisite: equivalent of 304 or 332; approval of instructor; or graduate standing.

407 Psychologic and Sociologic Concepts Applied to Physical Education and Sport (3)
Emphasis upon physical education and sport as a socio-cultural psycho-cultural force; psychological-sociologic concepts applied to physical education, recreation, sports. Prerequisite: senior level or graduate standing.

408 Seminar, Current Advances in Bio-Kinetics (3)
Current advances in kinesiologic and physiologic principles of physical education, athletic coaching, and sport. Prerequisite: equivalent of 317 or 318; approval of instructor; or graduate standing.

436 Physical Education for the Exceptional Student (3)
Lecture, demonstration, and practical experiences in the study of exercise and sport phases for the exceptional student. Prerequisite: equivalent of 302 and junior level; or graduate standing.

490r Workshop and Seminar (2-4)
Special problems; in-service education for specific groups; research in professional literature and evaluation measures to topics studied.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)
Prerequisite: approval of HPER department head.

498r Individual Studies (1-4)
Prerequisite: approval of HPER department head.

499r Group Studies (1-4)
Prerequisite: approval of HPER department head.

HPER: Professional Activities Courses

The professional activities component consists of those courses which by nature are physical education/coaching techniques. Courses of this type are designed primarily for that student planning to become a teacher-coach or recreation specialist. A student scheduling a course within this component may expect the final grade to reflect his or her achievement in cognitive acquisitions, affective learnings, and psychomotor skills. Minimal competency levels may be established according to the professional discretion of the respective instructor and each student will be responsible for demonstrating at least these minimal standards before receiving a passing mark.

211 Softball and Volleyball (2)
Histories, basic skills, strategies, psychologies, contemporary offenses, and defenses basic to coaching and teaching of volleyball and Softball. Prerequisite: HPER major or approval of instructor.

212 Conditioning Track and Field (2)
Histories, basic skills, strategies, psychologies, training systems basic to the coaching and teaching of conditioning and track and field. Field experience. Prerequisite: HPER major or approval of instructor.

214 Modern Dance and Exercises (2)
Histories, artistic executions, and expressions, integrations of ballet and modern dance techniques for communication and creative exercises. Prerequisite: HPER major or approval of instructor.

222 Archery and Badminton (2)
Histories, basic skills, strategies, contemporary teaching techniques, skills application for recreational and competitive usage appropriate to each sport. Prerequisite: HPER major or approval of instructor.
**224 Movement Exploration and Rhythmic Sequences (2)**
Skill development and teaching procedures in movement education, fundamental and contemporary movement patterns. **Prerequisite: HPER major or approval of instructor.**

**225 Tumbling and Gymnastics (2)**
Acquisition of fundamental skill development; developing techniques in floor exercises and apparatus; application of exercise theories, development of teaching competencies. **Prerequisite: HPER major or approval of instructor.**

**226 Aquatics (2)**
Development of basic and advanced swimming strokes for teaching and coaching, pool management, direction of swimming programs, emphasis on water safety. **Prerequisite: HPER major or approval of instructor.**

**231 Football (2)**
Histories, basic skills, strategies, psychologies, contemporary offenses, and defenses basic to the coaching and teaching of football. Field experience. **Prerequisite: HPER major or approval of instructor.**

**232 Baseball (2)**
Histories, basic skills, strategies, psychologies, contemporary offenses, and defenses basic to the coaching and teaching of baseball. Field experience. **Prerequisite: HPER major or approval of instructor.**

**233 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; field experiences. **Prerequisite: HPER major or approval of instructor.**

**234 Wrestling, Weightlifting (2)**
Histories, basic skills, strategies, psychologies, training systems basic to the coaching and teaching of wrestling and weightlifting. **Prerequisite: HPER major or approval of instructor.**

**235 Golf and Tennis (2)**
Histories, basic skills, strategies, contemporary teaching techniques, skill application for recreational and competitive usage appropriate to each sport. **Prerequisite: HPER major or approval of instructor.**

**237 Soccer and Racquetball (2)**
Histories, basic skill development and application, offensive and defensive theories, field experience. **Prerequisite: HPER major or approval of instructor.**

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**HPER: Recreation Specialist**

The recreation specialist 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, whose functions include the provision of recreational type services and activities. While there are a few courses common to both the teacher certification and recreation specialist tracks, the focus of the major courses in the recreation component of this program is directed toward the practical applications of theories and strategies learned in professional recreation courses.

To reinforce this intent a student specializing in recreation is expected to engage in several different types of field assignments and experiences.

**Internship Admittance**
The internship practicums in recreation are usually scheduled during the senior year. Normally, a student may not gain official approval for enrollment in either internship HPER 479 or 480 prior to completing at least 12 semester hours of course work within HPER at UTC. A minimum 2.25 grade point average is required on all course work for admission to a recreation internship.

**Health, Physical Education: Recreation Specialist (B.S.)**

**General Education** (see pages 26-27 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**
2 approved behavioral or social science courses including Sociology C151 (6 hours)

**Category D**
1 approved physical or natural science course with laboratory (4 hours): Biology D121

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

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

**HPER 021** plus one additional semester physical education activity

**Major and related courses**
Health, physical education, recreation courses (58 semester hours)
Recreation component (30 hours) to include:
- HPER Recreation 200 (2), 202 (2), 220 (2), 223 (2), 304, 305, 470, 479 (6), 480 (6)
Health component (12 hours) to include:
- HPER 100, 154, 302, 317
Total of 16 semester hours in physical education to include:
- HPER 405, 436 and professional activities (a minimum of 10 hours to be selected by student and assigned by academic adviser)
Related courses (24 hours) including:
- Human Services 405
- Music 321
- Sociology C220
- Sociology 305
- Theatre and Speech 412
Elective 3 hours: approved by adviser or department head
Elective 6 hours: Three hours each from art and office administration.
Elective hours require the approval of the HPER department head
Electives (10 hours) may include Computer Science 210; English 277, 300; Psychology/Sociology 331; Recreation 199r, 227, 498r; Sociology 317, 322
Courses other than listed need approval of HPER department head
2.40 average in recreation component of major courses
Minimum of 30 hours of 300 and 400 level courses
Electives to complete 128 hours

**Typical course of study in health, physical education: recreation specialist (B.S.)**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>Freshman</strong></td>
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<tr>
<td>General Education Category A 3</td>
<td>General Education Category A 3</td>
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<tr>
<td>Biology D121 4</td>
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<td>HPER Health Education 100 3</td>
<td>HPER Health Education 154 3</td>
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<td>Humanities Category B 3</td>
<td>HPER Recreation 200 3</td>
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<tr>
<td>Sociology C151 3</td>
<td>Perspectives Category G 3</td>
</tr>
</tbody>
</table>
## HPER: 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 at least two physical/recreational activities, one of which must be 021.

Participants enrolled in courses within the service program wear a specific type of uniform or the appropriate clothing and footwear prescribed by the respective instructor. Uniforms may be purchased from the bookstore on campus.

### HPER Service Program Courses

The second digit in the service course number indicates the level of skill required for the course. The 2 indicates elementary 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.**

#### 022 or 032 Recreational Activities (1)
Archery, backpacking, badminton, bicycling, bowling, camping, fencing, golf, gymnastics, handball, ice skating, racquetball, riflery, water skiing, sculling, tennis, sailing, weight training, and physical conditioning.

#### 023 or 033 Team Sports (1)
Basketball, volleyball, Softball; speedball, soccer, flag football.

#### 024 or 034 Swimming (1)
Beginning swimming; intermediate swimming, advanced lifesaving.
water safety Instructor I and II certification. **Prerequisite:** proficiency test to determine skill.

025 or 035 Body Mechanics (1)
Individualized program for students with disabilities who are unable to participate in regular activity classes. **Prerequisite:** referral by physician and HPER department head approval.

026 or 036 Dance (1)
Aerobic, ballet, folk and square, modern, and contemporary jazz.

039 Varsity Sports (1)
Basketball, baseball, football, golf, tennis, volleyball, cross country/track and field, soccer, fencing, wrestling, riflery. **Prerequisite:** approval of head coach of respective varsity sport. Course graded on satisfactory/no credit basis and does not meet HPER requirements for graduation. Maximum of eight hours credit may be applied toward the 128 hours required for graduation.
School of Engineering

Professor Ronald B. Cox, Dean
Associate Professor Jones, Director of Undergraduate Studies
Associate Professor Gurley, Director of Graduate Studies and Research
Associate Professor Thomason, Director of Laboratories
Professors Carney, Cox, Rekoff, Koch (Emeritus), Garrison, Welch
Associate Professors Cunningham, Damshala, Foster, Gurley, Henry, Jones, Knight, Lovett, Schonblom, Sendaula, Thomason, Todd, Wynn
Assistant Professor Evans
B. Hull, Coordinator of Cooperative Engineering Program
Covington, Senior Engineering Technician
Gossett, Shops Supervisor

Programs of study available at the B.S. level in which students may specialize are:
- Chemical Engineering
- Civil Engineering (Structural)
- Electrical Engineering (Instrumentation and Control)
- Electrical Engineering (Power)
- Industrial Engineering
- Mechanical Engineering (Mechanics)
- Mechanical Engineering (Thermal)
- Engineering Management

The School of Engineering is the organizational unit of the University which is responsible for engineering and computer science programs. Programs are offered which lead to the Bachelor of Science in Engineering degree, the Bachelor of Science degree (Engineering Management), the Master of Science degree with a major in Engineering, and the Bachelor of Science degree with a major in Computer Science. A Master of Science degree with a major in Computer Science is also offered. The Computer Science program operates as an independent organizational unit under the direction of a department head. Its programs are described in a later section.

The faculty listed above support all of the engineering programs offered by the University. 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.

The B.S. Engineering program is accredited by the Engineer's Council for Professional Development/Accrediting Board for Engineering and Technology, the national accrediting agency for engineering programs.

Bachelor of Science in Engineering (B.S.E.) Program

The engineering curriculum provides a four year program with emphasis on the fundamentals of engineering, mathematics, and science. Considerable attention is also given to supporting curricular content in the area of humanities and social sciences.

Integrated throughout the engineering curriculum is a significant amount of engineering design. The engineering design experiences begin with freshman team design projects and are continued throughout the curriculum. Particular attention is given to the systems aspects of engineering design problems. An introductory engineering design course is provided during the junior year which introduces the student to the characterization of engineering design as a decision process with objectives, constraints, models, and appropriate optimization techniques. Following this course, all students take an engineering design course in a specific area during their senior year which provides for the application of engineering design techniques to specific problems in their particular area of interest. The design experiences are culminated by a year-long team design project for all students during their senior year.

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 during the first semester of the freshman year in engineering computations. Another course follows during the sophomore year. These two courses provide the background for the utilization of the computer throughout the remainder of the engineering program.

Appropriate laboratory experiences with new and modern laboratory equipment and facilities are included in the program of each student.

Engineering (B.S.E.)

General Education (see pages 26-27 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 F
1 approved mathematics course (3 hours; approved related course below will apply)

Category C
1 approved perspectives course other than engineering (3 hours)

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, 250, 260  
Chemistry D121 (counts as Category D)  
Physics 231  
Engineering Core (49 to 59 hours)  
Syllabi Courses: 24 hours minimum (including senior design)  
Electives depend on program selected  
Minimum degree requirements: 137 hours (147 for co-op graduates)  
2.00 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. The requirements are —  

Chemical Engineering  
Special requirements of this program dictate accurate advising regarding prerequisite courses, etc., as early as the freshman year.  

*For qualified students, Engineering 495 (Honors) may be substituted for four of the eight hours required in Engineering 490.  

Civil Engineering (Structural)  
General Education requirements (see above)  

Major and related courses  
Mathematics F150,160, 250, 260  
Chemistry D121 (counts as category D), 122, 351, 352, 371, 372  
Physics 231  
Engineering Core Courses: 49 hours including 100r (twice), 102,103, 104,124, 225, 246, 272, 303, 307, 322, 325, 340, 373, 379, 380, 400r (twice)  
Syllabi Engineering Courses: 24 hours including 405,430, 431, 432, 434, 490* (8 hours)  
2.00 average in all engineering courses  
Total hours: 143 (153 for co-op graduates)  

*For qualified students, Engineering 495 (Honors) may be substituted for four of the eight hours required in Engineering 490.  

Electrical Engineering  
(Two tracks: Instrumentation and Control or Power)  

General Education requirements (see above)  

Major and related courses  
Mathematics F150,160, 250, 260  
Chemistry D121  
Physics 231, 232  
Engineering Core Courses: 59 hours including 100r (twice), 102,103, 104,124, 225, 246, 248, 272, 303, 307, 322, 325, 340, 373, 379, 380, 400r (twice)  
Syllabi Engineering Courses: 24 hours including 452,460, 462, 465, 468, 490* (8 hours)  
2.00 average in all engineering courses  
Total hours: 137 (147 for co-op graduate)  

*For qualified students, Engineering 495 (Honors) may be substituted for four of the eight hours required in Engineering 490.  

Industrial Engineering  
General Education requirements (see above)  

Major and related courses  
Mathematics F150,160, 250, 260  
Chemistry D121  
Physics 231, 232  
Engineering Core Courses: 59 hours including 100r (twice), 102,103, 104,124, 225, 246, 248, 272, 303, 307, 322, 325, 340, 373, 379, 380, 400r (twice)  
Syllabi Engineering Courses: 24 hours including 450, 452, 454, 457, 490* (8 hours), plus approved elective  
2.00 average in all engineering courses  
Total hours: 137 (147 for co-op graduates)  

*For qualified students, Engineering 495 (Honors) may be substituted for four of the eight hours required in Engineering 490.  

Mechanical Engineering  
(Two tracks: Mechanics or Thermal Science)  

General Education requirements (see above)  

Major and related courses  
Mathematics F150,160, 250, 260  
Chemistry D121  
Physics 231, 232  
Engineering Core Courses: 59 hours including 100r (twice), 102,103, 104,124, 225, 246, 248, 272, 303, 307, 322, 325, 340, 373, 379, 380, 400r (twice)  
Syllabi Engineering Courses (Mechanics): 24 hours including 405, 442, 444 or 445, 446 or 468, 490* (8 hours), plus approved elective  
Syllabi Engineering Courses (Thermal Science): 24 hours including 405, 431, 436, 490* (8 hours), plus approved electives  
2.00 average in all engineering courses  
Total hours: 137 (147 for co-op graduates)  

*For qualified students, Engineering 495 (Honors) may be substituted for four of the eight hours required in Engineering 490.  

Typical courses of study in engineering (B.S.E.)  
In general all engineering students take a common core of courses during their first three years and then take courses in their area of specialization during their fourth year. The typical first three years for all students are listed below, followed by the typical fourth year for students in each of the areas of specialization.  

Engineering Core  
Chemical Engineering differs from this sequence, see under Areas of Specialization.  

<table>
<thead>
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<th>First Semester</th>
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<td><strong>General Education Category B</strong></td>
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<td><strong>Chemistry 121 Laboratory</strong></td>
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<td><strong>Mathematics 150</strong></td>
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**Sophomore**  

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<td><strong>Engineering 102</strong></td>
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<tr>
<td><strong>Engineering 104</strong></td>
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<td><strong>Physics 231</strong></td>
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<tr>
<td><strong>Chemistry 121 Laboratory</strong></td>
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<tr>
<td><strong>Physical Education Activity</strong></td>
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**Junior**  

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<td><strong>Physics 231</strong></td>
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**Senior**  

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<td><strong>Mathematics 250</strong></td>
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<td><strong>Physics 231</strong></td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>18</td>
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</table>
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 years, 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.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Freshman</td>
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<td>Engineering 100r Seminar</td>
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<td>Mathematics F150</td>
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<td>Mathematics 250</td>
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<td>General Education Category A</td>
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<td>Engineer 405</td>
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</table>

Civil Engineering (Structural)—

| Senior          |                 |
| General Education Category B | General Education Category G |
| Engineering 400r Seminar | Engineering 400r Seminar |
| Engineer 460     | Engineering 465 |
| Engineer 452     | Engineering 468 |
| Engineer 462     | Engineering 490r |
| Engineer 490r    |                 |
|                |                 |

Electrical Engineering (Instrumentation and Control)—

| Senior          |                 |
| General Education |                 |
| Engineering 400r Seminar | Engineering 400r Seminar |
| Engineer 470     | Categories B and G |
| Engineer 475     | Engineering 400r Seminar |
| Engineer 477     | Engineering 473   |
| Engineering 490r | Engineering 490r |
|                |                 |

Electrical Engineering (Power)—

| Senior          |                 |
| General Education |                 |
| Engineering 400r Seminar | Engineering 400r Seminar |
| Engineer 452     | Categories B and G |
| Engineer 454     | Engineering 400r Seminar |
| Engineer 490r    | Engineering 450  |
| Engineer 471     | Engineering 457  |
| Engineer 475     | Engineering 490r |
|                |                 |

Industrial Engineering—

| Senior          |                 |
| General Education Category B | General Education Category G |
| Engineering 400r Seminar | Engineering 400r Seminar |
| Engineer 452     | Categories B and G |
| Engineer 454     | Engineering 400r Seminar |
| Engineer 490r    | Engineering 550  |
| Engineer 471     | Engineering 457  |
| Engineer 475     | Engineering 490r |
|                |                 |

Mechanical Engineering (Mechanics)—

| Senior          |                 |
| General Education Category B | General Education Category G |
| Engineering 400r Seminar | Engineering 400r Seminar |
| Engineer 444 or 445 | Engineering 442 |
| Engineer 405     | Engineering 468 or 468 |
| Engineer 490r    | Engineering 490r |
| Engineer Elective |                 |
|                |                 |

Mechanical Engineering (Thermal Sciences)—

| Senior          |                 |
| General Education Category B | General Education Category G |
| Engineering 400r Seminar | Engineering 400r Seminar |
| Engineer 405     | Categories B and G |
| Engineer 431     | Engineering 400r Seminar |
| Engineer 490r    | Engineering 436 |
| Engineer Elective | Engineering 490r |
|                |                 |

Career Preparation for Other Fields

By careful selection of electives a student may prepare for one of a variety of fields in addition to those listed above. For example, students may prepare for the emerging field of environmental engineering by completing the core program along with electives in environmental sciences. Other fields such as nuclear engineering are primarily areas of graduate specialization. By proper selection of electives in physics, mathematics, and engineering in consultation with an adviser, the student may prepare to enter such fields.

It is also possible to prepare to enter medical school or law school by proper selection of electives and perhaps by completion of some additional courses above the minimum requirements. Such a premedical or prelaw engineering program will provide an excellent back-
ground for the student who wishes to enter the medical or law profession with a better understanding of the expanding scientific and technological aspects of these fields.

For guidance and assistance concerning preparation for any particular field of interest, the student should contact the dean of the School of Engineering or an appropriate adviser.

Engineering Management Program

Professors Evans and Lovett, Coordinators

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 suggests that the program develops skills useful to those who do or will manage.

Engineering Management (B.S.)

General Education (see pages 26-27 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)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
Math F145, F150,160, 250
Chemistry D121 (counts as Category D)
Physics 231, 303
Engineering 100r (twice), 102,103,104,124,225,246,303,400r (twice), 452, 454, 457
Economics C101, C102
Accounting 201, 202, 305
Management 211, 212, 311
Finance 302

Marketing 313
Psychology 406 (Organizational Behavior)
Free electives (10 hours)
2.00 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.)

First Semester | Second Semester
---|---
Freshman | General Education Category A 3
| Chemistry D121 (Category D) 4
| Chemistry Lab 0
| Mathematics F145 4
| Economics C101 3
| Physical Education 021 1
| General Education Category B 3
| 17.5 | 17.5

Sophomore | Mathematics 250 4
| Physics 231 4
| Accounting 305 3
| General Education Category G 3
| Management 311 3
| 17 | 14

Junior | Psychology 406 3
| (Organizational Behavior) 3
| Engineering 452 3
| Engineering 454 4
| Engineering 400r Seminar 5
| General Education Category B 3
| General Education Category B 3
| 16.5 | 16.5

Senior | Physics 303 4
| Marketing 313 3
| Engineering 400r Seminar 5
| Finance 302 3
| General Electives 6
| 16.5 | 16.5

Cooperative Engineering Program

B. Hull, Coordinator

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 2.00 grade point average (out of 4.00) to be enrolled in the program. Further, he or she must maintain a 2.00 average to remain in the program. If a student is placed on academic probation while participating in the co-op program, his or her employer will be notified and the student will be terminated from the program if desired by the employer. In any case, two successive school terms are considered as continuous terms at UTC for determining academic suspension, probation, etc.

