Bulletin

The University of Tennessee at Chattanooga

Undergraduate Catalog Issue

Record for 1978-79

Announcements 1979-80
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
Graduate Admissions Requirements and Degree Requirements
Degree Requirements
Course Offerings
Fees and Tuition

Dean of Admissions and Records
Executive Dean of Graduate Studies and Research
Director of Graduate Admissions
Director of Records
Faculty Adviser
Head of Major Department
Dean of College
Department offering course
Business Office

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 Dr. Charles M. Temple. Charges of violation of the above policy should also be directed to Dr. 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.
# Table of Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Academic Calendar</td>
</tr>
<tr>
<td>5</td>
<td>Glossary of Academic Terms</td>
</tr>
<tr>
<td>7</td>
<td>The Administration</td>
</tr>
<tr>
<td>8</td>
<td>The University of Tennessee Trustees</td>
</tr>
<tr>
<td>9</td>
<td>The University of Tennessee Administration and Service</td>
</tr>
<tr>
<td>10</td>
<td>The University of Chattanooga Foundation Trustees</td>
</tr>
<tr>
<td>11</td>
<td>The University of Tennessee at Chattanooga Administration</td>
</tr>
<tr>
<td>12</td>
<td>The University</td>
</tr>
<tr>
<td>13</td>
<td>History</td>
</tr>
<tr>
<td>13</td>
<td>The Community</td>
</tr>
<tr>
<td>14</td>
<td>Admission to the University</td>
</tr>
<tr>
<td>15</td>
<td>Undergraduate Admission</td>
</tr>
<tr>
<td>20</td>
<td>Student Financial Aid</td>
</tr>
<tr>
<td>23</td>
<td>Student Fees and Expenses</td>
</tr>
<tr>
<td>25</td>
<td>Academic Regulations</td>
</tr>
<tr>
<td>27</td>
<td>Undergraduate Degrees</td>
</tr>
<tr>
<td>30</td>
<td>Pre-Professional Programs</td>
</tr>
<tr>
<td>32</td>
<td>Honors and Honor Societies</td>
</tr>
<tr>
<td>34</td>
<td>Student Life</td>
</tr>
<tr>
<td>35</td>
<td>Student Activities</td>
</tr>
<tr>
<td>36</td>
<td>Student Services</td>
</tr>
<tr>
<td>38</td>
<td>General Regulations</td>
</tr>
<tr>
<td>39</td>
<td>Alumni Association</td>
</tr>
<tr>
<td>39</td>
<td>Graduate Studies</td>
</tr>
<tr>
<td>41</td>
<td>Academic Programs</td>
</tr>
<tr>
<td>42</td>
<td>Academic Organization and Departments</td>
</tr>
<tr>
<td>44</td>
<td>College of Arts and Sciences</td>
</tr>
<tr>
<td>98</td>
<td>School of Business Administration</td>
</tr>
<tr>
<td>108</td>
<td>School of Education</td>
</tr>
<tr>
<td>129</td>
<td>School of Engineering</td>
</tr>
<tr>
<td>139</td>
<td>Division of Human Services</td>
</tr>
<tr>
<td>150</td>
<td>Department of Nursing</td>
</tr>
<tr>
<td>153</td>
<td>Other Educational and Public Service Units</td>
</tr>
<tr>
<td>153</td>
<td>Division of Continuing Education</td>
</tr>
<tr>
<td>156</td>
<td>Faculty and Staff</td>
</tr>
<tr>
<td>157</td>
<td>Instructional Faculty</td>
</tr>
<tr>
<td>165</td>
<td>Administrative Directory</td>
</tr>
<tr>
<td>168</td>
<td>Endowed Funds</td>
</tr>
<tr>
<td>171</td>
<td>Summary of Degrees Conferred</td>
</tr>
<tr>
<td>172</td>
<td>Index</td>
</tr>
</tbody>
</table>
Academic Calendar
1979-1980

Fall Semester 1979
Registration and fee collection (See note below)
August 27 (Monday)
September 1 (Saturday)
September 3 (Monday)
September 4 (Tuesday)
September 4-7 (Tuesday-Friday)
September 10 (Monday)
October 24 (Wednesday)

November 21 (Wednesday)
November 26 (Monday)
December 7 (Friday)
December 9 (Sunday)
December 10-16 (Monday—Sunday)

Spring Semester 1980
Registration and fee collection (See note below)
January 3 (Thursday)
January 9 (Wednesday)
January 10-16 (Thursday—Wednesday)
January 16 (Wednesday)
March 2 (Sunday)
March 10 (Monday)
March 11 (Tuesday)
April 3 (Thursday)
April 7 (Monday)
April 18 (Friday)
April 20 (Sunday)
April 21 (Monday)
April 22-28
(Tuesday—Monday)
May 3 (Saturday) 7:30 p.m.