In general it is expected that co-op students will maintain a grade point average considerably above the 2.00 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 (Cooperative Seminar) during the term in school immediately following a work assignment. This seminar is especially designed to provide for discussing and reporting on projects conducted as a part of the cooperative work assignment.

(4) **Reports**—Student participants and employers are requested to file a brief statement with UTC concerning the student's work at the end of each work term.

(5) **Work Schedule**—Co-op students are expected to attend school full-time during their first year and last year in the program. They will alternate each term (between school and work) during the three years between their first and last year in the program. (A term is considered to be either first semester, second semester, or summer term.)

(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 75 weeks of co-op work experience.

Degree Requirements

A B.S.E. cooperative engineering student graduate completes all degree requirements of the B.S.E. graduate listed above, plus ten additional hours in Engineering 390r, Cooperative Seminar.

**Engineering Courses**

**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.)

**100r Seminar (.5) CORE**

Professional, ethical, and technical aspects of engineering. Two semesters of WOR required except for junior or senior transfer students. Course graded on a satisfactory/no-credit basis. Normally taken as corequisite with 103 and 104.

**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. Corequisite: Mathematics 145 or equivalent.

**103, 104 Basic Engineering Science (4,4) CORE**

First semester: introduction to basic concepts of engineering. Physical quantities, units, dimensions, vectors; formulation of engineering problems. Fundamentals of mechanics with emphasis on statics; equilibrium conditions, free-body diagrams, center of mass, friction, kinematics of particle, work and energy. Second semester: fundamentals of first law of thermodynamics, basic heat transfer, elements of fluid mechanics, applications. Laboratory: a team design experience. Lecture three hours, laboratory three hours. Corequisite: I00r each semester; Mathematics 150, 160.

**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 in BASIC and in FORTRAN by digital computer. Introduction to the use of plotters and graphics terminals. Prerequisite: Mathematics 145 or equivalent.

**190r Special Introductory Topics in Engineering (1-4)**

Introductory treatment of a fundamental area in engineering, varying from term to term. 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. 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. Prerequisite: sophomore standing.

**225 Engineering Computations and Numerical Techniques (3) CORE**

Application of the FORTRAN programming language to the solution of representative engineering problems by the digital computer. Experience in program design, implementation, and documentation. Applications of numerical techniques to integration, solution of sets of equations, differential equations, and optimization. Prerequisite: Engineering 124; corequisite: Mathematics 250.

**246 Mechanics (4) CORE**

Review of statics, vectors, plane moments of inertia and truss analysis. Stress-strain concepts and relations. Bending, shear, and torsion, Euler columns. Particle kinematics. Introduction to material and structural testing techniques, subsequent team design projects with experimental verification in laboratory. Lecture three hours, laboratory three hours. Prerequisites: 102, 104.

**248 Dynamics (3) CORE**


**272 Dynamic Systems I (4) CORE**

Introduction to analysis of dynamic systems. Circuit elements and relationships for electrical, mechanical, fluid, and thermal systems.
Formulation of equilibrium equations and the solution of differential equations using Laplace transforms. Applications to analysis of electrical systems; d.c. and a.c. analysis, frequency response, source modeling, and network theorems. Laboratory introduces electrical instrumentation, measurement techniques, examines dynamic response of electrical and mechanical systems, and simulation of response using PCAP analysis program, lecture three hours, laboratory three hours. Prerequisites: 225, Physics 231, Mathematics 250.

303 Thermodynamics (4) CORE
Classical thermodynamics with emphasis on first and second laws of thermodynamics. Property relationships, chemical equilibrium, and cycle analysis. Prerequisites: 104, Mathematics 250.

307 Fluid Mechanics (4) CORE
Fluid statics and kinematics; fluid dynamics including Bernoulli, continuity and momentum equations; fluid measurements; viscosity; compressible and incompressible flow; laminar and turbulent flow; flow in pipes and open channels; model studies; lift and drag. Laboratory: pressure measurements; quantity measurements; property measurements; energy losses; wind tunnel studies; shock waves; open channel flow; pumps and turbines; pipe flow. Lecture three hours, laboratory three hours. Prerequisites: 303, Mathematics 260.

322 Probability and Statistics for Engineering (3) CORE

325 Dynamic Systems II (3) CORE
Continuation of Engineering 272, with additional techniques for analysis of dynamic systems and applications of analytical methods. Extension of a.c. analysis to polyphase circuits, power, and resonance problems. Fourier series. Complex frequency domain characterization of responses. Block diagrams, signal flow graphs, and state variable representations. Prerequisites: 272, Mathematics 260, either Engineering 225 or Mathematics 305.

340 Engineering Materials Science (3) CORE

358 Manufacturing Processes (3)
Foundry and sand moulding, hot and cold forming of metals, welding, brazing, heat treatment of metals, lathe operations and thread cutting, milling machines, drilling, boring, and reaming machines, shapers and planers, gears and gear manufacturing, and inspection of materials. Primarily elective for B.S. in engineering management.

372 Electronics (4) CORE
Fundamentals of electronic devices and circuits. Physical operation of electronic devices; models from a physical viewpoint, two-port representation, biasing methods, stability, frequency response, input and output impedance concepts, untuned amplifiers, rectifiers, regulators, digital devices, and logic circuits. Laboratory: a design experience in electronics. Lecture three hours, laboratory three hours. Prerequisites: 272 and Physics 232.

373 Linear Systems Analysis and Design (4) CORE

379 Dynamic Systems Laboratory (1) CORE
Laboratory exercises in the simulation of dynamic systems and the design of automatic controls. Includes use of analog computers and CSMP for simulation and design confirmation. Laboratory three 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 an appropriate optimization technique. Computer application. Economic and managerial considerations. Prerequisites: completion of 36 hours in Engineering CORE, including 225.

390r Cooperative Seminar (1-5)
Seminar for developing, discussing, and reporting projects carried on as a portion of the cooperative work assignment. Written and oral report required. Maximum of 15 cumulative hours. Course graded on satisfactory/no-credit basis.

400r Seminar (5) CORE
Professional, ethical, and technical aspects of engineering. Two semesters of 400r required. Course graded on a satisfactory/no-credit basis. Normally taken as corequisite with 490r.

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. Prerequisite: 307.

430 Thermal System Design (3)
Application of systems design techniques to the design to thermal processes. Discussion of case studies including heat exchanger networks, mechanical refrigeration, absorption refrigeration, steam generation, and chemical processes. Individual or group design problems. Prerequisites: 307, 380, 405, 431.

431 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, heat, and economic balances. Prerequisite: 303.

432 Chemical Operations (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. Prerequisite: 431.

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. Prerequisite: Chemistry 372.

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. Prerequisites: 307, 380, 405, 431.

438 Advanced Fluid Dynamics (4)
Equations of continuity, momentum, and energy in three-dimensional vector formulation. Reduction to two- and one-dimensional flows for cases of engineering interest. Applications to students' areas of specialty. Laboratory work included. Prerequisite: 307.

442 Machine Design (3)
Essential elements of machine design: shafts, clutches, brakes, gears, flywheels, and lubrication. Kinematics and dynamics of balancing, rotating, and reciprocating masses. Prerequisite: 248.

444 Applied Elasticity (3)

445 Mechanical Vibrations (3)
Free and forced vibrations of damped and undamped systems; single and multiple degrees of freedom utilizing lumped parameter analysis. Matrix rotation: sweeping and rotation techniques. Prerequisites: 248; Mathematics 250, 260.
446 Advanced Mechanics of Materials (3)
Statically indeterminate structures; introduction to theory of elasticity; special topics in mechanics of materials. Prerequisites: 246; Mathematics 250, 260.

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. Prerequisite: 380.

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. Prerequisite: Mathematics 136 or 160.

453 Value Engineering (3)
Application of value engineering techniques through an organized approach which consists of the following phases: information, speculation, analysis, planning, and execution; reporting and implementation. Primarily elective for B.S. in engineering management.

454 Work Measurement and Design (4)
Techniques for analysis and improvement of work methods; principles of motion economy, process charts, development of standard data from work sampling; predetermined time systems, performance rating, and wage incentive systems. Lecture four hours; laboratory work included.

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.

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. Lecture three hours; laboratory work included. Prerequisite: 322 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. Primarily elective for B.S. in engineering management.

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. Prerequisites: 246; Mathematics 250, 260.

462 Soil Mechanics, Foundations and Substructures (4)
Physical properties of soils, foundation explorations, and principles of design of dry and subaqueous foundations, lecture three hours, laboratory three hours. Prerequisites: 246, 307.

465 Structural Engineering Design (4)
Design criteria in structures. Behavior of steel structures and reinforced concrete columns and beams. AISC and ACI codes. Prerequisite: 460.

468 Elementary Structural Matric Methods (3)
Review of matrix algebra and vectors, development of member stiffness and flexibility matrices. Prerequisite: 444 or 445 or 460.

470 Microprocessors and Digital Logic (3)
Design of sequential electric circuits. Circuit minimization, cubic representation, and Quine/McClusky algorithm. Circuit equivalence, synchronous circuits, and memory circuits. Applications of the microprocessor to realization of logic circuits, lecture two hours, laboratory three hours. Prerequisite: 372.

471 Electrical Machinery (4)
Magnetic circuits and transformers. Rotating electrical machinery; D.C. machines, synchronous machines, induction motors. Speed control and transient behavior, lecture three hours, laboratory three hours. Prerequisite: 373. Corequisite: 475.

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. Prerequisite: 471.

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. Lecture two hours, laboratory three hours. Prerequisites: 322, 325.

475 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; Blot-Savart Law; time varying electric and magnetic fields; Maxwell’s equations. Prerequisites: 372; Physics 232; Mathematics 250, 260.

477 Electronic Instrumentation (4)
Intended for seniors or beginning graduates anticipating need for developing instrumentation systems. Primary emphasis on instrumentation systems to gather design data and to verify performance. Design and specification of instrumentation systems to acquire and condition large quantities of data from a multiplicity of sensors. Prerequisite: 372 or 373 or equivalent.

478 Sampled Data and Nonlinear Control Systems (4)
Intended for seniors or beginning graduates desiring to pursue automatic control technology beyond that offered in the core curriculum. Traditional and new techniques for analysis and design of nonlinear and sampled data control systems. Prerequisite: 373 or equivalent.

490r Senior Design Experience (4)
A group design project. Solution to an engineering problem; oral and written presentation of progress and final results. To be registered twice for a total of eight hours. Prerequisites: 380, completion of all lower division engineering courses, and senior standing; corequisite for both semesters: 400r; corequisite in second semester one of the following: 430, 436, 442, 450, 465 or 470.

491r Special Topics in Engineering (1-4)
Advanced treatment of a specialized area in engineering, varying from term to term. Prerequisite: approval of instructor and dean.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See “Departmental Honors,” page 32.
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<th>Spring</th>
<th>Summer</th>
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<tr>
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<td>Engineering 103 Basic Engineering Science 4</td>
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<td>Engineering 124 Computations 3</td>
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<td>Math F150 Calculus I 4</td>
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<td>Chemistry D121 General Chemistry 4</td>
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| **Second Year** | Engineering 225 Engineering Computation 3 | Engineering 248 Dynamics 3 | Engineering 322 Probability & Statistics 3 |
|                 | Engineering 246 Mechanics 4 | Engineering 272 Dynamic Systems I 4 | Engineering 380 Engineering Design 3 |
|                 | Engineering 390 Co-op Seminar 3 | Engineering 307 Fluid Mechanics 4 | Engineering 390 Co-op Seminar 3 |
|                 | Math 250 Intro, to Ordinary Differential Equations 4 | Engineering 390 Co-op Seminar 2 | Elective General Ed Category C or A 3 |
|                 | Physics 231 Principles of Physics 4 | Physics 232 Principles of Physics 4 | Elective General Ed Category B (Fine Arts) 3 |
|                 | **18** | **17** | **15** |

| **Third Year** | Engineering 325 Dynamic Systems II 3 | Engineering 400r Seminar .5 | Engineering 225 Engineering Computations 3 |
|               | Engineering 340 Materials Science 3 | Engineering 400r Seminar .5 | Math 250 Introduction to Ordinary Differential Equations 4 |
|               | Engineering 372 Electronics 4 | Engineering 373 Linear Systems Analysis 4 | Engineering 303 Thermodynamics 4 |
|               | Engineering 390 Co-op Seminar 3 | Engineering 379 Dynamic Systems Lab 1 | Engineering 372 Probability & Statistics 3 |
|               | Elective General Education Category B 3 | Engineering 380 Engineering Design 3 | Engineering 390 Co-op Seminar 3 |
|               | **16** | Elective General Education Category G 3 | **14.5** |

| **Fourth Year** | Engineering 400r Seminar .5 | Engineering 400r Seminar .5 | Engineering 225 Engineering Computations 3 |
|                 | Engineering 490 Senior Education Experience 4 | Engineering 373 Linear Systems Analysis 4 | Math 250 Introduction to Ordinary Differential Equations 4 |
|                 | Elective Engineering 4  | Elective Engineering 3 | Physics 231 Principles of Physics 4 |
|                 | Elective Engineering 3 | Elective Engineering 3 | Elective General Ed Category A or C 3 |
|                 | Elective Engineering 3 | Elective Engineering 3 | Elective General Ed Category B (Fine Arts) 3 |
|                 | **14.5** | Elective General Ed Category B 3 | **17** |

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<tr>
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<th>Spring</th>
<th>Summer</th>
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<tr>
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<td>Engineering 100r Seminar .5</td>
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<tr>
<td></td>
<td>Engineering 103 Basic Engineering Science 4</td>
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<td><strong>15.5</strong></td>
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| **Second Year** | Engineering 225 Engineering Computation 3 | Engineering 248 Dynamics 3 | Engineering 225 Engineering Computations 3 |
|                 | Engineering 246 Mechanics 4 | Engineering 272 Dynamic Systems I 4 | Math 250 Introduction to Ordinary Differential Equations 4 |
|                 | Engineering 390 Co-op Seminar 3 | Engineering 307 Fluid Mechanics 4 | Engineering 303 Thermodynamics 4 |
|                 | Math 250 Intro, to Ordinary Differential Equations 4 | Engineering 390 Co-op Seminar 2 | Engineering 372 Probability & Statistics 3 |
|                 | Physics 231 Principles of Physics 4 | Physics 232 Principles of Physics 4 | Engineering 390 Co-op Seminar 3 |
|                 | **18** | **17** | **16** |

| **Third Year** | Engineering 325 Dynamic Systems II 3 | Engineering 400r Seminar .5 | Engineering 225 Engineering Computations 3 |
|               | Engineering 340 Materials Science 3 | Engineering 400r Seminar .5 | Math 250 Introduction to Ordinary Differential Equations 4 |
|               | Engineering 372 Electronics 4 | Engineering 373 Linear Systems Analysis 4 | Engineering 303 Thermodynamics 4 |
|               | Engineering 390 Co-op Seminar 3 | Engineering 379 Dynamic Systems Lab 1 | Engineering 372 Probability & Statistics 3 |
|               | Elective General Education Category B 3 | Engineering 380 Engineering Design 3 | Engineering 390 Co-op Seminar 3 |
|               | **17** | Elective General Education Category G 3 | **14.5** |

| **Fourth Year** | Engineering 400r Seminar .5 | Engineering 400r Seminar .5 | Engineering 225 Engineering Computations 3 |
|                 | Engineering 490 Senior Education Experience 4 | Engineering 373 Linear Systems Analysis 4 | Math 250 Introduction to Ordinary Differential Equations 4 |
|                 | Elective Engineering 4 | Elective Engineering 3 | Physics 231 Principles of Physics 4 |
|                 | Elective Engineering 3 | Elective Engineering 3 | Elective General Ed Category A or C 3 |
|                 | Elective Engineering 3 | Elective Engineering 3 | Elective General Ed Category B (Fine Arts) 3 |
|                 | **18** | **17** | **16** |

| **Fifth Year** | Engineering 100r Seminar .5 | Engineering 100r Seminar .5 | Engineering 303 Thermodynamics 4 |
|               | Engineering 103 Basic Engineering Science 4 | Engineering 102 Graphics 3 | Engineering 390 Co-op Seminar 3 |
|               | Engineering 124 Computations 3 | Engineering 104 Basic Engineering Science 4 | Math 260 Multivariable Calculus 4 |
|               | Math F150 Calculus I 4 | Math 160 Calculus II 4 | Elective General Ed Category A or C 3 |
|               | HPER 021 Fundamentals 1 | Chemistry D121 General Chemistry 4 | Elective General Ed Category B 3 |
|               | Elective General Ed Category A or C 3 | HPER Activity 1 | WORK |
|               | **18** | Elective General Ed Category C or A 3 | **19.5** |
Computer Science

Associate Professor J. Thompson, Head
Associate Professors Smullen, J. Thompson, L. Thompson
Assistant Professors S. Davis, Day, Fiducia, J. Smith, True
Instructor Evans

The Computer Science Department offers a B.S. degree in computer science. Majors take a 30-hour sequence of computer science core courses and take additional courses in an area of concentration. The concentration of study augments the core 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.


General Education (see pages 26-27 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)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses

Computer Science core courses: Computer Science 121, 122, 201, 251, 252, 301, 312, 320, 350, 460
Six hours of upper division (300 or 400 level) computer science electives
Computer Science 340 may not be used as an upper division elective. Mathematics 303 may be used as an upper division computer science elective.

English 277 or 278

One of the following concentrations—

1. Information Systems
Mathematics F150, 160; Accounting 201, 202, 305; Management 211, 212, 311, 356; Computer Science 280

2. Scientific Applications
Mathematics F150, 160, 250, 260, 308 and one of the following: 412, 414, 418, 428, 445 or 460; either Engineering 322, or Mathematics 407 and Mathematics 408; two of the following sequences: Biology D121 and D122 or Geology D111 and D112, Chemistry D121 and D122, Physics D103 and 104 or 230 and 231

3. Systems Architecture
Mathematics F150, 160, 250, 260; Engineering 272, 372; Physics 230, 231; either Engineering 322, or Mathematics 407 and Mathematics 408

4. Topical
At least eight hours of mathematics beginning with Mathematics F150; 6 hours of statistics; 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.

2.00 average required in all computer science courses excluding 123, 210, 211, and 340

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

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

Computer science (B.S.): information systems concentration

First Semester   Second Semester

Freshman

Computer Science 121  3 Computer Science 122  3
Mathematics F150  4 Mathematics 160  4
English A101  3 English A102  3
General Education  3 General Education  3
Physical Education 021  1 Physical Education Activity  1
Elective  3 Elective  3

Sophomore

Computer Science 201  3 Computer Science 252  3
Computer Science 251  3 B Accounting 202  3
B Accounting 201  3 B Management 212  3
B Management 211  3 English 277 or 278  3
Elective  3 General Education Category D  4

Junior

Computer Science 280  3 Computer Science 350  3
Computer Science 301  3 Computer Science 320  3
Computer Science 312  3 B Management 311  3
B Accounting 305  3 General Education  3
General Education  3 Electives  6

Senior

B Management 356  3 Computer Science 460  3
General Education  3 General Education  3
Computer Science—300-400 level electives  6
Elective  3

Computer science (B.S.): scientific applications concentration

First Semester   Second Semester

Freshman

Computer Science 121  3 Computer Science 122  3
Mathematics F150  4 Mathematics 160  4
English A101  3 English A102  3
Science Elective  4 Science Elective  4
Physical Education 021  1 Physical Education Activity  1

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### Computer Science Courses

117 Computer Programming with BASIC (3)
An introduction to the concepts and techniques of computer science. Emphasis is placed on the design and implementation of efficient algorithms using the BASIC language. Prerequisite: Mathematics 135 or 145; credit not allowed after Computer Science 210 or Engineering 124.

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. Prerequisite: Mathematics 135 or 145.

121 Computer Programming I (3)
An introduction to digital computer techniques using 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. Pre- or corequisite: Mathematics 135 or 145.

122 Computer Programming II (3)
Continued development of programming style using structures and top down design. Debugging and testing of large programs. Emphasis on algorithm development. List processing. Recursion. Comparison of compilation techniques. Prerequisite: 121 with a grade of C or better.

123 Introduction to Data Processing (3)
General overview of electronic data processing. Topics include methodology, terminology, systems and procedures, file organization, peripheral equipment, and central processing unit components.

150 PL/I Programming (1)
An introduction to the PL/I language. Intended for students who have completed an introductory course in computer programming with a language other than PL/I. Prerequisite: at least three credit hours of computer programming with a grade of C or better. Prerequisite or corequisite: Mathematics 150.

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

201 Assembly Language Programming (3)
Computer structures; introduction to machine language, symbolic coding, and assembly systems; macros; program segmentation and linkage; file organization; operating systems introduction. Prerequisite: 122 with a grade of C or better.

210 Computer Information Systems I (3)
Survey of computer applications. Introduction to machine functions and organization. Problem solving and program design. Use of BASIC to
Computer Science

solve problems from business and other disciplines. Formerly Computer Science 100. Prerequisite: three credit hours of college mathematics.

211 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; an introduction to information retrieval and file and data base management systems; advanced topics in the BASIC language. Formerly Computer Science 101. Prerequisite: 210, Accounting 201.

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 integration; numerical solution of initial value problems in differential equations. Pre- or corequisite: Mathematics 250.

251 Introduction to File Processing (3)
Functions of file systems, file system organization and structure, analysis of file systems, introductory data management concepts, job control language. Prerequisite: 122 with a grade of C or better.

252 Introduction to Computer Organization (3)
Basic digital logic design, coding, number representation and arithmetic, mechanics of information transfer and control within a digital computer system. Prerequisite: 201 with a grade of C or better.

280 Accelerated COBOL (3)
A study of standard and advanced methods of computer programming in business applications; emphasis on the organization and processing of direct access storage device files using COBOL. Prerequisite: 251 with a grade of C or better.

301 Systems Programming (3)
Structure and design of programs whose inputs are programs. Assemblers, interpreters, compilers, generators, input/output control systems, supervisors. Formal programming languages, syntactic descriptions, symbolic functions and manipulations. Prerequisite: 201 and 251 with grades of C or better.

312 Data Structures (3)
Description of data bases and structures; concepts of records, files, trees and lists; sorting, searching, and merging of information files; referencing and cross-referencing files. Prerequisite: 201 and 251 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. Prerequisite: 301 with a grade of C or better.

340 Computer Analysis of Social Science Data (3)
The analysis of data from the social sciences using widely distributed statistical packages such as SPSS. Topics include data types, data files, manipulation, use of computers for description of univariate data, exploration of bivariate and multivariate relationships, hypothesis construction and testing; data sets drawn from sociology, anthropology, economics, political science and psychology. May not be used as 300-level elective for computer science majors. Prerequisite: introductory statistics course.

350 Software Engineering (3)
Organization and scheduling of software engineering projects. Designing, coding, and debugging program components and synthesizing them into a tested, documented program product. Prerequisite: 301 with a grade of C or better.

410 Programming Language Structures (3)
The study of a major computer language with a structure different from FORTRAN or PL/I, or a study of advanced features such as extensibility, concurrency, or multitasking. Prerequisite: 312 and 320 with grades of C or better.
School of Human Services

Professor Venters, Dean

The School of Human Services offers four distinct programs leading to baccalaureate degrees. These programs are criminal justice, home economics, human services, and social work. In addition to the undergraduate degrees, a Master of Science in Criminal Justice degree is offered.

Each degree is designed to prepare professional personnel to work in a variety of settings related to meeting human needs. The faculty and philosophy of the division emphasize the interdisciplinary relationships of the various fields of knowledge and practice.

The Military Science Department and the Special Services/Upward Bound Program are administered through the School of Human Services.

Criminal Justice

Assistant Professor W. Hall, Head
Professors Fjeld (Psychology), Venters
Associate Professor D. Anderson
Assistant Professors Bush, Catale, R. Thompson

The baccalaureate degree in criminal justice is designed to prepare professionally competent individuals for positions within the criminal justice system. Specializations in corrections, court administration, juvenile justice, law enforcement, and the court, and criminal justice research and planning are available.

Criminal Justice (B.S.)

General Education (see pages 26-27 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 C
1 approved perspectives course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses

Criminal Justice 410 or Psychology 308 or Sociology 321

Human Services 405

24 hours criminal justice including 101,112,113 through Cleveland State Community College, plus UTC courses 301, 303, 450, 470 and 471

One of the following concentrations—

1. Corrections:
21 hours from CSCC Criminal Justice Program 120; UTC Criminal Justice 312,313,314,315,320,322,330,400,403,430,465; Computer Science 210; Sociology 322, 323

2. Crime control:
21 hours from CSCC Criminal Justice Program 104,105,130,140; UTC Criminal Justice 322,400,402,440,465; Sociology 320; Human Services 301; Social Work 305; Political Science 323

3. Juvenile justice:
21 hours from CSCC Criminal Justice Program 212; UTC Criminal Justice 312,313,314,315,320,322,330,350,403,406,430,465; Psychology 221, 222; Sociology 322; Social Work 305; Computer Science 210; Home Economics 301

4. Law and the Courts
21 hours from CSCC Criminal Justice Program 102; UTC Criminal Justice 320,400,403,405,406,408,430; English 360,370; Sociology 320, Political Science 322, 323; Business Marketing 336; Environmental Studies 410, 411; Philosophy 211, 230; CSCC Law* 101,102,103,104, 105

5. Law enforcement:
21 hours from CSCC Criminal Justice Program 102,105,203,204,220; UTC Criminal Justice 300,310,320,322,400,402,403,405,408,430,465; Political Science 323; Sociology 320

2.00 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.)

First Semester Second Semester

<table>
<thead>
<tr>
<th>Freshman</th>
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<tbody>
<tr>
<td>CJP 101</td>
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<td>CJP 112</td>
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<td>Sociology C151</td>
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<td>Psychology C101</td>
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<td>General Education Category C</td>
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<td>Physical Education 021</td>
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<td>Physical Education Activity</td>
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<tr>
<td>CJP 113</td>
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<td>Criminal Justice 301</td>
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<tr>
<td>General Education Category B (American History)</td>
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<td>General Education Category B (Literature)</td>
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<td>General Education Category B (Fine Arts)</td>
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<td>Sociology 321</td>
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<tr>
<td>General Education Category F: Mathematics F210 Statistics</td>
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<td>or Psychology 308</td>
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<tr>
<td>Electives</td>
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<td>Electives</td>
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</table>

   17
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**General Education Category G**

Electives may be taken from any academic program.

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**Criminal Justice**

**Sociology 314**

**Criminal Justice 303**

**Criminal Justice**

Junior
- Concentration 3
- 303 3
- General Education Category G 3
- Sociology 314 3
- Electives 3

Senior
- Internship 9
- Concentration 3
- Criminal Justice 450 3
- Electives 6

^JP*Cleveland State criminal justice consortium courses.

^2Electives may be taken from any academic program.

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**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.

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

**201 Violence in America (3)**
An historical investigation into violence in America and the evolutionary response of criminal justice agencies.

**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.

**301 Information Systems in Criminal and Juvenile Justice (3)**
An introduction to information management tools and processes of accountability as they relate to the two systems of justice.

**303 Comparative Criminal and Juvenile Justice Systems (3)**
An examination of these two systems of justice as they function in other countries.

**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.

**312 Correctional Perspectives in Criminal and Juvenile Justice (3)**
The development of priorities, goals, and standards for the correctional field.

**313 The Volunteer in Criminal and Juvenile Justice (3)**
An examination of the role of the citizen volunteer in the two systems of justice.

**314 Correctional Casework (3)**
The application of counseling and interviewing techniques and theory to the correctional client.

**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.

**316 Blacks and Criminal Justice (3)**
Discussion of the black offender and the black criminal justice professional from the black perspective.

**320 Advanced Administration in Criminal and Juvenile Justice (3)**
Theory and practice of the administration of criminal justice system components. Prerequisite: CJ* 105 or approval of instructor.

**322 Criminal Justice Planning (3)**
An examination of the role of a criminal justice planning agency in a local, state, or federal system; and contemporary sources of funds for program planning, implementing, and evaluating. Prerequisite: 301 or approval of instructor.

**325 Street Law (3)**
An examination of criminal and civil law to emphasize the full range of the legal system and its application to everyday life. Elective credit; not applicable toward major.

**330 Probation and Parole (3)**
An examination of the theory and practice of probation and parole with juvenile and adult offenders.

**350 Juvenile Institutional Services (3)**
An historical perspective of the evolution of juvenile institutions and their present day applicability and use.

**400 Constitutional Law (3)**
An examination of the leading constitutional principles pertaining to modern criminal procedure.

**402 Organized Crime (3)**
The impact of organized crime on the community, the government, legal systems, and the individual; and methods of combating organized crime.

**403 Management Concepts in Criminal Justice (3)**
Theories of criminal justice management, motivation, communication, planning, and decision making. Prerequisites: CJ* 105 and 320, or approval of instructor.

**405 Advanced Criminal Law (3)**
Common and statutory law of crimes including national developments and trends, inchoate offenses, and defenses to crime. Prerequisite: CJ* 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. Prerequisite: CJ* 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. Prerequisite: CJ* 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.

**411 Criminal Justice Research Methodology (3)**
Examination of the contemporary philosophy and techniques of research as applied in the criminal justice field.

**422 Advanced Planning and Evaluation in Criminal and Juvenile Justice (3)**
Application of scientific methodology and analysis to problem solving. A research project will be designed and evaluated. Prerequisite: 322 or approval of instructor.

**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. Prerequisite: at least one course at the 200 level or above in either philosophy or religion, or approval of instructor.

**440 Science and Technology in Criminal Justice (3)**
An exploration of the ways in which science and technology have influenced (and failed to influence) the practices, procedures, and problems of the criminal justice system. Prerequisite: completion of Category D requirements or approval of the instructor.
450 Integrative Criminal Justice Systems Seminar (3)
Discussion of selected system-wide problems and topics in criminal justice. Research and oral presentation by the student. Prerequisites: senior standing, criminal justice major, methodology course.

465 Crisis Intervention (3)
Study of the theoretical bases for accurately assessing crisis situations and a guided practicum in techniques of crisis intervention.

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. Prerequisite: criminal justice major, junior standing, and approval of instructor. Courses may be taken concurrently or consecutively.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)
*CJP-Cleveland State criminal justice consortium courses.

Home Economics

Assistant Professor Cochran, Head
Assistant Professors E. Smith, Tanner, Temple
Instructor Rhodes

The Department of Home Economics offers three concentrations including Home Economics: General, Home Economics: Business, and Education: Home Economics. Students desiring teacher certification should follow Education: Home Economics. A student preparing for a career in fashion merchandising, consumer affairs, interior design, or food systems administration should meet the requirements for the Home Economics: Business concentration selecting appropriate electives. Students interested in the field of child and family development, foods and nutrition, or management and consumer science should follow the Home Economics: General concentration. Individualized program planning is available for students interested in the field of dietetics.

Admission to Home Economics 405, Practicum, requires a written application filled with the department head no later than three months prior to the semester in which the student plans to register for the course.

Home Economics: General (B.S.)

General Education (see pages 26-27 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; approved related course below will apply)

Category C
1 approved perspectives course (3 hours; approved related course below will apply)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
Economics C101, C102
Sociology C151
Psychology C101, 311
Chemistry 111
Mathematics F210
Anthropology G208

One of the following specialties—

1. Child and Family Development:
39 hours Home Economics including 101, 105, 202, 304, 340, 350, 402 plus 21 hours from 205, 300, 301, 306, 328, 332, 440, 441, 445
15 hours from Education: Counseling 401; Health, Physical Education, and Recreation 154, 302; Psychology 221; Social Work 315, 411

2. Foods and Nutrition:
39 hours Home Economics including 101, 105, 202, 304, 340, 350, 402 plus 21 hours from 206, 207, 305, 330, 331, 332, 401, 431
15 hours from Biology 192, 193, 210; Chemistry 122, 351, 352, 466

3. Management and Consumer Science:
39 hours Home Economics including 101, 105, 202, 304, 340, 350, 402 plus 21 hours from 104, 201, 206, 207, 301, 302, 303, 306, 310, 311, 312, 328, 331, 332, 412
15 hours from Communications 101, 110, 260, 340, 345; Human Services 301, 405; Social Work 432, 450

200 average in all home economics courses

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

Typical course of study in home economics (B.S.): general

First Semester

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<td>Chemistry 111</td>
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<td>Physical Education 021</td>
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<td>Total</td>
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Second Semester

<table>
<thead>
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<td>General Education Category C</td>
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<tr>
<td>Sociology C151, Category C</td>
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<tr>
<td>Anthropology G208</td>
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<td>Mathematics F210</td>
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<td>Physical Education Activity</td>
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158—Home Economics

Junior

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<th>Course</th>
<th>Hours</th>
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<tr>
<td>Home Economics 304</td>
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<tr>
<td>Psychology 311</td>
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<td>Elective</td>
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Senior

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Home Economics: Business (B.S.)

General Education (see pages 26-27 for list of approved courses)

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>A</td>
<td>2 approved courses in written communication in the English language (6 hours)</td>
</tr>
<tr>
<td>B</td>
<td>3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each)</td>
</tr>
<tr>
<td>C</td>
<td>2 approved behavioral or social science courses (6 hours; approved related courses below will apply)</td>
</tr>
<tr>
<td>D</td>
<td>1 approved physical or natural science course with laboratory (4 hours)</td>
</tr>
<tr>
<td>F</td>
<td>1 approved mathematics course (3 hours; approved related course below will apply)</td>
</tr>
<tr>
<td>C</td>
<td>1 approved perspectives course (3 hours)</td>
</tr>
</tbody>
</table>

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics C101, C102</td>
<td></td>
</tr>
<tr>
<td>Chemistry 111</td>
<td></td>
</tr>
<tr>
<td>Computer Science 210</td>
<td></td>
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<tr>
<td>Mathematics F210</td>
<td></td>
</tr>
<tr>
<td>Psychology C101, 311</td>
<td>3</td>
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<tr>
<td>3 hours sociology</td>
<td></td>
</tr>
<tr>
<td>Theatre and Speech 109</td>
<td></td>
</tr>
<tr>
<td>12 hours from the School of Business Administration including Management 103,315,332,438; Marketing 313,318,319,335,355,361,362,363,364,365,415,417,450; Finance 281,302,321,322,337; Accounting 306; Economics 301; Office Administration 219 (Maximum of 32 hours in School of Business Administration courses)</td>
<td></td>
</tr>
<tr>
<td>One of the following specialties—</td>
<td></td>
</tr>
<tr>
<td>1. Fashion Merchandising:</td>
<td></td>
</tr>
<tr>
<td>39 hours from Home Economics including 101,105,202,304,340,350,402 plus 21 hours from 201,220,222,311,313,370,405,412</td>
<td></td>
</tr>
<tr>
<td>2. Food Systems Administration:</td>
<td></td>
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<tr>
<td>3. Interior Design:</td>
<td></td>
</tr>
<tr>
<td>39 hours Home Economics including 101,105,202,304,340,350,402 plus 21 hours from 201,220,222,303,306,315,326,422</td>
<td></td>
</tr>
<tr>
<td>4. Consumer Affairs:</td>
<td></td>
</tr>
<tr>
<td>39 hours Home Economics including 101,105,202,304,340,350,402 plus 21 hours from 104,201,205,206,207,220,222,301,303,306,312,328,331,332,370,390</td>
<td></td>
</tr>
<tr>
<td>2.00 average in all home economics courses</td>
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</table>

Electives to complete 128 hours

Typical course of study in home economics (B.S.): business

First Semester | Second Semester
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Freshman</td>
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<tr>
<td>Home Economics 101</td>
<td>Home Economics Elective</td>
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<td>Home Economics 105</td>
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<td>General Education Category A</td>
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<td>General Education Category B</td>
<td></td>
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<tr>
<td>General Education Category C</td>
<td></td>
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<td>General Education Category D</td>
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<tr>
<td>Chemistry 111</td>
<td>Accounting 201</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>Home Economics Elective</td>
</tr>
<tr>
<td>Theatre &amp; Speech 109</td>
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</table>

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Home Economics Electives</td>
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</tr>
<tr>
<td>Mathematics F210</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category C</td>
<td>4</td>
</tr>
<tr>
<td>Economics C101</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics 202</td>
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<tr>
<td>Business related elective</td>
<td>3</td>
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<tr>
<td>Computer Science 210</td>
<td>3</td>
</tr>
<tr>
<td>Psychology C101</td>
<td>3</td>
</tr>
<tr>
<td>Business related elective</td>
<td>6</td>
</tr>
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<td></td>
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</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Home Economics 304</td>
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</tr>
<tr>
<td>Home Economics Electives</td>
<td>6</td>
</tr>
<tr>
<td>Business related elective</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 210</td>
<td>3</td>
</tr>
<tr>
<td>Business related elective</td>
<td>6</td>
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<td></td>
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Senior

<table>
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<tbody>
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<td>Home Economics 402</td>
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<td>Home Economics Electives</td>
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<td>General Education Category C</td>
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<tr>
<td>Home Economics Electives</td>
<td>3</td>
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<tr>
<td>Business related elective</td>
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</tr>
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</tbody>
</table>

Education: Home Economics (B.S.)

See under School of Education, page 131.

Home Economics Courses

101 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.

104 Clothing Construction (3)
Proficiency based techniques and principles of garment construction, lecture two hours, laboratory two hours.

105 Nutrition and Man (3)
An introduction to nutrition with an integrated emphasis on the scientific, psychological, sociological, and economic aspects of nutrition. Impact of optimal nutrition on human development. Application of knowledge to the home and school situation.

19r Special Projects (1-4)
Individual or group projects. Maximum credit four hours.

201 Consumer Textiles (3)
Modern fibers, yarns, fabrics, and finishes for apparel and home furnishings. Trade practices and consumer problems.
202 Orientation to the Home Economics Profession (1)
Introduction to home economics as an area of study focusing on basic concepts that form the foundation of the discipline. History, philosophy, and career options in home economics.

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.

206 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. Lecture two hours, laboratory two hours. Pre- or corequisites: Chemistry 121, 122.

207 Food Management and Marketing (3)
Nature of the American food market, marketing procedures, resource management, regulations in the food industry, consumer food technology, cultural and regional influences in food preference, menu development, and styles of service.

220 Interior Space Design (3)
Analysis of space needs for people. Techniques of analyzing floor plans. Drawing skills, symbols, and terminology used in interior design. Lecture one hour, laboratory four hours.

222 Color Systems (3)
Experimentation in color systems and their use in interior design. Analysis of psychological impact of color systems on people. Correlation of color scheme to total room design. Development of skills for various media and tools used in color planning. Lecture one hour, laboratory four hours. Prerequisite: 101.

270 Introduction to Restaurant Management (3)
Profile of the food service-for-profit industry. Management theories and techniques for restaurants. Trends in tourism. Emphasis on sales planning, promotions, regulations, special problems in recordkeeping, human relations, and legal aspects of the industry.

300 Child Development Lab (1)
Supervised observation in community agencies within appropriate age levels. Corequisite: 301.

301 Child Development (3)
Growth and development of infants and pre-school children within the familial setting. Review of current research relating to child rearing. Emphasis on parenthood and parenting skills. Directed experience in observation and participation in approved nursery and day care centers. Lecture two hours, laboratory two hours. Prerequisites: lower level child study course from psychology or the School of Education.