Classes begin
Last day to register in day or evening classes, to add a subject, or to change sections
Labor Day—Holiday
Classes Resume
Registration and addition of classes with approval of instructors only
Last day to drop a course before a "W" (withdrawal) is recorded and to change from "credit" to "audit"
Last day for official withdrawal from any class with a "W"

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 and/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 to 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 Nursing or 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 Human Services.

Elective—a course not specifically required.

Fine Arts Courses—certain courses in Art, Theatre and Speech 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—the courses for which a student is enrolled during a semester or summer term.

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

School—an organizational unit composed of related disciplines. At UTC there are three schools; the School of Business Administration, the School of Education, and the School of Engineering.

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.

Special Credit—credit awarded for work accomplished by means other than through University classes.

Transcript—an official copy of a student’s permanent academic record.

Undergraduate—a college student who has not received a bachelor’s degree.
The Administration

Dr. James E. Drinnon, Jr.
Chancellor, UTC
The University of Tennessee

Board of Trustees

Legal Title: The University of Tennessee
His Excellency, The Governor of Tennessee
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The Commissioner of Agriculture
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Ex-Officio
Ex-Officio
Ex-Officio
Ex-Officio
Ex-Officio

From Congressional Districts
Buford Goldstein, Elizabethton
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District
First
Second
Third
Fourth
Fifth
Sixth
Seventh
Eighth
Ninth

Began
1975
1977
1957
1975
1975
1953
1951
1956
1975

Term Expires
June 1, 1984
June 1, 1986
July 1, 1979
June 1, 1987
June 1, 1982
July 1, 1981
July 1, 1979
June 1, 1986
June 1, 1984

From Anderson, Bedford, Coffee, Franklin, Lincoln, Moore, and Warren Counties
Don O. Shadow
Elaine A. McReynolds
Paul J. Kinser
Ann Baker Furrow
Frank P. Bowyer

1970
1975
1969
1971
1959

June 1, 1979
June 1, 1984
June 1, 1987
June 1, 1980
June 1, 1980

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
Frank P. Bowyer

1971
1959

June 1, 1980
June 1, 1980

From Shelby County
Harry W. Laughlin
Marcus J. Stewart

1953
1970

July 1, 1981
July 1, 1981

From Weakley County
Wayne Fisher

1953

July 1, 1981

Student Member
Anne M. Long

1979

July 1, 1979

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   General Counsel Emeritus and Secretary Emeritus of the Board of Trustees
The University of Chattanooga Foundation

Board of Trustees

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 Administration

1979-1980

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Chancellor

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Executive Vice Chancellor

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Vice Chancellor for Academic Affairs

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Vice Chancellor for Development

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Executive Dean of Faculty

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Executive Dean of Graduate Studies and Research

Charles M. Renneisen, B.S., M.S., Ed.D.
Dean of Students

Hatold B. Wilkes, B.S.
Director of Athletics
The University

Founders Hall is the University's administration building.
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, Chattanoогans came forward to work with the church in this effort.

Since its founding as Chattanoогa University in 1886, The University of Tennessee at Chattanoогa 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 Chattanoогa was adopted.

In 1969 the University of Chattanoогa and a junior college, Chattanoогa City College, merged to become a major campus of The University of Tennessee, one of the oldest land-grant universities in the nation. Pledged to the service of the entire state, The University of Tennessee has emerged as a state-wide system consisting of five 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 7106 students who represent 57 Tennessee counties, 34 states and 18 foreign countries.

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, 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.

In 1973 Dr. James E. Drinnon, Jr. was appointed Chancellor of The University of Tennessee at Chattanoогa.

The Community

The University is located only a few blocks from the urban area of Chattanoогa, a city that is both highly industrial and rich in natural beauty. Claiming more than 600 industries, Chattanoогa 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 Chattanoогa is enhanced by contributions from the University and the many civic organizations which support the arts through dramatic productions, concerts, and art exhibits. Seven city parks, seven public golf courses and a 35,400 acre lake provide a variety of recreational activities.

With a county-wide population of about 264,700 in a metropolitan area of 396,600, Chattanoогa is easily accessible from all parts of the nation by air and bus.
Admission to the University

Working adults often come to UTC to earn college degrees.
Undergraduate Admissions

The Admissions Office administers all matters pertaining to undergraduate admission. All requests for information and application forms should be addressed to the Director of Admissions, The University of Tennessee at Chattanooga, Chattanooga, Tennessee 37402. The Admissions Office telephone number is (615) 755-4157. Completed applications and credentials should be sent to the same office. A $10 nonrefundable application fee is required of all candidates for admission who have not previously attended a University of Tennessee campus or the University of Chattanooga.

New students may be admitted at the beginning of either semester or any summer session. Every effort should be made to submit the completed application and supporting credentials to the director of admissions not 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. A one-day session for transfer students is held the week preceding the beginning of classes.

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 undeclared majors. Results of aptitude and achievement tests as well as copies of the student's 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.

Specific Admission Requirements:

Freshmen
Graduates of state approved high schools may enter The University of Tennessee at Chattanooga upon completion of sixteen required units of work. 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 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 require-
### Bachelor Degree Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Studies (B.A.)</td>
<td>4 2*</td>
<td></td>
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<tr>
<td>Applied Mathematics (B.S.)</td>
<td>4 2</td>
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</tr>
<tr>
<td>Art (B.F.A.)</td>
<td>4 2*</td>
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<tr>
<td>Art Education (B.F.A.)</td>
<td>4 2*</td>
<td></td>
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<tr>
<td>Biology (B.A.)</td>
<td>4 2</td>
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<tr>
<td>Business Administration (B.S.)</td>
<td>4 2*</td>
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<tr>
<td>Chemistry (B.S.)</td>
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<tr>
<td>Communications (B.A.)</td>
<td>4 2*</td>
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<tr>
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<td>4 2</td>
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<tr>
<td>Early Childhood Education (B.S.)</td>
<td>4 1</td>
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<tr>
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<td>4 2</td>
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<td>Economics (B.S.)</td>
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<tr>
<td>Education, Secondary School Programs (B.S.)</td>
<td>4 1</td>
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<td>Elementary Education (B.S.)</td>
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<tr>
<td>Engineering (B.S.)</td>
<td>4 2</td>
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<tr>
<td>English and American Languages and Literature (B.A.)</td>
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<tr>
<td>Foreign Languages: French, Greek, Latin, Latin, and Spanish (B.A.)</td>
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<td>Geology (B.S.)</td>
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<td>Health and Physical Education</td>
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<tr>
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<td>4 2</td>
<td></td>
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<tr>
<td>History (B.A.)</td>
<td>4 2</td>
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<tr>
<td>Home Economics (B.S.)</td>
<td>4 2</td>
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<tr>
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<td>4 2</td>
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<tr>
<td>Human Services: Social Work (B.A.)</td>
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<td>Office Administration (B.S.)</td>
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<tr>
<td>Sociology and Anthropology (B.S.)</td>
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<tr>
<td>Special Education: General (B.S.)</td>
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<tr>
<td>Theatre and Speech (B.A.)</td>
<td>4 2*</td>
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<tr>
<td>Certificate Programs</td>
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<tr>
<td>Computer Science Business</td>
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<tr>
<td>Computer Science Technical</td>
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<td>Office Administration</td>
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### Certificate Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Units</th>
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<tbody>
<tr>
<td>Computer Science Business</td>
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<td>Computer Science Technical</td>
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<tr>
<td>Office Administration</td>
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</tr>
</tbody>
</table>

### 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 college 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 to teaching area in biology, chemistry, geology, math, or physics should have two units of algebra and one unit of geometry.
- f) 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.
- g) 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.
- h) For scientific or systems concentrations: four "units of college preparatory mathematics and three units of science through physics are recommended.
Adult Special Status
An applicant twenty-one 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, or The University of Tennessee, may be admitted as an adult special student. The applicant must give satisfactory evidence of preparedness to take the courses open to him or her. An adult special student must meet the same course requirements as regular students since the special student's work is graded at the completion of the course. An adult special student may subsequently apply for regular student status at the University. In such a case the student's grades will be reviewed and up to sixty semester hours of credit may be counted toward fulfillment of degree requirements. Students who have previously been suspended or dismissed from the University of Chattanooga or The University of Tennessee may not enroll as adult special students. Students with previous college work from another institution 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 advisor 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. Those under twenty-one may have this privilege only if they have fulfilled the admission requirements of the University. Any adult student entering under audit classification who subsequently wishes to take courses for credit must meet all requirements for admission to 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.

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

1. A completed application for undergraduate admission, accompanied by the $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.
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 1 for the spring semester.
Post-Baccalaureate Admission

Students who already hold baccalaureate degrees who wish to take further courses which lead to a second bachelor’s degree or to qualify for admission to graduate studies, must apply to the Graduate Division for admission to the University as a post-baccalaureate student.

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 B+ average (an average greater than 3.00 on a 4.00 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 departmental requirements are met. Upon earning the required grade-point average, the student must re-apply for admission to graduate study and complete the admission procedures as specified for the proposed graduate 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 and is not applicable to students applying to the MBA program. In addition, courses completed under post-baccalaureate admission may not count toward a graduate degree.