302 Clothing Construction (3)
A comprehensive study of clothing construction for educators and consumer consultants with emphasis on challenging problems in the use of modern fabrics, intricate design details, fitting, and pattern alterations. Lecture two hours, laboratory two hours. Prerequisites: 101, 104.

303 Interior Furnishings (3)
Study of design characteristics of historical and contemporary furniture and interiors including the dominant, socio-economic influences on design development. An overview of the selection and use of interior furnishings.

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.

305 Advanced Nutrition (3)
Food nutrients in physiological and biochemical processes of the body. Emphasis on their relationship to health and human development. Prerequisites: 105 or equivalent; Chemistry 121, 122 or equivalent.

306 Housing and Energy Management (3)

310 Tailoring (3)
Tailoring of suits, coats, and ensembles with emphasis on various professional techniques used in manufacturing and hand tailoring. Lecture one hour, laboratory four hours. Prerequisite: 302 or approval of the department.

311 Fashion Marketing (3)
An analysis of the world of fashion from designer to consumer; fashion trends, cycles, and retail distribution of fashion goods.

312 Fashion Fundamentals (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.

313 Merchandising (3)
Principles and practices of merchandising in relation to the retailing of apparel and textile products. Problem solving approach with the consumer as a major consideration in planning merchandise assortment, presentation, and promotion.

315 Elements of Interior Design (3)
Components of the interior basic to the art of interior design: wall treatments, floor coverings, window treatment, lighting, accessories, fabric selections, furniture arrangements. Design principles in putting the elements together. Patios and outdoor living furnishings. Energy conservation. Prerequisite: 101 or equivalent.

325 Interior Design Renderings/Presentations (3)
Advanced projects using creative design techniques in a variety of media as a means of visual communication and precise delineation. Lecture one hour, laboratory four hours. Prerequisites: 222 or equivalent.

328 The Consumer and the Market (3)

330 Experimental Food Science (3)
Chemical and physical factors affecting food preparation, including experimental methods and individual experimentation in selected food problems. Lecture one hour, laboratory four hours. Prerequisites: 206, Chemistry 122, Biology 210.

331 Food & Nutrition: Issues and Policies (3)
Issues and policies of food and nutrition focusing on local, regional, national, and international concerns in relation to population, special group problems, cultural, and economic factors. Food safety issues.

332 Life Cycle Nutrition (3)
Application of the principles of nutrition in dietary management for meeting the physiological, psychological, and social needs of individuals and groups throughout the life cycle. Focus on the postulated nutrient requirements in various environments and economic levels. Prerequisite: 105 or knowledge of basic principles of nutrition.

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.

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.

370 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. Prerequisite: 312, 313 or equivalent.
160—Human Services

390 Images of Western Living (3)
Perspectives of the near environment of Western people using a study of styles of architecture, furniture, fashion, and food patterns of selected historic periods. Exploration of the combination of economics, geographic, social, and cultural patterns which influenced or dictated their development.

401 Diet Therapy (3)
Application of diet designed for the prevention and treatment of diseases which are influenced by food intake. Prerequisite: 305.

402 Seminar (2)
Professional procedures in consumer and family related professions including trends, developments, challenges, opportunities, ethics, and business procedures. Prerequisite: approval of the department.

405 Home Economics Practicum (3)
Directed field experience in a selected professional area of home economics, including a weekly seminar and faculty supervision within an approved institution, agency, or business establishment in the Chattanooga area. Prerequisite: senior status in home economics and approval of department.

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.

422 Interior Design Synthesis (3)
Development of creative ideas for the total room concept. Problems and projects to integrate the interior elements to achieve predetermined goals and effects for inhabitants: furniture layouts, simple perspective, furniture, accessory, and color selection. Projection of the psychological response of inhabitants to the total design. Lecture one hour, laboratory four hours. Prerequisites: 220, 222, 303 and 315 or equivalent, 326.

430 Food System Administration I (3)
Management, organization, and administration of food service in institutions.

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. Pre- or corequisite: 430.

432 Food System Administration II (3)
A continuation of 430 with emphasis on production, manpower, facility, and financial planning in food service systems. Prerequisite: 430, 431.

440 Infant Development (3)
Explores the developmental needs which characterize the infant period, reviews the research extant on infants in groups, and examines the interrelationships among various aspects of infant development in families and group care settings. Corequisite: 441.

441 Infant Day Care Practicum (1)
Supervised observation and participation in group care settings for children under 2Vi years. Corequisite: 440.

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.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)

Human Services Program

Associate Professor Printz, Acting Head and Director of Field Placement
Assistant Professors R. Anderson, Osmus

The Human Services Programs are intended as basic preparation for entry level supervisory and managerial positions in public and private organizations which provide a broad spectrum of human and community services.

Human Services: Management (B.S.)

General Education (see pages 26-27 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 (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses

Psychology C101
Psychology 221 or 222
9 hours from 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: Business Management 315 (required)
6 hours from the following: Business Management 330, 332; Sociology 317; Political Science 223
3 hours of research or statistics from Mathematics F210; Sociology 314; or equivalent approved course
21 hours human services including 101,102, 301, 330, 405, 440, 450
9 hours practicum from Human Services 470 and 471 or 472, 474, and 471; Political Science 471 r
200 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 Second Semester
Freshman
General Education Category A 3 General Education Category A 3

499r Group Studies (1-4)
Human Services Courses

100 Principles of Effective Study (3)
The study and development of reading and study skills that are required for college level study. Prerequisite: approval of the instructor.

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.

102 Human Existence and Urban Society (3)
An interdisciplinary examination of characteristics and problems of post-industrial urban society with special reference to the possibilities and dangers for future human existence.

199r Special Projects (1-4)
Individual or group projects. Prerequisite: approval of the coordinator of human services. Maximum credit four hours.

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.

301 Social Policy and Social Change (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.

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.

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. Prerequisites: six hours of behavioral sciences.

440 Human Services Supervision (3)
Concepts and techniques appropriate to supervision in human services and government agencies and organizations. Prerequisite: B Management 315 plus one of the following: B 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. 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 ninety days prior to enrollment in the course. In addition, Human Services: Management majors must present evidence of a minimum 2.00 overall grade point average and completion of Human Services 440 before enrolling in Human Services 470. Prerequisites: 440, approval of the coordinator of field placement, and senior standing. Corequisite: 471 r (two hours). Graded on a satisfactory/no credit basis. Maximum seven hours total in field placement.

471r Field Seminar (1-2)
Concurrent integrative seminar emphasizing issues common to field experience setting. Two hours maximum. Corequisite: Human Services 470, 472, or 474.

472, 474 Part-time Field Instruction (4) (3)
See Human Services 470 description. Corequisite: Human Services 471 r (one hour). Maximum seven hours total in field placement.
Military Science

Reserve Officers Training Corps (ROTC)
Professor Mossburg, Head
Assistant Professors Hathcock,- Hoskins, Hinnant, Simmons, Shires

The Military Science Department offers courses in general military subjects which may be applicable to any student regardless of his or her career intentions. The overall objectives are:

1. To provide general orientation courses open to all students in the basic course.
2. To provide selected students for the advanced course an opportunity to seek a commission in the U.S. Army, the Army National Guard, or the Army Reserve.
3. In conjunction with other college disciplines, to develop individual character and attributes essential to an officer.

Military Science I and Military Science II
The general requirements for admission in the basic course ROTC program are:

1. Be physically qualified.
2. Be not less than seventeen years of age.

Military Science III and Military Science IV
Continuation Standards
All cadets enrolled in the advanced course of the Army ROTC who seek a commission must:

1. Have either completed the basic course, three years junior ROTC, have the required amount of prior military service or completed the six-week basic summer camp. The basic summer camp is designed specifically to fill the needs of community and junior college graduates and students of four-year colleges who have not taken ROTC during their first two years. By attending the six weeks’ camp, students qualify to enter ROTC directly as a junior simultaneously earning approximately $600 while at camp. Attendance does not obligate an individual to enter the advanced ROTC program. Applicant must contact the Military Science Department to process early during the spring semester.
2. Have two academic years of college remaining, either graduate or undergraduate.
3. Be enrolled as a full-time student at The University of Tennessee at Chattanooga or other accredited institution in the Chattanooga area.
4. Be at least 17 years of age.
5. Meet military screening and physical requirements.

Regularly enrolled students, who meet the academic prerequisites and do not desire a commission, may take individual courses as electives with the permission of the department chair and their academic adviser.

Course Content
The basic course is composed of the first four semesters of military science, one of which may be an enrichment course. No active duty commitment is required of students taking the basic course.

The advanced course is composed of the last four semesters of military science. It includes a six-week summer camp at an army installation at the end of the junior year. The student successfully completing the advanced course will, upon graduation, be commissioned a Second Lieutenant in the U.S. Army.

Uniforms and Pay
Uniforms are not issued to basic course students; textbooks for ROTC are provided. Issued items must be returned at the end of the school year or upon disenrollment from the ROTC program.

Advanced course ROTC students sign a contract with the U.S. Government which requires them to complete the advanced course and accept a commission before or upon graduation. Students receive $100.00 each month while enrolled in the advanced course and approximately $600.00 for attending summer camp plus travel pay to and from summer camp.

For information about Army ROTC scholarships, see the financial aid section of this catalog.

Military Science Curriculum

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Military Studies</td>
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</tr>
<tr>
<td>MS 101 Fundamentals of Military Science I</td>
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</tr>
<tr>
<td>MS102 Fundamentals of Military Science II</td>
<td>3</td>
</tr>
<tr>
<td>MS201 American Military Profile and the Professional Soldier</td>
<td>3</td>
</tr>
<tr>
<td>MS 202 Military Management and Leadership Skills</td>
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</tr>
<tr>
<td>MS300 ROTC Basic Camp²</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Military Studies</td>
<td></td>
</tr>
<tr>
<td>MS301,302 Advanced Leadership and Management</td>
<td>6</td>
</tr>
<tr>
<td>MS400 Army ROTC Summer Studies</td>
<td>4</td>
</tr>
<tr>
<td>MS401,402 Seminar in Leadership and Management (3,1)</td>
<td>4</td>
</tr>
</tbody>
</table>

Total credit possible not to exceed 26

Students in all of the above classes participate in the equivalent of one hour of leadership laboratory per week.

¹On 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.
²With permission of the professor of Military Science (PMS).

Military Science Courses
101 Fundamentals of Military Science I (3)
Organization, missions, and functions of the Army; ROTC orientation; historical development of the Army; introduction to management of military resources; practical experience in rappelling, orienteering, and riflery.
102 Fundamentals of Military Science II (3)
A study of the role of the Army in the nation’s defense; an introduction to the U.S. counterpart, the Russian soldier; practical experience at the advanced level in marksmanship, rappelling, and drill and ceremony.

201 American Military Profile and the Professional Soldier (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.

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.

300 ROTC Basic Camp (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. 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. Prerequisite: acceptance into the advanced course.

400 Army ROTC (4)
A five week statutory prerequisite to commissioning; conducted during the summer months following Military Science 302 at an army installation. Presentations made during subsequent semesters.

401, 402 Seminar in Leadership and Management (3.1)
Application of leadership principles stressing responsibilities of the leader through practical exercises in small unit tactics, leadership, and management problems involved in unit administration, material readiness, and military justice. Prerequisites: 400 and History 350 or permission of department head.

Social Work

Associate Professor Walker, Head and Director of Field Instruction
Associate Professor T. Brown
Assistant Professors Lamb, Williams

Admission Policies
Enrollment in the social work program is limited to one hundred majors; application alone will not insure admission. Students pursue the Bachelor of Social Work degree. Students wishing to enter the social work program should designate pre-social work as their major. Once this declaration has been made the student will be assigned to social work faculty for advisement. Pre-social work majors are required to fulfill the following for admission to the social work program:

1. Earn a 2.00 cumulative grade point average in 45 semester hours which include the following prerequisite courses:
   - Biology 192, 193
   - Sociology 151 or Human Services 101
   - Psychology 101
   - Political Science 101
   - Economics 101
   - Anthropology 208

Social Work 150
Social Work 204
Social Work 205

2. Earn a minimum 2.6 grade point average in Social Work 150, 204, and 205.

3. Make candidacy known 60 days prior to the semester for which admission is sought by filing formal application.
   a. Obtain and complete application form from the office of the head of the Social Work Department.
   b. Submit written self-assessment.
   c. Write autobiography.
   d. Indicate subscription to the Social Work Code of Ethics.

4. Complete personal interview with a social work faculty member.

5. The Social Work Admissions and Continuation Committee (SWACC) reviews application and makes recommendations. The decision of the SWACC will be given to the applicants in writing. Those applicants granted admission will be assigned an academic adviser.

6. Upon acceptence in the department and completion of Social Work 300 and 301, students will file for field placement. All field placement assignments are made by the director of field instruction.

In the event that more qualified students submit applications than there are vacancies, the Social Work Admissions and Continuation Committee reserves the right to apply additional screening procedures.

Continuation Standards
The committee will review cases involving the academic, emotional, ethical, and professional fitness of social work students and will make recommendations regarding continuation in the department.

When majors complete the necessary requisites and present a grade point average of 2.50 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 head of the Social Work Department, who may grant exceptions when deemed desirable or necessary. A grade point average of 2.50 in the complete major will be required for graduation.

Social Work (B.S.VV.)

General Education (see pages 26-27 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)
Typical course of study in social work (B.S.)

Any required course (with exception of English 300) which meets general education requirements may be used to fulfill both the major requirements and general education requirements.

First Semester | Second Semester
--- | ---
General Education Category A | Political Science C101
General Education Category B | General Education Category A
Humanities | Social Work 204
Social Work 150 | General Education Category D
Sociology C151 | General Education Category F
Biography 192 | Physical Education 021
Biography 193 | 17
17

Sophomore | 
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Mathematics F210 | General Education Category B
Social Work 205 | Economics C101
General Education Category G | General Education Category B
Anthropology G208 | Philosophy B221,322 or 425
General Education Category C | English 277 or 279 or 300
Psychology C101 | Electives 5
Physical Education Activity | 16
Election | 17

Junior | 
--- | ---
Social Work 301 | Social Work 304
Sociology 305 | Social Work 305
Home Economics 328 | Social Work 370
Social Work 300 | Social Work 371
Theatre and Speech 309 | Psychology 308
16 | 15

Senior | 
--- | ---
Social Work 400 | Social Work 406
Social Work 404 | Electives 12
Social Work 470 | 6
Social Work 471 | 2
Election | 3
3 | 17

1. Apply for admission to Social Work major.
2. File for Advanced Field and Methods.
305 Legal Issues in Social Work (3)
Identification and analysis of common legal issues and problems encountered by the professional social worker. 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.

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.

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 one-hour integrative seminar required. Prerequisites: 204, 205, 300. Corequisites: 304, 371. Six hours required for students matriculated prior to the 7976-77 catalog.

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

400 Social Welfare Policy Research (3)
An examination of the role of research in social policy; its functions in identifying needs, describing and evaluating programs, analyzing processes, and predicting results. A major project integrating course content with field experience required. Prerequisites: 205, Mathematics 210. Corequisites: 404, 470, 471.

401 Introduction to Social Work Practice in the Health Field (3)
Designed to introduce the student to the health care system. Focus will be upon the impact this system has for social work. 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. Prerequisites: 300, 301, 304, 370, 371; Mathematics 210. Corequisites: 400, 470, 471.

406 Social Values and Ethics in Social Work Practice (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.

411 Social Work and Family Dysfunction (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.

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.

420 The Social Welfare System: Its Impact Upon Women (3)
A critical analysis of the social welfare system's impact upon women; analysis of their roles as consumers and providers of social welfare services.

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.

430 Social Work Practice with the Dying (3)
A multi-disciplinary exploration of the phenomena of death and dying and their implications for social work practice.

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.

432 Geriatric Social Services (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.

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.

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

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.

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 two-hour integrative seminar emphasizing issues common to field experience. Prerequisites: 300, 301, 304, 370, 371; Mathematics 210. Corequisites: 400, 404, 471.

471 Field Seminar II (2)
An advanced integrative seminar emphasizing issues common to social work theory, methods, and field experience. Prerequisites: 300, 301, 304, 370, 371; Mathematics 210. Corequisites: 404, 470.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms)
See "Departmental Honors," page 32.

497r Research (1-4)
Prerequisite: approval of department head.

498r Individual Studies (1-4)
Prerequisite: approval of department head.

499r Group Studies (1-4)
Prerequisite: approval of department head.
School of Nursing

Professor Haase, Dean
Professor M. Jackson
Associate Professor Charles
Assistant Professors Butterfield, Gilmore, Lemaire, Norwood, Seaborg, M. Trimpey, Troxel, Volz

Prenursing students must meet the same admission requirements as all other applicants to the University. Two units of high school algebra and one unit of high school chemistry are desirable.

Enrollment in the nursing major is limited. Admission to the University does not insure acceptance into the nursing major. Academic advising for all students declaring prenursing or nursing majors must be done by a member of the nursing faculty. Students desiring admission or readmission to the nursing major must submit written application on forms available from the faculty in the School of Nursing. Candidates for Nursing 202 must make formal application by March 15 of the year preceding the January enrollment. Readmission or transfer students should submit written application three months prior to the desired enrollment date.

Admission to the Nursing Major

The committee for admissions has the responsibility for selecting those students to be admitted or readmitted to the nursing major. A limited number of students will be admitted to the first nursing course. Candidates will be considered for admission conditional to meeting the following requirements:

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 2.50 on a 4.00 point scale at UTC.
   - Chemistry 121, 122
   - Biology 191, 192, 193, 210
   - Sociology 151
   - English 101, 102
   - Psychology 101
   - Two or three hours of mathematics
   - Anthropology 208 or Psychology 221 (remaining course to be taken prior to Nursing 303)
   - Two or three hours normal nutrition
   - Students who have credit for chemistry, microbiology, or physiology which was received ten years prior to admission to the nursing major must either repeat or test out of these courses.

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 will be considered on a selected basis.

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.

Preference will be given to applicants with a composite ACT score of 18 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 dean of the School of Nursing.

Candidates will receive written notice of the committee's decision by May 30 of each year. 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 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.

In addition to regular education costs, nursing students must meet the following expenses: uniforms, laboratory coat, standardized test fees, yearly liability insurance, and transportation (clinical experience in nursing is obtained in a variety of health care settings in local and outlying areas. Students are individually responsible for transportation to these agencies).

Upon successful completion of the baccalaureate program in nursing, 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 exam.

Continuation Standards

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 2.00; and c) maintain an active liability insurance policy.
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 may be allowed to repeat only one nursing course one time at the discretion of the committee for admissions and/or the dean of the School of Nursing.
Any student who is enrolled in a course beyond the midterm point and who then withdraws will be considered to have taken the course and must apply for readmission.

4. To insure preparation of a safe practitioner, any student who fails to make satisfactory progress in the clinical portion of a nursing course will not be permitted to continue in the clinical area.

5. Students are evaluated in a specific time sequence in all clinical courses. Students will participate in this procedure which includes a written self evaluation.

6. In determining the final grade in a clinical nursing course, both the theory and the clinical components will be evaluated on the basis of previously written criteria developed for each course.

7. Students must acquaint themselves with and meet fully the University standards entitled "Maintenance of Ethical and Professional Standards of the Nursing Profession." These standards are published in the UTC Student Handbook.

In the judgment of an instructor there is reason to question the emotional or physical condition of a student or the safety or quality of nursing care provided, the instructor 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 nursing faculty on or before the next class day. The student will receive written notification of the faculty's recommendation. Should the decision be unacceptable to the student, he or she may appeal to the dean, and thereafter in accordance with the University policy.

Nursing (B.S.N.)