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) 755-4344.

Transfer Students

Applicants for admission who have registered and have attempted any work in another institution of higher learning regardless of whether they wish to receive credit for it, must submit to the Director of Admissions complete credentials of their college work.

Students from accredited colleges and universities who have pursued college courses appropriate to the curriculum of The University of Tennessee at Chattanooga, who are eligible to return to their last institution, and who meet UTC continuation standards may be admitted to the University.

Tennessee residents who wish to transfer must have an overall grade point average equal to the minimum required for continuation. 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 or the Director of Admissions acceptance on scholastic probation is justified.

The University will usually accept, by transfer, work satisfactorily completed at regionally accredited senior colleges. However, transfer students seeking a degree from The University of Tennessee at Chattanooga must complete at least their last thirty academic hours of work at the University. If an applicant for transfer meets the requirements stated in the preceding paragraph, the University will accept, as either specific equivalents or electives, all credit earned. Such transfer credit is entered on the permanent record only after the student has registered for classes at The University of Tennessee at Chattanooga.

The University usually accepts at full credit value approved transfer courses completed with satisfactory grades at regionally accredited two-year institutions. A student transferring any credit from such an institution must complete the last sixty semester hours credit offered for a degree in an accredited senior college and the last thirty semester hours at UTC if the student uses the junior college credit toward graduation.

Students wishing to transfer to The University of Tennessee at Chattanooga from regionally unaccredited institutions of higher learning must fulfill the requirements stated above. For information concerning the amount of credit acceptable by transfer from regionally unaccredited institutions, applicants should communicate with the Office of Admissions of 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.

See page 19 for information concerning correspondence credit.

University Scholars Program

University Scholars are those exceptionally talented and highly motivated 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 p. 72); a carefully integrated program of co-curricular activities; an advisement system that will enable each Scholar to derive the greatest benefits from the University’s rich and varied resources; membership in a highly visible and respected group; and, a four-year financial scholarship award. In addition,
University Scholars will be 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 of the University's Scholarship Board.

For further information or application forms, please write Dr. Peter Consacro, Director, University Scholars, The University of Tennessee at Chattanooga, Chattanooga, Tennessee 37402.

**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 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 advance 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, 755-4344.

**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 and/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:

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

A fee of $15.00 will be charged for each semester hour for which credit is given.

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 S nor NC grades will be used in computing the grade point average.

**Limitations on Non-Traditional Credit: 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 non-traditional credit shall be 30 hours for any
one of these categories. Normally, non-traditional 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 non-traditional 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. 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 Educators 1974 *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 DD Form 214 to the Records Office for evaluation.

The University also grants credit for most correspondence courses completed through USAFI. Veterans should apply to the Records Office with supporting documents of their previous training.

**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, scores on the American College Testing (ACT), or Scholastic Aptitude Testing (SAT) admissions test battery. 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 $100 to $1000. Each year twenty outstanding entering freshmen are selected to participate in the University Scholars Program. These scholars receive four-year stipends of $750 or $1000. Selection is based on scholarship, leadership and service. Application is made directly to the University Scholars program. For further information see the University Scholars section of the catalog.

In addition to the University Scholars, fifteen prestigious merit scholarships are awarded each year to incoming freshmen: five Andy Holt Scholarships (sponsored by the UT National Alumni Association) for $750 each and renewable for four years; five Chancellor's and five Leadership scholarships (sponsored by the UC Foundation) of $600 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 nine Tennessee community colleges. These one-year $500 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 $600 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 Students 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.

**Student Financial Aid**

In accordance with the belief that the 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 utilizes 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 utilizes 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.
Grants

Basic Educational Opportunity Grants

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 Basic 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 Eligibility Report. Because the Student Eligibility Report indicates eligibility, it should be sent to the Financial Aid Office for award processing.

Maximum grants are $1800 or not more than one-half the cost of education. The above regulations and provisions of the Basic Educational Opportunity 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 exceptional financial need. Grants may be extended for a maximum of eight semesters and must be matched dollar for dollar by other sources of financial aid; i.e., scholarships, loans, and/or earnings from University part-time employment. A Supplemental Educational Opportunity Grant may not be less than $200 or more than $1500, or exceed one-half of the student’s need for assistance. The above regulations and provisions of the Supplemental Educational Opportunity Grant are subject to change by federal legislative action.

Nursing Scholarship Program

The purpose of this program is to assist students of exceptional financial need who are enrolled as full-time students in a course of study leading to a baccalaureate degree or a graduate degree in nursing.

The amount of scholarship which a student may receive depends upon financial need. The maximum scholarship available for any student in a twelve (12) month period is $2000. 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 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 a period of three (3) years while the borrower is serving in the Armed Forces, Peace Corps, or Vista. Interest is 3 percent per year on the unpaid balance. The maximum repayment period is ten (10) years with the current minimum annual repayment $360 or 10 percent of the accumulated loan, whichever is greater.

If upon graduation the borrower becomes a full-time teacher in a public or non-profit school which 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 which is operated for a period comparable to a full school year, 15 percent of principal plus interest will be cancelled for each year of service. Cancellation for up to 50 percent of the loan will also be given at the rate of 12 1/2 percent of the total principal plus interest for each year of Armed Forces service in an area of hostility.

An undergraduate may be extended a maximum annual loan of $1250 to an accumulated loan total of $5000. Graduate level students may be extended annual loans of $2500 to a maximum accumulated loan total of $10,000. 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 $500 a year can be extended. One surety or cosigner is required for each promissory note and a new promissory note must be completed for each loan installment. The interest is 3 percent per annum payable annually on the anniversary date of the note. The loan is made for a specific time period (four years maximum) and is due at the end of a stated number of years from the date of the note. 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 3 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. If upon graduation the borrower becomes employed full-time as a registered nurse in a public or non-profit private agency or institution, up to 85 percent of the principal may be cancelled at the rate of 15 percent of the loan that was unpaid on the first day of employment plus interest for the first three years of employment and 20 percent for the fourth and fifth years.

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 Educa-
gram, 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 is also available. The UTC Application for Student Financial Aid and the 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 Office, is also available in private business, 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 would receive wages equal to the prevailing union contract. Interested students should contact the head of the music department.

Other Assistance

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 or credit union to determine their participation in the program. To receive the loan, a student must be admitted to or in regular full-time attendance 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 nine months after graduation or withdrawal from the University, the student pays up to 7 percent simple interest. The maximum amount of a loan to an undergraduate in a twelve-month period cannot exceed $2500.

Total loans outstanding may not exceed $7500 for the undergraduate or $10,000 for the graduate student.

Complete information is available at most banks and credit unions. In the state of Tennessee, write the Tennessee Student Assistance Corporation, 707 Main Street, Nashville, Tennessee 37206.

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 tuition costs, are available in the UTC Financial Aid Office, a high school counselor's office or from TSAC, 707 Main Street, Nashville, Tennessee 37206. Students should make application before May.

Law Enforcement Education Program (LEEP)
The Law Enforcement Education Program provides financial assistance to students who are already in law enforcement and to students who aspire to careers in law enforcement. Two types of Law Enforcement Education Program assistance are provided:

1. Grants not to exceed $400 per semester for full-time employed criminal justice personnel enrolled in the criminal justice program.
2. Loans not to exceed $2200 per academic year for full-time study toward a degree in criminal justice. Eligible students should contact Dr. Ken Venters, Criminal Justice Department, UTC, 412 Fletcher Hall, Chattanooga, Tennessee 37402 for applications and further information.

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 application for Student Financial Aid on or before the following priority deadline dates:
   - academic year—March 1-entering freshmen
   - April 1-transfer and currently enrolled students
   - spring only—November 15-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 scholarship a financial statement is not required.
3. Students should have begun the process for admission to the University prior to or at the same time as applying for financial aid.
4. Students applying for assistance based on financial need should apply for the Basic Educational Opportunity Grant.
5. Tennessee residents should apply for the Tennessee Student Assistance Award if requesting aid based on financial need.

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

Applications and further information on financial aid can be obtained by writing to the Financial Aid Office, 217 Race Hall, The University of Tennessee at Chattanooga, 615 McCallie Avenue, Chattanooga, Tennessee 37402.
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 Admissions with this information in order that a reappraisal of residence status may be made.

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

The University of Tennessee at Chattanooga honors Visa and Master Charge for certain student expenses.

### Tuition and Maintenance Fees

<table>
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<tr>
<th>Maintenance Fee</th>
<th>Undergraduate</th>
<th>Per semester $273.00*</th>
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<tr>
<td></td>
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<td>Per semester hour or fraction thereof $26.00; minimum charge $52.00</td>
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<tr>
<td>Graduate</td>
<td>Per semester $292.00*</td>
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<td>Per semester hour or fraction thereof, $37.00; minimum charge $74.00</td>
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### Tuition and Maintenance Fee (Out-of-state students only)

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<tr>
<th>Undergraduate</th>
<th>Per semester $773.00*</th>
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<tr>
<td></td>
<td>Per semester hour or fraction thereof, $65.00; minimum charge $130.00</td>
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<tr>
<td>Graduate</td>
<td>Per semester $792.00*</td>
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<td>Per semester hour or fraction thereof, $89.00; minimum charge $178.00</td>
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* Eighteen dollars of the fee is allotted to the bond obligation of the University Center.