General Education (see pages 26-27 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 C
1 approved perspectives course (3 hours; approved related course below will apply)

Health and Physical Education 021 plus one additional semester physical education activity

Major and related courses
2.50 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; Sociology C151; Anthropology G208

22 hours mathematics, natural, or applied science courses including: Biology 191,192,193,210; Chemistry D121,122; 2-3 hours mathematics Mathematics F210
2-3 hours nutrition Nursing 202, 302, 303, 304, 311, 312, 350, 402, 407,408, 411, 412, 450, 480 (effective with graduating class in 1984)
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.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Freshman</td>
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<tr>
<td>Chemistry D121</td>
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<tr>
<td>English A101</td>
<td>3</td>
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<tr>
<td>Mathematics</td>
<td>2-3</td>
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<tr>
<td>Physical Education 021</td>
<td>1</td>
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<tr>
<td>Sociology CI 51</td>
<td>3</td>
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<tr>
<td>Elective</td>
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<td></td>
<td>16-17</td>
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<tr>
<td>Sophomore</td>
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<tr>
<td>Biology 192, 193</td>
<td>4</td>
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<tr>
<td>Psychology C101</td>
<td>3</td>
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<tr>
<td>Biology 210</td>
<td>4</td>
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<td>Nutrition</td>
<td>3</td>
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<tr>
<td>(Home Economics 105 or 305)</td>
<td>3-4</td>
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<tr>
<td>Elective</td>
<td>3</td>
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<td></td>
<td>17</td>
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<tr>
<td>Junior</td>
<td></td>
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<tr>
<td>Nursing 302</td>
<td>3</td>
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<tr>
<td>Nursing 303</td>
<td>6</td>
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<td>Fine Arts</td>
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<td>Nursing 304</td>
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<td>Nursing 402</td>
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<tr>
<td>Senior</td>
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<tr>
<td>Nursing 480</td>
<td>3</td>
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<tr>
<td>Nursing 411</td>
<td>4</td>
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<tr>
<td>Nursing 412</td>
<td>4</td>
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<tr>
<td>Nursing 450</td>
<td>3</td>
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<tr>
<td>Humanities or Fine Arts</td>
<td>3</td>
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<td></td>
<td>17</td>
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<td>13-16</td>
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128 credit hours required for graduation

Curriculum revision is in process: Some change in sequence, hours, and GPA may occur. Revised and approved November 1982.

*Cumulative GPA of 2.50 is required for admission to Nursing 202.

Nursing Courses

100 Introduction to Nursing (3)
Beginning concepts used in nursing practice with an emphasis on methods of clinical inquiry. Basic human needs in health and illness are studied and the meaning of levels of wellness related to person, family, and community are explored.

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

202 Nursing Process (7)
Theory and practice of basic nursing skills and interpersonal relationships; emphasis on use of the nursing process to meet human needs. Focus is on commonalities of nursing care for individuals within the wellness/illness continuum. Lecture five hours, laboratory six hours. Prerequisites: approval of dean and admissions committee.
300 Pharmacology (3)
An overview of pharmacology including drug classifications, action, use, and nursing implications and drug interactions. Legislation pertinent to drug control included.

302 Psycho-Social Nursing I (3)
Study of behavioral concepts and communication theory as applied to nursing practice. A supervised clinical practicum providing for development of interpersonal skills and their application in a variety of situations. Lecture two hours, laboratory three hours. Prerequisites: completion of sophomore year courses including 202.

303 Parent-Infant Care (6)
Course content organized around biophysical and psycho-social concepts, principles, and theories necessary for the care of individuals and families during the child-bearing cycle; focus on the normal reproductive sequence. Lecture three hours, laboratory nine hours. Prerequisites: completion of sophomore year courses including 202 and Psychology 221.

304 Junior Seminar (2)
Study of the development and contemporary form of nursing practice. Consideration of the role of education in developing and maintaining professional standards. Emphasis on ethical and legal responsibilities of the individual. Prerequisites: permission of dean.

311 Adult Care I (4)
The nursing process is utilized with adult clients at any point in the wellness-illness continuum who have problems relating to cell proliferation, metabolism, digestion, and fluid and chemical regulation. Health maintenance, adult developmental, and nursing intervention concepts are explored in classroom and clinical practice. Lecture two hours, laboratory six hours. Prerequisites: 202, 302, 303.

312 Child Care I (4)
The normally well child, with attention to growth and development, health maintenance, and the episodic, frequently encountered health problems of each age group. Nursing interventions appropriate in child health care are developed in classroom and clinical practice, lecture two hours, laboratory six hours. Prerequisites: 202, 302, 303.

350 Management in Nursing (3)
A review of concepts and techniques applicable in nursing management. Examination of similarities, differences, and unique characteristics of various managerial roles in nursing. Focus on techniques of supervision, leadership, job assignment, and communication. Prerequisites: 302, 303, or permission of dean. Corequisites: 311, 312.

402 Principles of Public Health Nursing (2)
Content focusing on community services, biostatistics and epidemiology, and public health policy as they relate to the practice of nursing. Prerequisite: permission of dean.

404 Professional Seminar (2)
Literature study and in-depth discussion of selected topics relevant to nursing today and in the future. Prerequisites: completion of junior nursing courses and permission of dean.

407 Psycho-Social Nursing II (4)
Behavioral concepts and communication theory applied in nursing situations dealing with more complex forms of human behavior. Supervised clinical experience in individual and group interactions in mental health settings. Prerequisites: completion of junior and first semester senior nursing courses.

408 Senior Clinical Experience (3)
Clinical experience in a practice area chosen by student and instructor. Activities coordinated by nursing faculty and supervised by agency personnel. Graded satisfactory/unsatisfactory. Laboratory nine hours. Prerequisites: second semester, senior standing.

411 Adult Care II (4)
Continuation of 311. The nursing process is utilized for adult clients with problems relating to oxygenation, perception, and coordination. Prevention of illness and nursing interventions to achieve optimal level of wellness is addressed in classroom and in a variety of clinical settings.
Other Educational and Public Service Units

Academic Computing Services
Lloyd Davis, Director

The computing facilities available on the UTC campus are among the finest in the South. Equipment includes Hewlett-Packard 2000 and 3000 computers, both used solely for instruction and research. There are currently seven computer terminal clusters supporting over 80 video, hard copy, and graphic terminals. The clusters are located in the major classroom complexes and in the University library for easy student access. Additionally, UTC is a remote job entry station of the University of Tennessee Computer Center network. Available are IBM 370/3031S and a DEC 10, all accessible from the UTC campus and providing student job turnaround in an average of less than one minute.

UTC’s Office of Academic Computing is a major strength for the support and effectiveness of computing at UTC. Academic Computing deals only with instruction and research. UTC particularly espouses the enrichment of the curriculum with computer related experiences. To that end a continual and diligent search is made to secure quality educational software that is relevant to UTC’s academic programs.

Cadek Conservatory of Music
Marc H. Peretz, Director

Functioning as an auxiliary of the Cadek Department of Music, the Cadek Conservatory has as its goal the education of music students of all ages who are not enrolled at the University level. The Conservatory offers applied music courses in virtually all instruments and voice in a curriculum which includes theory, chamber music, and other ensemble activity. This comprehensive curriculum has special courses for young children including Suzuki violin, Kinder Keyboard and Music and Movement. There is also a course of study designed to give strong pre-college preparation to the student intending to pursue a major in music in college.

The faculty ranges from full-time Conservatory teachers to public school music teachers who serve part-time at the Conservatory. The faculty includes many University music faculty and other prominent performing musicians as well.

For further information, please consult the Cadek Conservatory of Music’s Bulletin, or call 755-4624.

Center for Economic Education
William H. Peterson, Director

As an educational facility of UTC, the Chair of Free Enterprise and the associated Center for Economic Education design and implement research projects and educational programs to educate UTC students, secondary and elementary school teachers, and the public about basic economic principles and the unique features of the free enterprise system.

Division of Continuing Education
Jerry Weeks, Dean

The Continuing Education Division develops, coordinates, and supervises continuing education and public service programs offered by The University of Tennessee at Chattanooga.

Adult Services Center
The Adult Services Center, located on the first floor of the University Center, is open from 12 P.M. to 8 P.M. Monday through Thursday, 12 P.M. to 5 P.M. Friday, and 8 A.M. to 12 P.M. Saturday for the convenience of students who work full time. The Center provides individualized advisement, registration, and other University services for adult part-time students. Workshops and seminars related to career/educational opportunities and transitions are conducted regularly for individuals currently enrolled or individuals who are interested in either entering or returning to college.

Evening College
The Division of Continuing Education 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 through evening study. The division publishes a brochure each semester listing all evening credit courses offered on campus as well as off campus.

The Continuing Education Office is open from 8 A.M. to 5 P.M. Monday through Friday. Persons requiring assistance or in need of the evening study brochure may come to the office or call during these hours.

Off-Campus Credit Courses

Off-campus UTC credit courses have been offered at numerous locations including Cleveland and downtown Chattanooga. Persons interested in having UTC credit courses taught at an off-campus location should contact the Division of Continuing Education for further information.
Individualized Education Program

The Individualized Education Program was launched as an official unit of The University of Tennessee at Chattanooga in August 1972. The primary purpose of the program is to make the University more accessible to adults who wish to enter or return to college. Specific objectives of the Individualized Education Program are 1) to inform adults in the community about the educational opportunities available at The University of Tennessee at Chattanooga; 2) to assist adults in making the transition into college life; and 3) to coordinate the process of awarding academic elective credit to adults for their previous work and training experience.

Adults are encouraged to contact the Division of Continuing Education for orientation and assistance related to admission procedures, registration, and academic requirements if they are considering entering or returning to the University.

Noncredit Courses

Noncredit courses dealing with a wide variety of topics and interests are offered through the Division of Continuing Education and are open to the general public. These noncredit courses are divided into three major categories: professional development, arts and sciences, and personal interest. Programs on management development, music, art, literature, foreign languages, recreation, engineering, real estate, home economics, and consumer education are offered throughout the year. Noncredit course formats range from one-day workshops or seminars to 16-week courses conducted during the day or evening at a variety of campus and off-campus locations.

Subject to the approval of the Continuing Education Council, participation in many non-credit 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 Office of Records.

The professional staff of the Division of Continuing Education 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 Institutes

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 for the purpose of developing and coordinating conferences and institutes which focus on topics of concern to the particular group. Groups as small as ten or those numbering four 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 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 at Chattanooga without charge in any class where there is space available beyond that needed for students who pay fees. Some courses which have special prerequisites or conditions are not available under this option. In addition, persons who are over 65 or totally disabled may, if admitted, enroll in credit courses for a fee of $7.50 per semester hour to a maximum of $75.00 per semester. The Division of Continuing Education 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 rather than applying for admission at the UTC Admissions Office.

FACE Program for Life Transitions

The FACE Program is designed to assist individuals in adjusting to the diverse transitions which periodically occur in their lives; i.e., family, adult, career, educational, thus the name FACE. Toward this end the staff works not only with individuals but with groups and area employers to provide counseling services, workshops, and training programs related to personal development, career assessment, and educational opportunities.

Other Services

Additional services provided by the Division of Continuing Education include 1) administering the non-engineering cooperative education program; 2) furthering public awareness of University activities through the UTC radio program “On Campus”; 3) coordinating the operation of a 50,000 watt rebroadcast radio station, WUTC; 4) representing The University of Tennessee Statewide Division of Continuing Education in providing correspondence, radio, and television instruction; 5) arranging for courses offered by other UT campuses to be taught at UTC; 6) providing faculty and facilities for programs conducted by The University of Tennessee's Institute for Public Service; 7) participating in the U.S. Army Project Ahead Program; and 8) coordinating the Listener’s Program whereby 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.
Division of Special Services/Upward Bound

Paul Beasley, Director

The Division of Special Services, located in 212 Race Hall, provides free academic support services to all UTC students. Specific services include:

Principles of Effective Study—A three-hour study skills class, HSRV 100, is offered each semester. The course covers techniques for effective study, library usage, and goal setting. As an integral part of this course, the Study Skills Lab staff diagnoses and prescribes an individualized, self-paced reading improvement program. All enrollees must have the prior approval of the Special Services staff.

Writing Skills—Small group and individual tutoring sessions in grammar and composition 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 3.00 GPA provide individual tutoring in academic subjects on the freshman and sophomore levels.

Counseling and Referral Services—Individual counseling services help students identify and solve problems which may hamper their academic progress.

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 to 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 213 Race Hall.

The Learning Resource Materials Center

The center is a service provided by the University for those students who wish to improve their reading, writing, and study skills. Any student may request individual help from the center in vocabulary development, reading, comprehension, reading rate, concentration and recall, test-taking, note-taking, spelling, and writing.

Each student's strengths and weaknesses are assessed in order to determine the most suitable materials for him or her to work with and a program of study is developed that is unique for that student. Such a program may include listening to taped materials, using various reading machines and filmstrips, and practicing with textbooks and workbook materials.

For additional information regarding the services provided by the center, contact the Department of Curriculum and Instruction located in 313 Hunter Hall.

Library

Joseph Jackson, Director

The University library's holdings include approximately 860,000 pieces of material, of which more than 300,000 are books and periodicals. The combined resources of the University Library and the Chattanooga Hamilton County Bicentennial Library make more than one million volumes available to University students. Annually, the University Library receives approximately 3,000 periodicals. In addition, students, staff, and faculty may use the collections and services of all libraries of The University of Tennessee system.

The general collections for support of the graduate programs are augmented by a variety of special collections which are also housed in the main library. Audiovisual equipment, including video playback, microforms, films, and curriculum resources, are also located in the library.

Library Fines

Books borrowed from the library's regular collections are subject to an overdue fine of 10 cents per day for the first week and 25 cents per day thereafter up to a limit of $5.00 for each book. For books on regular loan, a fine is not charged until the third day after due date at which time the full amount will be charged. 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 $5.00.

Reserve books are subject to an overdue fine of 50 cents for the first hour, 25 cents for the second hour, and 10 cents for each hour thereafter up to a limit of $5.00. Reserve materials are due one hour after opening time on the due date.

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.

Youth Educational Assessment & Research Center

Janice Davis, Coordinator

The Youth Educational Assessment & Research Center (YEAR) is located on the fourth floor in Hunter Hall. This center was established primarily to serve as a teaching/learning laboratory for School of Education preservice and graduate teacher education programs. Additionally, the center provides the campus with a demonstration
model for experiencing training in the multidisciplinary approach to psycho-educational observation, assessment, and program planning for youth.

While the center serves the various teacher preparation programs, youths within the Chattanooga metropolitan area are accepted as clients upon application by their parents, legal guardians, or school system. For additional information concerning the services provided by the YEAR Center, please contact the coordinator of the center or make an appointment for a conference by calling 755-4175 or 755-4368.
Faculty Emeriti

Robert H. Anacker (1932)  Professor Emeritus of Modern Languages
Ph.D., University of Berne, 1962.

George Warren Avertte (1933)  Professor Emeritus of Health and Physical Education
B.S., University of Alabama, 1940; M.A., University of Mississippi, 1950; Ed.D., Columbia University, 1953.

Stanley F. Brettske (1924)  Vice-President Emeritus for Development

Glenn LeRoy Bushey (1962)  Professor Emeritus of Education
B.S., Shippensburg State College; M.A., Columbia University; Ed.D., Temple University.

Wilbur Kingsley Butts (1931)  Guerry Professor Emeritus of Biology
B.S., 1918, M.S., 1923, Ph.D., 1929, Cornell University.

Roland Debusse Carter (1942)  Associate Professor Emeritus of English

Elizabeth Undress Dalton (1964)  Professor Emeritus of Education

Doris Doe (1956)  Professor Emerita of Voice
Studied with Frank La Forge, Michael Raucheisen and Johannes Heidenreich (Berlin), and Artur Bodanzky.

Gail Shimpman Hammond (1946)  Professor Emerita of Art

Reuben W. Holland (1946)  Professor Emeritus of French
A.B., 1929, M.A., 1931, Emory University.

Karel Hujer (1946)  Cuery Professor Emeritus of Physics and Astronomy
D.Sc, University of Prague, 1932.

Norbert Koch (1947)  Professor Emeritus of Engineering
B.Ed., Wisconsin State University, 1937; M.S., The University of Tennessee, Knoxville, 1940; Ed.D., University of Missouri, 1951.

Edwin Samuel Lindsey (1924)  Cuery Professor Emeritus of English
A.B., 1919, A.M., 1921, Ph.D., 1923, University of North Carolina.

James Weston Livingood (1937)  Cuery Professor Emeritus of History
B.S., Gettysburg College, 1932; M.A., 1934, Ph.D., 1937, Princeton University.

Myron Stanley McCay (1948)  Cuery Professor Emeritus of Physics
A.B., University of Georgia, 1932; M.A., University of North Carolina, 1934; Ph.D., Ohio State University, 1937.

Robert C. Mildram (1964)  Professor Emeritus of Philosophy and Religion
Ph.B., University of Vermont, 1935; B.D., Andover-Newton Theological School, 1938; M.A., 1943, Ph.D., 1949, Yale University.

Paul L. Palmer (1925)  Cuery Professor Emeritus of Education and Psychology
A.B., 1921, A.M., 1922, Northwestern University.

Sarah Phillips (1943)  Professor Emerita of Office Administration
A.B., Western Kentucky State College, 1930; M.A., Columbia University, 1938.

Arthur Plettner (1937)  fuillard Professor Emeritus of Music
Mus. Bac, 1942, Mus. Doc, 1951, University of Toronto; State Conservatory of Music; Wurzburg, Germany, 1919-1923; Fellowship Juilliard Graduate School of Music, 1932-1936.

Maxwell Austin Smith (1922)  Guerry Professor Emeritus of Modern Languages

Dorothy Hackett Ward (1938)  Cuery Professor Emerita of Theatre and Speech
A.B., University of Chattanooga, 1928; Speech Diploma, Cadet Conservatory, 1932; M.F.A., Yale University, 1946.

Faculty, 1982-83

College of Arts and Sciences

Art

Jimmy Lee Collins (1966)  Professor

George Ayers Cress (1951)  Cuery Professor
Department Head

Jean Karen Gallagher (1980)  Assistant Professor

Stephen S. LeWinter (1975)  Assistant Professor

Anne Lindsey (1978)  Assistant Professor

Richard William Lizza (1982)  Assistant Professor

Robert Bruce Wallace (1978)  Associate Professor
A.B., University of Chattanooga, 1954; M.F.A., Florida State University, 1969.

E. Alan White (1972)  Associate Professor

Adjunct Art


Biology

Ross M. Durham (1971)  Associate Professor
B.S., 1962, Ph.D., 1968, University of California, Los Angeles.

Maurice L. Edwards (1971)  Associate Professor

John Richardson Freeman (1959)  Professor

Richard Edwin Garth (1969)  Professor
A.B., 1949, Ph.D., 1954, Emory University; M.S., The University of Tennessee, Knoxville, 1950.

Charles Henry Nelson (1969)  Professor
A.B., Humboldt State College, 1963; Ph.D., University of California, Berkeley, 1970.

Gene S. Van Horn (1971)  Professor
A.B., Calvin College, 1951; M.S., 1955, Ph.D., 1965, Michigan State University.

Barbara Ann Walton (1970)  Associate Professor

Adjunct Biology


Barbara Rowenca (1982)  

Elizabeth C. Shirley (1982)  

Chemistry

Gregory J. Grant (1980)  
Assistant Professor  
B.S., 1974, Ph.D., 1980, Georgia Institute of Technology.

Benjamin Harrison Gross (1964)  
Curry Professor,  
Department Head  
B.S., University of Chattanooga, 1952; M.S., 1954, Ph.D., 1956, The University of Tennessee, Knoxville.

Henry Douglas Kutz (1978)  
Assistant Professor  
B.S., Union College, 1968; Ph.D., University of Notre Dame, 1973.

John August Lynch (1975)  
Associate Professor  
B.S., St. Peter's College, 1970; Ph.D., Pennsylvania State University, 1976.

Robert Lewis McNeely (1969)  
Professor  
B.S., Duke University, 1960; Ph.D., University of North Carolina, 1969.

Gail M. Meyer (1982)  
Instructor  
B.A., The University of Tennessee at Chattanooga, 1974; M.S., University of Minnesota, 1976.

Thomas R. Rybolt (1981)  
Assistant Professor  
B.S., Furman University, 1976; M.S., 1979, Ph.D., 1981, Georgia Institute of Technology.