### 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

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.

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) 755-4344.

### 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, 755-4344.

### Summer Terms

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

### Other Expenses

<table>
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</table>

### 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 (maximum $30.00) in effect at the time the student redeems the check.

### 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 $260.00 to $350.00 per semester according to the accommodations available. A $25.00 reservation-damage deposit is required from students applying for housing. In addition a $50.00 advance payment is required for fall semester.
Meals
Meals in the University cafeteria are served a la carte. Meal tickets maybe purchased at the University cafeteria.

Orientation
A $15.00 fee for the two-day sessions includes one dinner, two lunches and a Continental breakfast, as well as an overnight dormitory stay. Also covers cost of booklets and orientation materials.

Parking
Reserved parking decal . . . . . . . $40.00 per semester
General parking decal . . . . . . . . . . . 28.00 per year

Special Examination Fees
Payable for each proficiency or validation examination.
Undergraduate . . . . . . . . . . . . . . . . $15 per credit hour
Graduate . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $30 per credit hour

Late Service Fee

General
A student will not be allowed to register with a debt due the University.
On Saturdays when the Registration Office and/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 Records 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. 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. This $10.00 service fee is also applicable to room charges which 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 may be withdrawn from the University and will not be allowed to re-enter 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 Adjustments

General
No refund is due on courses which are dropped unless the charge for the remaining courses plus the adjusted charge for the courses dropped is less than the maximum semester charge for tuition and/or 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.

Fall and Spring Semester
For a fall or spring semester, withdrawal from all classes within 10 calendar days beginning with the first day of classes permits an 80% fee refund. Withdrawal between 11 through 20 calendar days beginning with the first day of classes permits a 60% fee refund. Withdrawal between 21 through 30 calendar days beginning with the first day of classes permits a 40% fee refund. Withdrawal between 31 through 40 calendar days beginning with the first day of classes permits a 20% fee refund. For withdrawals after 40 calendar days beginning with the first day of classes no fee refund is permitted.
For courses dropped during a fall or spring semester, which do not result in a complete withdrawal, within 10 calendar days beginning with the first day of classes a 100% refund is permitted. For courses dropped between 11 through 20 calendar days beginning with the first day of classes a 60% refund is permitted. For courses dropped between 21 through 30 calendar days, beginning with the first day of classes, a 40% refund is permitted. For classes dropped after 30 calendar days beginning with the first day of classes no refund is permitted.

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. A statement of account will be sent to students who owe additional amounts. Students not responding to such statements will be withdrawn from the University. Such a withdrawal does not relieve the financial responsibility.
Refunds on dropped courses, in accordance with the refund policy, will not be made until after the 10th week of the semester.

Summer Terms
For the summer terms, withdrawal from all classes within 3 calendar days beginning with the first day of classes for each term permits an 80% fee refund. Withdrawal between 4 through 6 calendar days permits a 60% refund. Withdrawal between 7 through 9 calendar days permits a 40% fee return, while withdrawal between 10 through 12 calendar days permits a 20% refund. Withdrawal after 12 calendar days permits no fee refund.

A 100% refund is permitted for courses dropped within three calendar days beginning with the first day of classes for each term, if the courses dropped do not result in complete withdrawal. For courses dropped between 4 through 6 calendar days a 60% refund is permitted. For courses dropped between 7 through 9 calendar days a 40% refund is permitted. For courses dropped after 9 calendar days no refund is permitted. In distinguishing between a drop and a withdrawal during the summer, each term is considered individually.

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.

According to the Tennessee Department of Education regulations, students seeking teacher certification may use the preceding year's catalog if they graduate by May of a given year but must use the current catalog if they do not graduate until August. Regulations concerning the ten-year limit or the catalog in effect at the time of entry do not apply to education majors.

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, school, or division 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.</td>
</tr>
<tr>
<td>100-199</td>
<td>A maximum of eight hours of S grade in courses in this group may be applied toward a degree.</td>
</tr>
<tr>
<td>200-299</td>
<td>Primarily for freshmen but may be taken by sophomores and juniors. Senior registrations at this level are not recommended.</td>
</tr>
<tr>
<td>300-399</td>
<td>Primarily for sophomores but open to juniors and seniors.</td>
</tr>
<tr>
<td>400-499</td>
<td>Juniors and seniors.</td>
</tr>
<tr>
<td>500-699</td>
<td>Seniors and graduate students. When taken for graduate credit, the letter C will precede the credit hours. Restricted to fully qualified graduate students.</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>jrs Attempted</th>
<th>Grade Point Average Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1—23</td>
<td>1.000</td>
</tr>
<tr>
<td>24—39</td>
<td>1.500</td>
</tr>
<tr>
<td>40—55</td>
<td>1.800</td>
</tr>
<tr>
<td>56 and above</td>
<td>2.000</td>
</tr>
</tbody>
</table>

Students who achieve the required grade point average for the hours attempted are considered to be in good standing. Those who fail to achieve the required average will be subject to the following action:
1. Students will be placed on academic probation after...
the first failure to earn the required grade point average.

2. Academic suspension for one semester will follow if probation is not removed by raising the grade point average to required standards or if a 2.00 average for the semester of probation is not achieved. The complete summer session is considered a period of suspension.

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. Students who fail to earn a 1.00 average in any semester will be placed on probation even if their cumulative averages meet continuation standards. These students will be suspended after the succeeding semester if their grade point averages for that semester are less than 2.00.

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

All students who are either suspended or dismissed have the right to an immediate appeal to the Petitions Committee if they believe that extenuating circumstances were responsible for their poor academic achievement. A petition form available in the Office of Records must be submitted to that office no later than the third day of classes in the regular semester or the second day of classes in the summer term for which readmission is sought.

Dismissed students who appeal for readmission after an absence from the University will apply to the Admissions Office and complete the supplemental form at least three weeks prior to the first day of classes for the semester or term for which readmission is requested. The Admissions and Readmissions Committee will act on the appeal.

Academic action is recorded on the permanent record card.

Grading Policies

Grades

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>is given for work of distinctly superior quality and quantity accompanied by unusual evidence of enthusiasm, initiative, thoroughness and originality.</td>
</tr>
<tr>
<td>B</td>
<td>is given for work showing the above qualities to a lesser extent.</td>
</tr>
<tr>
<td>C</td>
<td>represents substantial conscientious fulfillment of the minimum essentials of a course.</td>
</tr>
<tr>
<td>D</td>
<td>represents passing work, but is below the standards of graduation quality.</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.

IV 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>Quality Points</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>B</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>C</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>F</td>
</tr>
<tr>
<td>S</td>
<td>not included</td>
<td>NC (no credit)</td>
</tr>
<tr>
<td>NC</td>
<td>not included</td>
<td>not included</td>
</tr>
<tr>
<td>W</td>
<td>not included</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 off. 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 ex­
pected 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 ill­
ness, job responsibilities, or personal problems to dis­
continue their enrollment. They should never stop at­
tending and not 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.

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, and Bachelor of Science in Nurs­ing. 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, Business Administration, Com­
puter Science, Systems Analysis

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

Biology (B.A.)

Business Administration (B.S.)
Concentrations: Accounting, Finance, General Management, Indus­
trial Management, Marketing

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

Communications (B.A.)

Computer Science (B.S.)
Concentrations: Business, Scientific Programming, System Architec­
ture, Topical

Criminal Justice (B.S.)

Education (B.A. and B.S.)

Elementary Education (B.S.)

Engineering (B.S.E.)
Concentrations: Electrical Engineering, Industrial Engineering, Me­
chanical Engineering, Chemical Sciences

Engagement Management (B.S.)

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

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

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

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

History (B.A.)

Home Economics (B.S.)
Concentrations: General Home Economics, Business
Humanities (B.A.)
Includes concentration in International Studies

Human Services: Management (B.S.)

Human Services: Social Work (B.A. and B.S.)

Mathematics (B.A.)

Medical Technology (B.S.)

Music (B.A. and B.M.)

Music Education (B.S.)

Nursing (B.S.N.)

Office Administration (B.S.)
Concentrations: Secretarial, Office Management

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

Physics (B.S.)

Political Science (B.S.)
Concentrations: Pre-Professional, Public Service and Analytical

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

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, English, French, geography, geology,
Greek, Latin, mathematics, philosophy, political science,
religious studies, sociology, and Spanish. Additional
minors may be developed.

Degree Requirements

I. General Education Requirements

The purpose of general education requirements is
to guide the student to a realization of the scope of
knowledge and the methods of various disciplines.
Courses for each category are offered in numerous
departments at all class levels.