Thomas G. Waddell (1971)  
Alumni Distinguished Service Professor  
B.S., University of Wisconsin, Madison, 1966; Ph.D., University of California, Los Angeles, 1969.

Adjunct Chemistry

Virginia Brown (1979)  
B.S., 1970, M.S., 1972, Middle Tennessee State University.

A. James Engel (1980)  
B.A., Columbia Union College, 1951; M.S., 1955, Ph.D., 1972, University of Maryland.

William R. Peterson (1979)  
A.B., Carroll College, 1949; Ph.D., University of Illinois, 1952.

John E. Vincent (1982)  

Communications

Cynthia De Riemer (1976)  
Assistant Professor  
B.A., St. Mary's University, 1971; M.Ed., The University of Tennessee at Chattanooga, 1978.

Peter K. Pringle (1981)  
Associate Professor,  
Department Coordinator  

S. Kittrell Rushing (1982)  
Assistant Professor  
B.S., 1971, M.A., 1976, Memphis State University; Ph.D., University of Mississippi, 1982.

English

Craig Wallace Barrow (1970)  
Professor  

Frances K. Bender (1970)  
Assistant Professor  

George Coleman Connor (1959)  
Cuery Professor  

Robert C. Fulton III (1970)  
Associate Professor,  
Honors Director,  
Humanities Coordinator  

Arlie E. Herron (1961)  
Professor,  
American Studies Coordinator  
B.S., University of Alabama, 1950; M.A., University of Georgia, 1959.

Richard P. Jackson (1976)  
UC Foundation Associate Professor  

Eileen M. Meagher (1980)  
Associate Professor,  
Freshman Composition Director  

Paul Ramsey (1966)  
Cuery Professor,  
Poet-in-Residence  

Michael Reynard Richards (1961)  
Professor  

Robert Reed Sanderlin (1969)  
Associate Professor  

Edgar McDowell Shawen (1970)  
Associate Professor  
B.A., University of Virginia, 1966; M.Phil., 1969, Ph.D., 1972, Yale University.

John Douglas Tinkler (1967)  
Professor  

Charles F. Totten (1976)  
Assistant Professor  

John Eccles Trimpey (1979)  
Professor,  
College of Arts and Sciences Dean  
B.A., Ball State University, 1964; M.A., University of Arkansas, 1966; Ph.D., Ohio University, 1968.

Robert Jean Vallier (1970)  
Associate Professor  

Lucy E. Waddey (1975)  
Instructor  

Sally Burton Young (1982)  
Instructor  

Adjunct English

Carolyln P. Adcock (1980)  
B.S., East Tennessee State University, 1978.

Jane Pickett Eberly (1982)  
B.A., Bradley University, 1971.

G. Steven Epley (1980)  

Jamie K. Goodman (1981)  
B.S., Indiana State University, 1978.

Margaret L. Jackson (1976)  

Margaret C. Nagle (1979)  

Shirley F. Nelson (1982)  

Sarah Walden Ramsey (1982)  
B.A., Indiana State University, 1980; M.A., University of Michigan, 1982.

Carroll C. Reddon (1980)  

Virginia P. Souders (1980)  

Jeannette M. Vallier (1970)  

Roberta S. Ward (1979)  
Environmental Studies

Robert Gary Litchford (1965) Associate Professor
Environmental Studies and Biology
B.S., Georgia Southern College, 1960; Ph.D., Rice University, 1965.

Patricia Ann Bytnar Peretti (1969) Professor, Environmental Studies and Biology
Environmental Studies Coordinator

Foreign Languages and Literatures

Ronald G. Bohrer (1968) Associate Professor, Classics; Department Head

Pedro F. Campa (1970) Associate Professor, Spanish

Pierrette-Monique Denzler (1980) Assistant Professor, German and French

Thomas Kirkman Jones (1967) Assistant Professor, Spanish

Hugh Nelson Seay Jr. (1965) Professor, Spanish

Felicia Sturzer (1977) Assistant Professor, French and German

Lewis A.M. Sumberg (1972) University Professor

Geosciences

Richard E. Bergenback (1968) Professor, Geology
A.B., Lafayette College, 1948; M.S., Lehigh University, 1950; Ph.D., Pennsylvania State University, 1964.

Habte Giorgis Chumet (1980) Assistant Professor, Geology
A.B., Haile Selassie University, 1969; M.S., Leeds University; Ph.D., The University of Tennessee, Knoxville, 1979.

Deborah Wilbou Kuehn (1981) Assistant Professor, Geology

Kenneth W. Kuehn (1981) UC Foundation Fellow and Assistant Professor, Geology
B.S., Juniata College, 1975; M.S., Pennsylvania State University, 1979; Ph.D., Pennsylvania State University.

Horace Greeley McDowell (1960) Associate Professor, Geography
A.B., Miami University, 1949; M.A., University of Nebraska, 1950; Ed.D., The University of Tennessee, Knoxville, 1971.

Robert Lake Wilson (1955) Professor, Geography and Geology
A.B., Wheaton College, 1948; M.S., State University of Iowa, 1950; Ph.D., The University of Tennessee, Knoxville, 1967

Adjunct Geosciences


History

Albert Bowman (1952) Professor

Tyler Deierhoi (1963) Associate Professor

Jane Worth Harbaugh (1957) Professor

H. Larry Ingle (1967) Associate Professor
B.A., Wake Forest College, 1958; M.A., American University, 1951; Ph.D., University of Wisconsin, 1967.

Russell J. Linnemann (1970) Associate Professor

Ronald Oury Moore (1960) .

Richard B. Rice (1961) Associate Professor

James M. Russell (1970) Associate Professor

James A. Ward III (1969) UC Foundation Professor
B.A., 1964, M.A., 1965, Purdue University; Ph.D., Louisiana State University, 1969.

William J. Wright (1969) Associate Professor
A.B., 1964, M.A., 1965, Stetson University; Ph.D., Ohio State University, 1969.

Mathematics


James Stanley Byrd (1980) Instructor
B.S., 1973, M.S., 1974, Mississippi State University.

Barry P. Cuffe (1982) Assistant Professor
B.S., University of Miami, 1976; M.A., Indiana University, 1980.

Edward J. Danial (1982) Assistant Professor
B.A., Mercyhurst College, 1975; M.A., Northeast Missouri State University, 1977; Ph.D., University of Missouri at Rolla, 1982.

William Patrick Edwards (1969) Associate Professor

Nancy J. Fordye (1980) Assistant Professor
B.S., 1972, M.S., 1974, Florida State University.

Sandra Sawford Hartley (1981) Assistant Instructor

Joseph W. Hutcherson (1969) Associate Professor

John W. Jayne (1969) Professor
B.A., 1951, M.A., 1956, Vanderbilt University; Ph.D., Georgia Institute of Technology, 1966.

Joel Lynn Jones (1981) Lecturer

Stephen W. Kuhn (1978) Assistant Professor
B.S., Louisiana State University, 1970; M.S., University of Southwestern Louisiana, 1974; Ph.D., University of Georgia, 1979.

Louise Willis Mcintosh (1961) Associate Professor
B.S., 1940, M.Ed., 1962, University of Chattanooga; M.S., The University of Tennessee at Chattanooga, 1971.

Dewayne S. Nymann (1970) Professor
B.A., University of Northern Iowa, 1957; M.A., 1959, Ph.D., 1964, University of Kansas.

Voreata S. Perry (1973) Instructor

Edward Ralph Rozema (1973) Associate Professor
A.B., Calvin College, 1967; M.S., 1969, Ph.D., 1972, Purdue University.

Eugene P. Schlereth (1978) Assistant Professor
B.S., Marquette University, 1970; M.S., Southern Illinois
Adjunct Math

Billy Lester Abel (1977)  
B.S., Nicholls State University, 1971; M.Ed., The University of Tennessee at Chattanooga, 1977.

Nancy G. Caldwell (1980)  
B.A., Middle Tennessee State University, 1974; M.Ed., The University of Tennessee at Chattanooga, 1980.

Gail L. Nevins (1979)  
B.S., 1966; M.Ed., 1967, University of Chattanooga.

Ann C. Martin (1981)  
Mathematics Learning Center Coordinator  
B.S., East Central State College, 1965; M.Ed., West Georgia College, 1981.

Merrill B. Parker (1969)  

Kenneth S. Ross (1983)  

Leonidas Smith (1956)  
B.A., University of Chattanooga, 1942.

George Q. Taylor Jr. (1960)  
B.S., University of Chattanooga, 1958; M.S., Michigan State University, 1960; Ph.D., Georgia Institute of Technology, 1969.

William L. Walton (1976)  

Juanita G. Woods (1976)  
B.A., Fisk University, 1951; M.S., Tennessee A & I University, 1956; M.A., Purdue University, 1965.

Music

Mario Abril (1973)  
Associate Professor  
A.B., University of Albuquerque, 1967; Ph.D., Florida State University, 1971.

William Morris Bales (1969)  
Associate Professor  
A.B., 1940, B.M., 1947, University of Chattanooga; M.A., George Peabody College for Teachers, 1953.

Daniel Alan Bowles (1976)  
Assistant Professor  

London Grigsby Branch (1979)  
Associate Professor  

Walker L. Breland (1972)  
Professor  
B.A., Furman University, 1958; M.M., 1959, Ph.D., 1974, Indiana University.

Earl Coleman Jr. (1982)  
Assistant Professor  

Monte Coulter (1980)  
Instructor  

Renee S. Cox (1976)  
Assistant Professor  

Barbara Hanna Creider (1976)  
Associate Professor  

Anthony J. D’Andrea (1962)  
Associate Professor,  

Betsy Darken Smith (1979)  
Lecturer (on leave ’82-83)  

Ronald L. Smith (1980)  
Associate Professor  
B.S., Auburn University, 1969; M.S., University of California, Riverside, 1970; M.S., Ph.D., 1976, Auburn University.

Sherri L. Urcavich (1980)  
Mathematics Learning Center Coordinator  

James Careth Ware (1965)  
Professor,  
Department Head  

Adjunct Music

R. Steven Acklin (1982)  

Joe C. Chapman (1981)  
B.M., The University of Tennessee at Chattanooga, 1979; M.M., University of South Carolina, 1981.

Charles M. Evans (1980)  
B.M., The University of Tennessee at Chattanooga, 1980.

J. James Greasy (1980)  

Susan L. Pendleton (1982)  

Gail D. Reneau (1978)  

Mary A. Schmidt (1981)  

Janet Sump (1980)  
B.S., The University of Tennessee at Chattanooga, 1974; M.M., Converse College, 1977.
Philosophy and Religion

Herbert W.L. Burhenn Jr. (1970)  
Associate Professor,  
Department Head  

Dimis Taylor Dowse (1965)  
Associate Professor  

Thor Hall (1972)  
Distinguished Professor, Religious Studies  

Donald S. Klinefelter (1969)  
Professor  

John Frederick Phillips (1980)  
Assistant Professor, Classics and Philosophy and Religion  

Donald Robert Weisbaker (1965)  
Professor  

Physics

Joel Lamar Davis (1979)  
Assistant Professor  
B.S., 1970, M.S., 1972, Ph.D., 1976, Georgia Institute of Technology.

Morris Hetzler (1964)  
Associate Professor  
A.B., University of Chattanooga, 1959; Ph.D., Vanderbilt University, 1970.

Eric Trent Lane (1967)  
Associate Professor  

Randolph Stuart Peterson (1980)  
Assistant Professor  

Grayson Howard Walker (1978)  
Professor, Department Head  
B.S., University of North Carolina, 1961; M.S., University of Illinois, 1962; Ph.D., Georgia Institute of Technology, 1969.

Edwin Wurtz (1981)  
Associate Professor  
B.A., University of Colorado, 1967; M.S., University of Maryland, 1968; Ph.D., University of Chicago, 1974.

Adjunct Physics

Li-Hwa Huang (1980)  
B.S., Taiwan Normal University, 1965; M.S., Western Michigan University, 1968.

Political Science

David M. Brodsky (1971)  
Associate Professor  

David W. Carrithers (1970)  
Adolph S. Ochs Professor, Government  

Fouad Mouhabri (1968)  
Professor  

Robert H. Swansbrough (1971)  
Professor, Department Head  

Richard L. Wilson (1971)  
Associate Professor  
B.A., University of Chicago, 1966; Ph.D., Johns Hopkins University, 1971.

Psychology

Michael D. Biderman (1972)  
Associate Professor  

Stanton P. Field (1968)  
Professor, Psychology and Criminal Justice  

Edward J. Green (1971)  
Professor, Department Head  

George B. Helton (1975)  
Associate Professor  
B.S., 1966, M.S., 1967, North Texas State University; Ph.D., University of Texas, Austin, 1972.

Ralph W. Hood Jr. (1970)  
Professor  
A.B., University of California, Los Angeles, 1964; M.A., California State College of Los Angeles, 1966; Ph.D., University of Nevada, 1969.

Lawrence S. Kleiman (1979)  
Assistant Professor  

L. Lynn Outh (1970)  
Associate Professor  

Irene Nichols Ozbek (1977)  
Assistant Professor  
B.A., 1969, M.S., 1972, Ph.D., 1974, University of Georgia.

Phyllis Jan Printz (1966)  
Associate Professor  
B.A., University of Kansas City, 1950; M.A., University of Missouri, Kansas City, 1951; Ph.D., The University of Tennessee, Knoxville, 1978.

Pamela T. Reid (1979)  
Associate Professor  

Paul J. Watson (1977)  
Assistant Professor  

Edward A. Workman (1979)  
Assistant Professor  

Lynne D. Zager (1981)  
Assistant Professor  

Sociology and Anthropology

Edward E. Cahill (1975)  
Professor, Department Head  
B.B.Sc, St. Mary's College, 1952; M.A., University of Notre Dame, 1957; Ph.D., Catholic University of America, 1965.

Lawrence M. Cox (1979)  
Assistant Professor  

PK. Geervargese (1968)  
Associate Professor  

N. Honerkamp (1980)  
Assistant Professor  

Clive Kieff (1970)  
Assistant Professor  
A.B., Harvard University, 1966; Ph.D., Rice University, 1970.

Lyn W. Miles (1976)  
UC Foundation Associate Professor  

Bart Carter Pate (1966)  
Associate Professor  

Leland W. Robinson (1973)  
Associate Professor  

Richard G. Thurstun (1970)  
Associate Professor  

Theatre and Speech

Fred D. Behringer (1980)  
Associate Professor, Department Head  
Karen Gale Hayes (1981) Assistant Professor

Jim C. Lewis (1969) Associate Professor

William M. Smotherman (1980) Assistant Professor

David W. Wiley (1975) Associate Professor

Adjunct Theatre

Suzanne B. Carter (1982)
B.S., University of Chattanooga, 1961; M.M., College Conservatory of Music, 1963.

John R. Miller (1980)
B.A., Emory University, 1967; Ph.D., University of Georgia, 1974.

Sydney L. Roberts (1980)
B.F.A., University of Texas at Austin, 1980.

Ralph T. Thornbury (1977)

School of Business Administration

Accounting and Finance

John M. Abraham (1981) Assistant Professor
B.B.M., Banaras Hindu University, 1973; M.B.A., 1975, Ph.D., 1982, University of Georgia.

Donald E. Duke (1981) Professor
B.S., The University of Tennessee, Knoxville, 1955; M.S., Columbia University, 1958; Ph.D., University of Georgia, 1974; C.P.A.

Nancy T. Fletcher (1981) Assistant Professor
B.S., 1958, M.S., 1961, Duke University; M.Acct., Florida State University, 1976; C.P.A.

John C. Fulmer Jr. (1977) Professor
A.B., Wofford College, 1966; Ph.D., University of Alabama, 1970.

Thomas A. Gavin (1971) Associate Professor
B.S., Seton Hall University, 1966; M.B.A., University of Missouri, 1968; D.B.A., The University of Tennessee, Knoxville, 1982; C.P.A.

Richard B. Griffin (1981) Associate Professor
B.S., The University of Tennessee, Martin, 1966; M.Acct., University of Mississippi, 1967; Ph.D., University of Mississippi, 1979.

Jack A. Hale (1977) Professor

Rayford John McLaurin (1955) Associate Professor
B.S., Bowling Green Business University, 1948; M.B.A., University of Alabama, 1951.

James E. Moon (1976) Professor
Joseph F. DeCosimo Professor, Department Head

Jalal Soroosh (1981) Assistant Professor

C. Lankford Walker (1981) Assistant Professor

Marilyn Willis (1976) Associate Professor

Adjunct Accounting and Finance

J. Duane Cantrell (1982)

E. Taylor Claggett (1982)
B.S., University of Southwestern Louisiana, 1969; M.B.A., University of West Florida, 1972; Ph.D., University of Houston, 1979.

James M. Erwin (1982)

Durwood C. Harvey (1970)
B.B.A., University of Chattanooga, 1947; M.S., The University of Tennessee, Knoxville, 1948; C.P.A.

Alan L. Larson (1982)
B.A., University of Nebraska, 1968; Ph.D., Kansas State University, 1976.

Arthur C. McKee Jr. (1979)

Ronald F. Raulston (1982)
B.S., 1971, M.B.A., 1981, The University of Tennessee at Chattanooga; C.P.A.

Linda G. Scott (1982)
B.S., The University of Tennessee at Chattanooga, 1972; C.P.A.

Kenneth R. Starr (1982)
B.S., University of Tulsa, 1968; J.D., University of Georgia, 1978.

Economics

Fred C. Armstrong (1967) Professor
B.A., Southern Illinois University, 1947; M.A., Michigan State University, 1948; Ph.D., University of Illinois, 1953.

Kermit G. Cudd (1975) John Stagmayer Professor, Economics and Business Administration; School of Business Administration Dean
B.A., 1953, M.A., 1958, University of Wisconsin; Ph.D., The Ohio State University, 1969.

Phillip E. Griffin (1977) Associate Professor
B.A., University of Texas, Austin, 1966; M.A., Texas Technological University, 1968; Ph.D., The University of Tennessee, Knoxville, 1972.

Eugene B. Hutchinson (1982) Assistant Professor
B.S., 1965, Ph.D., 1979, University of Virginia.

Ziad Keilany (1968) Guerry Professor

William H. Peterson (1978) Scott L. Probasco Jr. Professor, Free Enterprise; Center for Economic Education Director
B.S., New York University, 1943; M.S., Columbia University, 1948; Ph.D., New York University, 1952.

Leila J. Pratt (1974) Associate Professor, Acting Department Head

Alan Rabin (1977) Associate Professor
B.A., Hamilton County, 1969; Ph.D., University of Virginia, 1977.

Akin S. Taluy (1980) Assistant Professor
B.S., University of Ankara, 1971; M.S., Oklahoma State University, 1975.

Cindy White (1981) Assistant Professor

Adjunct Economics

Dan E. Birch (1977)
B.A., Brigham Young University, 1970; M.S., 1972, Ph.D., 1977, Purdue University.

Jerry Crigger (1980)

Stephen C Grace (1979)

Gary Jackson (1979)
B.A., Florida Atlantic University, 1971; M.A., 1972, Ph.D., 1979, University of Massachusetts.
Management

Mohammad Ahmadi (1979)  Henry Hart Associate Professor
B.S.M.E., Mississippi State University, 1968; M.B.A., Nicholls State University, 1970; Ph.D., North Texas State University, 1976.

Arthur J.D. Cook (1968)  Professor

Lawrence P. Ellis (1976)  Marvin Edward White Professor, Department Head
B.B.S., Cleveland State University, 1967; M.B.A., Kent State University, 1968; Ph.D., University of Nebraska, 1974; C.P.I.M.*

Thomas Edwin Ceraghy (1960)  Professor

Edson C. Hamer (1973)  Professor

Bangalore P. Linganj (1981)  Professor

James Howard Macomber (1978)  Associate Professor

William H. Moll (1982)  Assistant Professor

Mohammad E. Raiszadeh (1981)  Assistant Professor

Charles Stephen White (1981)  Assistant Professor

Adjunct Management


A. Ben Forrester (1979)  B.S., North Georgia College, 1965; M.S., Auburn University, 1967.

David R. Parks (1979)  B.S.I.E., Purdue University, 1974; M.S.I.E., The University of Tennessee, Knoxville, 1978.


Marketing

A. Richard Casavant Jr. (1977)  Associate Professor
B.A., Emory University, 1964; M.B.A., University of Pennsylvania, 1966; Ph.D., Georgia State University, 1976.

Carmen Reagan (1982)  Assistant Professor
B.S., University of Mississippi, 1965; M.B.A., Memphis State University, 1968; A.B.D., Mississippi State University, 1982.

Irvin D. Reid (1979)  Alan Lorberbaum Professor, Marketing and Business Administration, Department Head

Walter F. Williams (1981)  Assistant Professor

Adjunct Marketing


A. Ben Forrester (1979)  B.S., North Georgia College, 1965; M.S., Auburn University, 1967.


David C. Nowading (1981)  B.S., Penn State University, 1968; Ph.D., Penn State University, 1974.


Office Administration/Business Education

Judy C. Nixon (1975)  Associate Professor, Department Head

Jane R. Robertson  Lecturer

Judy F. West (1981)  Assistant Professor
B.S., 1971, M.B.Ed., 1973, Middle Tennessee State University; Ph.D., Georgia State University, 1976.

Adjunct Office Administration/Business Education


School of Education

Ronald C. Area (1978)  Assistant Professor, Education; Development Vice-Chancellor

Donald H. Dalton (1979)  Associate Professor, Education; Center for Economic Education Associate Director

Charles Monroe Hyder (1968)  Guerry Professor, Education; Graduate Studies and Research Associate Provost

Dan Quarles (1977)  Associate Professor, Education; Institutional Research Director

Charles M. Renneisen (1970)  Associate Professor, Education; Student Affairs Dean
Adjunct Education

Sandra W. Boyles (1980)
Diana C. Brooks (1980)
Shirley J. Cronkhite (1982)
B.S., 1972, M.S., 1980, Indiana State University.
B.S., Middle Tennessee State University, 1953; M.Ed., The University of Tennessee at Chattanooga, 1971.
Linda K. Helton (1978)
B.S., North Texas State University, 1967; M.Ed., Texas Woman’s University, 1970.
Lucille S. Lewis (1977)
B.S., University of Chattanooga, 1964.
Nancy W. Linnemann (1978)
B.S., Eastern Michigan University, 1968; M.Ed., The University of Tennessee at Chattanooga, 1974.
Cynthia E. Messinger (1982)
B.S., The University of Tennessee, Knoxville, 1975; M.Ed., The University of Tennessee at Chattanooga, 1980.
Cynthia P. Rawls (1982)
B.S., Knoxville College, 1970; M.Ed., The University of Tennessee at Chattanooga, 1980.
Kathryn A. Simmons (1980)
Betty Vines (1976)
Marilyn M. Whitely (1980)
B.S., East Carolina University, 1949; M.Ed., The University of Tennessee at Chattanooga, 1975.
Curriculum and Instruction

Eugene C. Bartoo (1978) Associate Professor, Department Head
Bernard Wayne Benson (1970) UC Foundation Professor
B.S., 1962, M.S., 1966, Northern Illinois University; Ph.D., University of Iowa, 1970.
Thomas E. Biber (1970) Professor
William L. Butterfield (1967) Associate Professor
B.A., Ohio Northern University, 1952; B.S., Garrett Theological Seminary, 1955; Ph.D., Ohio State University, 1967.
Anne J. Hunt (1974) Associate Professor
Douglas E. Kingdon (1972) Associate Professor
Sandra L. Snyder (1981) Assistant Professor
Barbara Ann Wofford (1975) Assistant Professor

Educational Administration and Supervision

M. Daniel Baker (1976) Associate Professor, Student Teaching Director
Crayton Robert Benson Jr. (1967) Professor
Lloyd D. Davis (1970) UC Foundation Professor, Academic Computing Services Director
A.B., Ohio Northern University, 1956; M.S., University of Miami, 1959; Ed.D., The University of Tennessee, Knoxville, 1974.
William Hales Jr. (1969) Professor
B.S., Mankato State College, 1957; Ph.D., University of New Mexico, 1970.
Colbert W. Whitaker (1981) Associate Professor, Department Head
Frank R. Whittacre (1969) Professor

Health, Physical Education and Recreation

Gene Ezell (1974) Associate Professor
W. Leroy Fanning (1971) Associate Professor
B.A., Southeastern Louisiana University, 1964; M.S., The University of Tennessee, Knoxville, 1966; Ed.D., University of Georgia, 1972.
Leon Ford (1964) Assistant Professor
Anton David Jadin (1979) Instructor, Intramural Activities Director
Robert G. Norred (1977) Associate Professor, Department Head
William A. Norris (1981) Assistant Professor
B.S., 1973, M.S., 1975, University of Akron; Ph.D., Ohio State University, 1981.
Roy Stinnett (1967) Professor, School of Education Dean
Steven A. Underwood (1982) Instructor
Samuel Wood (1978) Assistant Professor

Adjunct HPER

Special Education and Counseling

Earl E. Davis (1978)  
Professor,  
Department Head  
B.S., University of Southern Mississippi, 1956; M.Ed., University of Texas at Austin, 1963; Ed.D., University of Alabama, 1972.

Janice R. Davis (1978)  
Assistant Professor,  
Youth Educational Assessment & Research Center Coordinator  

Paul DeVivo (1970)  
Professor  
B.S., Northeastern University, 1958; M.S., Kansas State Teachers College, 1961; Ed.D., Ball State University, 1970.

Rodney Fowler (1976)  
Associate Professor  
B.S., Lock Haven State, 1965; M.A., California State University, San Diego, 1968; Ed.D., Ball State University, 1971.

Barbara A. Marotz (1981)  
Assistant Professor  

Ted L. Miller (1978)  
UC Foundation Associate Professor  

Michael J. Sitzman (1975)  
Assistant Professor,  
Counseling Center Director  

Caryl A. Taylor (1978)  
Instructor  

School of Engineering

Terrance M. Carney (1970)  
Professor  
S.B.A.E., 1956, S.M.A.E., 1958, MIT; Ph.D., Rice University, 1967; P.E.

Ronald B. Cox (1970)  
Professor,  
School of Engineering Dean  
B.S., 1965, M.S., 1966, The University of Tennessee, Knoxville; M.B.A., Vanderbilt University, 1980; Ph.D., Rice University, 1970; P.E.

James R. Cunningham (1973)  
Associate Professor  
B.S., Louisiana State University, 1963; M.E., 1970, Ph.D., 1972, University of Florida; P.E.

Prakash R. Damshala (1981)  
Associate Professor  
B.E., Osmania University (India), 1969; M.S., University of Miami, 1972; Ph.D., Georgia Institute of Technology, 1978; P.E.

Jan M. Evans (1981)  
Assistant Professor  
B.S., The University of Tennessee at Chattanooga, 1974.

Edwin P. Foster (1979)  
Associate Professor  
B.E., 1964, M.S., 1966, Ph.D., 1974, Vanderbilt University; P.E.

George W. Garrison (1981)  
Professor  

William G. Gurley (1979)  
Associate Professor,  
Engineering Graduate Studies and Research Director  
B.S., University of North Carolina, Charlotte, 1967; M.S., 1970, Ph.D., 1973, North Carolina State University; P.E.

James E. Henry (1980)  
Associate Professor  
B.A., B.S.Ch.E., Rice University, 1964; M.A., 1966; Ph.D., 1970, Princeton University; P.E.

Michael H. Jones (1980)  
Chattanooga Manufacturers Association  
Associate Professor,  
Engineering Undergraduate Studies Director  

Charles V. Knight (1979)  
Associate Professor  
B.S., 1963; M.S., 1966, Ph.D., 1971, The University of Tennessee, Knoxville; P.E.

John N. Lovett Jr. (1976)  
Associate Professor  
B.A., Hendrix College, 1973; M.S., 1974, Ph.D., 1977, University of Arkansas; P.E.

Michael G. Rekoff Jr. (1979)  
Professor  
B.S.E.E., 1951, M.S.E.E., 1955, Texas A & M; Ph.D., University of Wisconsin, 1961; P.E.

Henry M. Sendaula (1979)  
Associate Professor  

Virgil A. Thomason (1975)  
Associate Professor,  
Engineering Laboratories Director  
B.S., Case Institute of Technology, 1960; M.S., 1971, Ph.D., 1977, The University of Tennessee, Knoxville; P.E.

Donald E. Todd (1979)  
Associate Professor  
B.S., 1959, M.S., 1964, Ph.D., 1968, Texas A & M University; P.E.

J. Eric Schonblom (1974)  
UC Foundation Associate Professor  
S.B., 1956, S.M., 1958, Massachusetts Institute of Technology; Ph.D., University of Florida, 1974; P.E.

Nathan E. Welch (1981)  
Professor  

Robert H. Wynn (1981)  
Associate Professor  
B.S., 1962, M.S., 1966, Tennessee Technological University; Ph.D., Virginia Polytechnic Institute, 1969; P.E.

Adjunct Engineering

Charles N. Adams Jr.  

Subir Banerji  
M.S.I.E., Kansas State University, 1967; M.B.A., Southern Methodist University, 1976.

Ronald W. Capps  
B.S., Stanford University, 1966; M.S., Tulane University, 1969; Ph.D., University of California, Davis, 1972.

Gayle K. Cunningham  
B.S., Louisiana State University, 1964.

Steve E. Gaines  
B.S.E., The University of Tennessee at Chattanooga, 1973; M.S., The University of Tennessee, Knoxville, 1976.

Roy E. Johnson Jr.  
B.S., 1966, M.S., 1969, Georgia Institute of Technology.

Rudolf G. Kittlitz Jr.  
B.S., University of Mississippi, 1957.

Norbert Koch  
B.Ed., Wisconsin State University, 1937; M.S., The University of Tennessee, Knoxville, 1940; Ed.D., University of Missouri, 1951.

Saphura S. Long  
B.S., Agnes Scott, 1972; M.S., University of Alabama, 1975.

Gordon G. Park  
B.S., University of Texas, 1970; M.S., University of Texas, 1972.

Tyndall L. Pugh  

N.D. Sadananand  

Alan H. Spring  
B.S., 1966, M.S., 1967, Georgia Institute of Technology.

Computer Science

Stephanie A. Davis (1979)  
Assistant Professor  

B.C. Day (1982)  
Assistant Professor  

Don Evans (1982)  
Instructor  

Fred Fiducia (1981)  
Assistant Professor  

Jerry Smith (1982)  
Assistant Professor  
B.S., University of South Carolina, 1977; M.A., 1978, Ph.D., 1982, University of Georgia.

Clinton Wills Smullen III (1973)  
Associate Professor  
Jack Thompson (1980)  
Associate Professor,  
Department Head  
B.S., University of Texas, El Paso, 1961; M.S.M.E., New Mexico State University, 1968; Ph.D., Texas A & M University, 1974.

LaVerne Thompson (1980)  
Associate Professor  
B.S., University of Texas, El Paso, 1960; M.S., New Mexico State University, 1968; Ph.D., Texas A & M University, 1974.

Adjunct Computer Science

David Adams (1982)  

Malcolm Babb (1980)  

Alice Campbell (1977)  
Assistant Professor  
B.S., The University of Tennessee, Knoxville, 1971.

Don Duncan (1982)  
B.S., University of Alabama at Huntsville, 1969.

Chris Levan (1980)  

Jack Pierce (1980)  
B.S., The University of Tennessee at Chattanooga, 1980.

Lamont Rogers (1980)  
B.S., 1974, M.S., 1977, The University of Tennessee at Chattanooga.

Rosemary Russell (1981)  

Robert L. Sample (1979)  
B.S., The University of Tennessee at Chattanooga, 1979.

Ron Villmow (1981)  

School of Human Services

Criminal Justice

David L. Anderson (1977)  
Associate Professor  

Kathryn Diane Bush (1980)  
Assistant Professor  
B.S., 1975, M.A., 1976, Texas Woman's University.

Stanton P. Fjeld  
Professor, Psychology and Criminal Justice  

William H. Hall (1977)  
Assistant Professor  
B.S., Aurora College, 1972; M.A.P.A., Northern Illinois University, 1974; J.D., Lewis University College of Law, 1978; J.D., Northern Illinois University College of Law, 1981.

Roger D. Thompson (1976)  
Assistant Professor  
B.S., 1973, M.S., 1975, Youngstown State University.

Kenneth Venters (1974)  
Professor,  
School of Human Services Dean  
B.S., Manhattan College, 1965; M.S., 1966, Ph.D., 1971, Florida State University.

Adjunct Criminal Justice

J. Michael Pearson (1979)  

Janet Williams (1979)  

Home Economics

Mary Jo Cochran (1965)  
Associate Professor,  
Department Head  
B.S., 1948, M.S., 1971, Auburn University.

Janice W. Rhodes (1977)  
Instructor,  
Graduate Studies Director  
B.S., The University of Tennessee, Knoxville, 1969; M.Ed., The University of Tennessee at Chattanooga, 1976.

Erskine R. Smith (1981)  
Assistant Professor  
B.S., Middle Tennessee State University, 1971; M.S., Ph.D., 1981, The University of Tennessee, Knoxville.

Mary N. Tanner (1971)  
Assistant Professor  
B.S., University of Chattanooga, 1964; M.Ed., The University of Tennessee at Chattanooga, 1970.

Patra B. Temple (1975)  
Assistant Professor  

Adjunct Home Economics

Marlene C. Bradshaw (1977)  
B.S., Michigan State University, 1957; M.A., University of New Mexico, 1972.

Katherine P. Dixon (1971)  

Barbara Neal (1981)  
B.S., University of Illinois, Urbana, 1976; M.S., Indiana State University, 1977.

Dixie Forester Saeger (1976)  

Karen Swanson  
B.S., Georgia Southern College, 1975.

Jane Teeter (1976)  

Juanita Thomas (1972)  
B.S., 1955, M.S., 1956, The University of Tennessee, Knoxville.

Human Services: Management

Ralph Anderson (1982)  
Assistant Professor  
B.S., University of Wisconsin, Whitewater, 1969; M.S., Ph.D., 1976, University of Wisconsin, Milwaukee.

Lawrence M. Cox (1979)  
Assistant Professor  

Kyna Osmus (1982)  
Assistant Professor  

Phyllis Jan Printz (1966)  
Associate Professor, Psychology;  
Acting Department Head  
B.A., University of Kansas City, 1950; M.A., University of Missouri, Kansas City, 1951; Ph.D., The University of Tennessee, Knoxville, 1978.

Military Science

Guy E. Door (1982)  
Professor,  
Department Head  

John D. Hathcock (1981)  
Assistant Professor  
Major, Army National Guard of the United States; B.S., Lincoln University, 1972; Master of Military Science, U.S. Naval War College, 1981.

James R. Hinnant (1982)  
Assistant Professor  

Lynn W. Hoskins III (1980)  
Assistant Professor  

Stephen E. Shires (1982)  
Assistant Professor  
Captain, U.S. Army; B.S., Jacksonville State University, 1975.

Robert W. Simmons (1982)  
Assistant Professor  
Major, U.S. Army; B.S., Tennessee Tech University, 1970.

Social Work

Tommie F. Brown (1977)  
UC Foundation Associate Professor  
B.A., Dillard University, 1957; M.S.W., Washington University, 1964.
Jane A. Lamb (1976) Assistant Professor
B.A., Southwestern at Memphis, 1964; M.S.W., University of North Carolina, 1966.

Patricia Walker (1974) Associate Professor, Field Placement Director, Department Head
B.S., Butler University, 1960; M.A., Indiana University, 1965.

Dorothy Williams (1977) Assistant Professor
B.A., South Carolina State College, 1967; M.S.W., State University of New York, 1971.

Adjunct Social Work
Diane Allen (1981) Assistant Professor
B.S., The University of Tennessee at Chattanooga, 1975.

Sandy Cambeill (1980) Assistant Professor
B.A., Loyola University, New Orleans, 1970; M.S.S.W., The University of Tennessee, Knoxville, 1974.

Farrell B. Cooper (1976) Assistant Professor
B.S., Memphis State, 1963; M.S.S.W., The University of Tennessee, Knoxville, 1967.

Barbara Foster (1979) Assistant Professor
B.S., The University of Tennessee, Knoxville, 1967; M.S.W., Atlanta University, 1970.

Danette Codbold (1981) Assistant Professor
B.A., University of Alabama, 1965; M.S.S.W., The University of Tennessee, Knoxville, 1980.

Carol Holtcamp (1979) Assistant Professor
B.A., The University of Tennessee at Chattanooga, 1975; M.S.S.W., The University of Tennessee, Knoxville, 1980.

Tom Jernigan (1977) Assistant Professor

Eleanor Johnson (1981) Assistant Professor
B.S., University of Chattanooga, 1966.

Barbara Lasater (1981) Assistant Professor

Mary Elaine Moniz (1978) Assistant Professor

Ellen Predmore (1980) Assistant Professor
B.S., Ohio State University, 1965; M.S.S.W., The University of Tennessee, Knoxville, 1977.

Mary Ratteeman (1981) Assistant Professor
B.S.W., Indiana University, 1957.

William Ulmer (1979) Assistant Professor

Linda Usher (1977) Assistant Professor
B.S., 1972, M.S.S.W., 1974, The University of Tennessee, Knoxville.

Mary Frances West (1982) Assistant Professor

Pearl Wong (1977) Assistant Professor
B.A., The University of Tennessee at Chattanooga, 1971; M.S.S.W., The University of Tennessee, Knoxville, 1974.

Dennis Miller
B.S., 1975; M.Ed., 1982, The University of Tennessee at Chattanooga.

School of Nursing
Martha Butterfield (1974) Assistant Professor
B.S.N., 1957, M.S.N., 1964, Ohio State University.

Gwendolyn Charles (1975) Assistant Professor
B.S.N., A&T State University (North Carolina), 1960; M.S.N., Emory University, 1970.

Janice B. Gilmore (1976) Assistant Professor

Mary B. Jackson (1973) Assistant Professor
Diploma, Baroness Erlanger Hospital School of Nursing, 1947; B.S., University of Chattanooga, 1954; B.S.N., 1961, M.S.N., 1962, University of Alabama, Tuscaloosa.

Gail S. Lemaire (1980) Assistant Professor
B.S.N., Boston University, 1971; M.S.N., The University of Texas Health Science Center at San Antonio, 1978.

Barbara Norris (1974) Assistant Professor

Joan Furman Seaborg (1982) Assistant Professor
Diploma in Nursing, Greenville, South Carolina, 1968; B.A., The University of Tennessee, Nashville, 1974; M.S.N., Vanderbilt University, 1975.

Margaret I. Trimpey (1981) Assistant Professor
Diploma, North Carolina Baptist Hospital, School of Nursing, 1959; B.S., The University of Tennessee at Chattanooga, 1978; M.S.N., Vanderbilt University, 1979.

Josephine Troxel (1974) Assistant Professor
Diploma, Hindsdale Sanitarium and Hospital School of Nursing, 1968; B.S., Southern Missionary College, 1970; N.S.N., University of Alabama, Birmingham, 1972.

Dorothy D. Volf (1977) Assistant Professor
B.S.N., Vanderbilt University, 1972; M.S.N., University of Alabama, 1977.

Library
W. Michael Bell (1980) Instructor, Reference Librarian

Joyce W. Campbell (1980) Instructor, Reference Librarian
B.S., Middle Tennessee State University, 1978; M.S.L.S., The University of Tennessee, Knoxville, 1978.

Robert Neal Coulter (1971) Assistant Professor, Reference Librarian

Mary Bashie Evans (1980) Instructional Assistant Librarian

Marcella M. Henry (1981) Instructor, Reference Librarian
B.A., University of Pittsburgh, 1974; M.S.L.S., Louisiana State University, 1980.

Joseph A. Jackson (1973) Professor and Director, Libraries

Constance A. Mellon (1980) Associate Professor, Bibliographic Instruction Coordinator
B.A., Hiram College, 1959; M.S.L.S., Syracuse University, 1970; Ph.D., Syracuse University, 1981.

Sara Murgai (1969) Professor and Director, Libraries
B.S., 1952, M.A., 1954, Government College (Ludhiana); B.L.S., University of Delhi, 1962; M.S.L.S., Atlanta University, 1968.

Jessie L. Nicol (1977) Assistant Professor

Additional Adjunct
Special Services
Deborah Arfen

Paul L. Beasley

Victoria Bowman-Alton

Booker T. Scruggs

Diane Orr
B.S., Alabama A&M University, 1976; M.S., Iowa State University, 1980.
Susan H. Pinckard (1975)  
Associate Professor,  
Catalog Department Head  

William W. Prince (1981)  
Assistant Professor,  
Reference Department Head  

Anne L. Seay (1975)  
Assistant Professor, Catalog Librarian  

Marilyn R. Snow (1973)  
Assistant Professor, Reference Librarian  

Randolph A. Whitson (1979)  
Associate Professor;  
Assistant Director, Libraries  

Frederick W. Obear (1981)  
Chancellor  
B.S., University of Lowell, 1956; Ph.D., University of New Hampshire, 1961.

Phyllis D. Woods (1981)  
Assistant to the Chancellor  

David Larson (1969)  
Vice-Chancellor, Business and Finance  
B.S., University of Minnesota, 1967; M.B.A., The University of Tennessee, Knoxville, 1969; C.P.A.

James A. Morris (1982)  
Director, Accounting  
B.B.A., Georgia State University, 1974.

Naomi McCarrell (1976)  
Accounting Supervisor  

Mickey Yerger (1981)  
Director, Arena  

Richard Lindeman (1982)  
Assistant Director, Bursar  
B.S., University of Kansas, 1976.

Frances Marandi (1982)  
Box Office Supervisor  

Ralph Moser (1971)  
Director, Budgets and Auditing  
B.S., Tennessee Technological University, 1970.

Alice Knight (1979)  
Auditor  
B.S., The University of Tennessee at Chattanooga, 1977.

Jonee Daniels (1978)  
Bursar  
B.S., The University of Tennessee, Knoxville, 1977.

Terene Bennett (1981)  
Assistant Bursar  

Linda Freeman Sendaula (1975)  
Director  
B.A., Memphis State University, 1971; M.Ed., The University of Tennessee at Chattanooga, 1982.

Henry T. Barbatti (1971)  
Assistant Vice-Chancellor, Business and Finance  
B.S., University of Illinois, P.E.

Robert W. Mills (1978)  
Campus Services Superintendent  
B.S., University of Georgia, 1962.

Joseph F. Milner Jr. (1976)  
Building Services Superintendent  

Production Control Superintendent  
B.S., The University of Tennessee at Chattanooga, 1976.
Purchasing
Robert Mayes (1971)
B.S., The University of Tennessee, Knoxville, 1950; C.P.M., 1976.
Marked Wedington (1973)
Assistant Purchasing Agent
William Madewell (1981)
Assistant Buyer
B.S., The University of Tennessee at Chattanooga, 1977.

Safety and Security
Roger Fowler (1973)
B.S., The University of Tennessee at Martin, 1967; M.Ed., The University of Tennessee at Chattanooga, 1981.
St. Augustine Cranford (1972)
Assistant Director

Administrative and Auxiliary Services
T.C. Emmons III (1978)

Bookstore
Susan Van Wagner (1980)
Staff Accountant
B.S., Tennessee Technological University, 1968.

Graph Services
William H. Civens (1978)

Food Services
Stan Cuinn (1968)
James Campbell (1982)
Staff Accountant
B.S., The University of Tennessee at Chattanooga, 1980.
Barbara P. Griffith (1978)
Manager
B.S., The University of Tennessee at Chattanooga, 1980.

Vice-Chancellor, Development
Ronald C. Area (1978)
B.S., University of Arkansas at Fayetteville, 1967; M.A., Adelphi University, 1972; Ed.D., Oklahoma State University, 1978.

Alumni Affairs
Margaret C. Culpepper (1982)
Director
B.S., The University of Tennessee, Knoxville, 1974.

Development
John R. Cathy (1982)
Director
Victoria C. Weathers (1978)
Associate Director
B.S., Meredith College, 1963.

Information Services
James Adams (1981)
Director
Mitzi D. Smith (1978)
Assistant Director
A.B.J., University of Georgia, 1977.
William T. Hanrick (1980)
Publications Editor

Executive Vice-Chancellor
Charles M. Temple (1973)

Athletics
Harold B. Wilkes (1959)
Director of Athletics
B.S., University of Chattanooga, 1959.
Murray Arnold (1979)
Head Basketball Coach
B.A., American University, 1960; M.A., Stetson University, 1966.
Tommy Bartlett (1979)
Tennis Coach
B.S., The University of Tennessee, Knoxville, 1952.
David Culley (1983)
Assistant Football Coach
B.S., Vanderbilt University, 1977.

Richard Daly (1978)
Assistant Basketball Coach
Head Football Coach
Steve Dennis (1982)
Assistant Football Coach
B.S., University of Georgia, 1978.
Sharon Fanning (1976)
Women's Coach/Administrative Assistant
B.S., The University of Tennessee at Chattanooga, 1975; M.S., The University of Tennessee, Knoxville, 1978.
Bill Gleason (1981)
Assistant Basketball Coach
Tom Grant (1982)
Assistant Football Coach
B.S., Eastern Carolina University, 1968.
Mike Hand (1983)
Assistant Football Coach
B.S., University of Alabama, 1972.
John H. Henderson (1980)
Assistant Football Coach
B.S., University of Georgia, 1977.
Terry Lewis (1977)
Certified Trainer
Neil Magnusson (1979)
Soccer Coach/Administrative Assistant
James W. Morgan (1969)
Wrestling Coach/Administrative Assistant

Institutional Research
Dan Quaries (1977)
Director
C. Michael Hyder (1981)
Research Associate
B.A., University of Kentucky, 1974.

Management Consulting
Karen Ford Eickhoff (1979)
Management Analyst

Provost
Merl Baker (1982)
Provost
B.S., University of Kentucky, 1945; M.S., 1948, Ph.D., 1952, Purdue University.

Associate Provost, Academic Services
Jane W. Harbaugh (1957)

Academic Computing
Lloyd D. Davis (1970)
Director
B.A., Ohio Northern University, 1956; M.S., University of Miami, 1959; Ed.D., The University of Tennessee, Knoxville, 1974.
Elisabeth M. Craig (1974)
Senior Applied Computer Analyst
B.A., Bishop's University, Quebec, Canada, 1956; A.S., Chattanooga State Technical Community College, 1974.

Administrative Computing Services
John True (1971)
Director
Glenda F. Sullivan (1978)
Assistant Director
Calvin Ingle (1980)
Computer Programmer/Analyst
Jeffrey Keill (1975)
Systems Analyst
Mickey Spencer (1982)
Systems Analyst
B.S., The University of Tennessee at Chattanooga, 1981.
H. Forrest Cantrell (1977) Senior Engineering Technician
B.S., The University of Tennessee at Chattanooga, 1971.

Admissions and Records
Ray P. Fox (1974) Dean

Patsy K. Reynolds (1982) Assistant Director of Student and School Relations
B.S., Illinois State University, 1976.

Johnnye L. Goodrich (1982) Assistant Director of Student and School Relations
B.S., Tennessee State University, 1957.

George B. LeNoir (1982) Admissions Officer

Ann S. Tinnon (1973) Director of Financial Aid

Susan Phillips (1975) Financial Aid Counselor

Darolyn F. Parks (1979) Financial Aid Officer
B.B.A., Middle Tennessee State University, 1976.

Natalie D. Schlack (1951) Director of Records
A.B., University of Chattanooga, 1945; M.A., University of Wisconsin, 1946.

Marilyn P. Benson (1977) Assistant Director of Records

Brenda S. Davis (1968) Director of Admissions and Registration
B.A., Oglethorpe University, 1964; M.Ed., The University of Tennessee at Chattanooga, 1972.

Sandra Cole Mills (1978) Assistant Director of Registration
B.S., The University of Tennessee at Chattanooga, 1974.

Helen B. Arthur (1981) Coordinator, Adult Services Center
B.A., University of Chattanooga, 1962.

Brook Scholars
Robert C. Fulton III (1970) Director

Libraries
Joseph A. Jackson (1973) Professor and Director

Associate Provost, Graduate and Continuing Studies
Charles M. Hyder (1968) Dean

Graduate Office
Janice W. Rhodes (1977) Director of Graduate Studies
B.S., The University of Tennessee, Knoxville, 1969; M.Ed., The University of Tennessee at Chattanooga, 1976.

Cynthia L. Wideman (1978) Coordinator of Graduate Admissions

Center for Economic Education
William H. Peterson (1978) Director
B.S., New York University, 1943; M.S., Columbia University, 1948; Ph.D., New York University, 1952.

Continuing Education and Public Service
Jerry W. Weeks (1979) Dean

Kitty Kirby-Miller (1979) Director, Adult and Community Services

W.O.P. Dorsey Jr. (1974) Director, Communication Services
B.S., Tennessee A & I University, 1950; M.Ed., The University of Tennessee at Chattanooga, 1974.

William Sutton (1982) Director, Conferences and Non-Credit Programs

Shirley Spiers (1983) Assistant Director, Conferences and Non-Credit Programs

Susan Harrison (1982) Coordinator, Conferences and Non-Credit Programs
B.S., Northwestern University, 1961.

Gail Lindberg (1975) Director, FACE Program
A.B., University of North Carolina, Chapel Hill, 1967; M.Ed., The University of Tennessee at Chattanooga, 1980.

Beverly Cofrancesco (1981) Coordinator, FACE Program
B.A., DePaul University, 1956.

Pamela Simmons-Beasley (1980) job Advocate, FACE Program
B.S., Emory University, 1977.

Shirley Taybron (1981) Counselor, FACE Program

Robert C. Dennis (1979) Media Services

Fred Landy (1981) TV Producer, Media Services
B.A., Loyola University, 1978.

Grants and Research
Lucy C. Henry (1977) Director

Academic Deans
College of Arts and Sciences
John Trimpey (1979) Dean
B.A., Ball State University, 1964; M.A., University of Arkansas, 1966; Ph.D., Ohio University, 1968.

School of Business Administration
Kennit G. Cudd (1975) Dean
B.A., 1953, M.A., 1958, University of Wisconsin; Ph.D., Ohio State University, 1969.

School of Education
Roy Stinnett (1967) Dean

School of Engineering
Ronald B. Cox (1970) Dean

School of Human Services
Kenneth R. Venters (1974) Dean
B.S., Manhattan College, 1965; M.S., 1966, Ph.D., 1971, Florida State University.

School of Nursing
Patricia Haase (1982) Dean
B.S., 1956, M.S., 1957, Indiana University; Ph.D., Purdue University, 1972.

Dean of Students
Charles M. Renneisen (1970) Dean

Counseling Center
Michael J. Sitzman (1975) Director

Marsha Parks Provost (1977) Counselor
B.A., Hampton Institute, 1969; M.Ed., The University of Tennessee at Chattanooga, 1976.
Endowed Funds

Through the years many persons 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.

Scholarships

Julius Ochs Adler Scholarship: Established in July 1956 by an anonymous donor in memory of the distinguished citizen who was associated with Adolph S. Ochs in the management of The Chattanooga Times.

Marvin L. Anthony Scholarship: Established in 1965 by Chicago banker, Marvin L. Anthony, 1926 chemistry graduate and member of Phi Delta Sigma, for students of business administration or chemistry.

James William (Bill) Barker Scholarship: Established in 1960 by friends and fraternity brothers of the popular young 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 Chattanooga area.

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.

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 at UTC and founder and director of the University’s Institute of Archaeology. The scholarship award is based on merit and is given to a student who will further advance the academic ideals of conservation and preservation of man’s historical past espoused by Dr. Brown.

Margaret Whiteside Buhrman 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.
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 Neal Center Athletic Scholarship: Established in 1978 by Mr. Center, business and civic leader, to be awarded to a qualified and deserving student athlete.

Walter W. Colby Memorial Scholarships: Established in 1982 by Benjamin W. Colby, a University of Chattanooga alumnus, in memory of his father Walter W. Colby, an early resident of Walden's Ridge (1878). Preference for scholarship is given to needy and worthy students from the Hamilton and Sequatchie County area of Walden's Ridge.

Thomas O. Duff Scholarship: Established in 1956 by Mr. Duff, business and civic leader, patron and trustee of the University, augmented at his death by memorial gifts from family and friends, with preference to be given to sons and daughters of licensed Chattanooga area pharmacists who desire to make pharmacy a career.

John W. Evans Scholarship: Established in 1966 by the will of John W. Evans, retired Chattanooga real estate dealer, who bequeathed his entire estate to the University for the benefit of “needy and deserving students.”

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.

John Earlton Kerr Scholarship: Established in 1959 with a bequest from Mrs. 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.

Norbert Koch Scholarship: Established in 1979 by gifts from former students, colleagues, and citizens of the Chattanooga community in honor of Dr. Norbert Koch, professor of engineering, on the occasion of his retirement after 32 years of dedicated service to the University to be awarded annually to a qualified and deserving engineering student.

David McKendrie Key Scholarship: Established in 1955 by Mrs. Sarah Key Patten in memory of her father, Postmaster General of the United States, U.S. Senator, Federal Judge, and one of the founders of the University.

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.

Winston L. Massey Scholarship: Established in 1973 by the University of Chattanooga Foundation in honor of Mr. 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.

T.R. McAfee Memorial Scholarship: Established in 1979 and enhanced in 1980 by friends who hosted a T.R. McAfee Golf Tournament to raise funds for an endowed golf scholarship in memory of T.R. McAfee Jr., former University student and member of the varsity golf team.

Burkett Miller Scholarships: Established in 1954 by a generous gift from Mr. Miller, leading Chattanooga attorney and philanthropist, to aid needy and worthy students.

Scrappy Moore Memorial Scholarship: Established in 1971 by memorial gifts from the family and friends of longtime, 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 who was the father of an alumnus.

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.

U.G. and William E. Paschal Scholarships: Established by William Earnest 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 Scholarship: Established in 1972 by Chattanooga businessman Z. Cartter Patten in honor of his wife, active civic, welfare, and religious leader of her community.

Sarah Key Patten Scholarship: Established in 1955 by Z. Cartter Patten in honor of his mother, one of Chattanooga's most beloved matrons, daughter, and mother of University trustees.

Ruth Clark Perry Scholarship: Established in 1969 by Mrs. Leonora Miller Seids of Perry, Oklahoma, in memory of her friend, the late Ruth Clark Perry, UC dean of women from 1924 to 1943 and professor of mathematics from 1922 until her death in 1955, to be awarded to an outstanding upperclasswoman majoring in mathematics.

Dr. E.E. Reisman Jr. Memorial Nursing Scholarship: Established in 1981 under the terms of the will of Dr. Reisman, well-known Chattanooga physician and longtime 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.

Calvin U. Smith Jr.—C.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 armed forces of their country.

Dr. Charles Roberts Thomas Scholarships: 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.

Vanzanf B. Warrenfels Scholarship: Established in 1976 by Mr. and Mrs. W.O. Cullen of Oxford, Ohio, in honor of Mrs. Cullen’s father, Dr. Warrenfels, to be awarded to a student participating in the University Scholars program.

Professorships

Joseph F. Decosimo Professorship in Accounting: Established in 1977 by Mr. and Mrs. Joseph F. Decosimo, civic and business leaders long associated with The University of Tennessee at Chattanooga, to provide faculty support for the University’s program in accounting.

Chattanooga Manufacturers’ Association Professorship in Engineering: Established in 1980 to provide support for the School of Engineering that will enable the University to reward a member of the engineering faculty for excellence in teaching, public service, and research.

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 enable a group of outstanding professors to bear a revered name and to receive salary supplements.

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.

Alan S. Lorberbaum Professor in Marketing: Established in 1978 by Alan S. Lorberbaum, a business leader and carpet executive of Dalton, Georgia, to provide faculty support for the marketing program in the School of Business Administration.

Adolph S. Ochs Chair of Government: Established in 1925 by Mr. Ochs, distinguished owner and publisher of The Chattanooga Times and The New York Times, longtime friend of the University, father and grandfather of trustees.

Scott L Probasco Jr. Chair of Free Enterprise: Established in 1976 by Mr. Burkett Miller, a leading Chattanooga attorney and philanthropist, in honor of a longtime friend, well-respected Chattanooga citizen, and trustee of the UC Foundation Incorporated, for a distinguished professorship relating to the free enterprise system.

John Stagmayer 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.

Marvin Edward White Professor in Business Administration: Established in 1978 by Selox Incorporated to provide faculty support for the University’s program in business administration and to honor Mr. White, the company’s founder.

Supported Professorships

Alumni Distinguished Service Professorships are awarded to outstanding faculty members of each of the four campuses of The University of Tennessee. Each faculty member, chosen on the basis of University and community service, will continue to receive the stipend as long as he or she remains at the University. These awards are made by the University of Tennessee National Alumni Association.

The Distinguished Professor of Religious Studies is supported by the UC Foundation. This professorship was established to insure the continuation of the ties with the University of Chattanooga’s Methodist origin and heritage.

UC Foundation Professorships were established in 1976 to recognize outstanding younger faculty and to provide an incentive for their remaining at UTC.

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 Hames 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 Dr. Headrick, class of 1926, research physicist with the Radio Corporation of America for 34 years.

Ethel Chapin Morgan Student Loan Fund: Established by a bequest from the UC alumna who took her B.S. degree in 1925, taught at several colleges, and lived in Lorain, Ohio, at the time of her death at 86 on October 10, 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 from 1920 until his death in 1942.

Additional Funds

Morrow Chamberlain Memorial Library Fund: Established in 1971 by a bequest from Mrs. Chamberlain in
memory of her husband, Chattanooga business and civic leader, chair of the UC Board of Trustees from 1932 to 1958, member from 1919 until his death in 1959.

**Paul W. Curtis Jr. Awards:** Endowed in 1948 by Mr. and Mrs. Paul W. Curtis in memory of their son, class of 1933, who was killed in action in World War 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 solely for the benefit of the chemistry department in such manner and amounts as the administrative department head and the chancellor of the University may in their discretion from time to time determine.

**Hartung Fund for Nursing Education:** Established in 1969 by Dr. and Mrs. Carl A. Hartung, UC graduates of 1929 and 1931 respectively, with income to be expended in support of the nursing program.

**John B. Haskins Jr. Memorial Laboratory:** Science laboratory equipped and its upkeep endowed in 1948 by gifts from Dr. John B. Haskins in memory of his son, a UC student who died in 1944 after a long illness.

**Hinds Memorial Book Fund:** Established in 1921 by Mrs. Kate Hinds Steele and Mrs. Bashie Martin in memory of their father, J.I.D. Hinds, for the purchase of chemistry books.

**Martha Chase and Andrew David Holt Library Endowment Fund:** Established in 1970 by the Hamilton County chapter of The University of Tennessee National Alumni Association and other friends in honor of the retiring UT president and his wife, for the purchase of books for the UTC Library.

**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 the campus each year an outstanding speaker who is an authority in some branch of the humanities.

**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 graduating with a major in management.

**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 department of modern languages.

**Terrell Louise Tatum Spanish Award:** Endowed in 1964 by an anonymous donor to honor UC's Guerry professor of Spanish by awarding a yearly prize bearing her name to the outstanding senior majoring in Spanish.

**Edgar B. Tolson Memorial Book Fund:** Established in 1942 with the residue of Mr. Tolson's estate, authorized by Wilfred O. Stout Sr. of Minneapolis, executor, for the purchase of books of history and philosophy.
Summary of Degrees Conferred

December 17, 1981

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<th>Degree</th>
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One-Year Certificate

Two-Year Certificate

May 3, 1982

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Two-Year Certificate

August 16, 1982

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<tr>
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Two-Year Certificate

Summary of Credit Registrations

Fall Semester 1982

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<td>Part-time students</td>
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<td>Total graduates</td>
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<td><strong>Total, fall semester 1982</strong></td>
<td>3692</td>
<td>3842</td>
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