The general education program is minimal. In set­
ting forth such requirements the faculty is not im­
plying that the requirement is all that the student
needs in each category; nor is the faculty implying
that any particular course offers a thorough knowl­
dge 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. Only courses earning a minimum of three semester hours of credit may fulfill a general education requirement. On credit transferred from the quarter system, the minimum acceptable for general education purposes is a course equated to two and two-thirds semester hours of credit that has been given the equivalency of an approved UTC general education course. Two transfer courses of two semester hours of credit that have been equated to approved general education courses in the same category may fulfill one course requirement: for example, courses equivalent to Art III and Music III for two courses. Two transfer courses of two semester hours each may fulfill the fine arts requirement. It is University policy that the student not schedule courses above his or her class level without permission of the department offering the course. Students majoring in general areas, such as the humanities, are exempted from the requirement that the courses must be outside the major discipline. Also, courses for Category E, interdisciplinary or non-Western, may be taken in the department of the major discipline.

Category A

Written communication in the English language: two courses, one at the freshman level and one chosen by the student. The following courses will satisfy this requirement: English 101, 102, 300, 410; University Scholars, 101, 102.

Category B

Humanities and fine arts: three approved courses outside the major discipline—one from the disciplines of classics, English, history, modern languages, philosophy, and religion; and one from art, music, theatre and speech. The third course may be selected from either humanities or fine arts. Only the courses listed below will satisfy the requirements for Category B. Majors in education may not use history in this category.


Category C

Behavioral and social sciences: two approved courses outside the major discipline from the disciplines of anthropology, economics, education, geography, history, human services, political science, psychology and sociology. Only the courses listed below will satisfy Category C requirements. Education majors should consult the outlines of their specific requirements.

Anthropology 152, 210, 211, 351; Economics 101, 102; Education 100; Geography 409; History 314, 315, 317, 415, 416, 419, 463; Human Services 101, 102, 201; Political Science 101, 102, 242, 243, 302, 314, 323, 499r*; Psychology 101, 251; Sociology 125, 151, 199r*, 209, 215, 219, 220, 305, 317, 318, 340, 345, 391, 400; University Scholars 105, 106; University Studies 199r*, 499r*

Category D

Mathematics, natural and applied sciences: two approved courses outside the major discipline selected from the disciplines of astronomy, biology, chemistry, engineering, geography, geology, mathematics, and physics. Category D may be satisfied only by the courses listed below. Education majors should consult the outlines of their specific requirements, which differ from those of other majors.

Astronomy 101, 102; Biology 121, 122, 315; Chemistry 111, 121, 122; Engineering 107, 108; Environmental Studies 150; General Science 111, 112; Geology 101, 206; Geography 111, 112, 225, 499r*; Mathematics 120, 125, 126, 195, 210, 225, 303, 451, 452; Physics 101, 102, 103, 104, 230, 232, 318, 324, 411, 499r*; University Scholars 107, 108, 109; University Studies 199r*, 499r*

Category E

Interdisciplinary or non-Western: one approved course—these courses are offered in various programs and departments.

Interdisciplinary: Engineering 311; English 392; History 466; Human Services 300; University Studies 199r*, 499r*

Non-Western: Anthropology 208, 333r, 334r, 410, 425r; Art 211, 431, 432; Economics 444; English 333r; History 207, 208, 211, 212, 364, 365, 368, 370, 372, 499r*; Religion 211, 314, 316r, 491r*; Political Science 499r*; University Studies 199r*, 499r*

*General Education credit only when approved topic offered. An r following a course number indicates that because of difference in content, the course may be taken more than once for credit.
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 and readmitted 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 B.A. 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.

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 134 semester hours and co-op Engineering graduates will need 144 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 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. See page 18 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. Grade point average
   A minimum grade point average of 2.00 must be achieved
   1. On all cumulative work undertaken.
   2. On all hours attempted at The University of Tennessee at Chattanooga.
   3. Calculated over those semesters and/or terms in which the final 30 hours are earned.

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 colleges 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; Computer Science 123; all home economics courses except 105; Engineering 102) may be applied toward a Bachelor of Arts degree.

*See pages 25-27 for additional information on academic regulations.
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.

Pre-Professional Programs

Certificates

The University offers a two-year certificate program in office administration. At least the last 30 hours for the two-year certificate must be earned at The University of Tennessee at Chattanooga. A certificate candidate must earn at least a 2.00 average on all credits as well as a 2.00 average on all work taken on this campus. See the School of Business Administration section for an outline of this program.

At the beginning of the semester preceding that in which the student expects to complete his or her program, the student must file application for a certificate with the Office of Records.

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. See pages 47 and 51 for additional information. 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; and 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.

Cooperative Education Program

The cooperative education program provides the student with the opportunity to gain practical work experience in a chosen major. Students may be placed on one of two systems: (1) the alternate 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 or (2) the parallel system whereby the student is employed part-time and attends classes on a part-time basis.

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 radiologic technology may complete their pre-professional 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 150. 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.

In general, these same programs will also meet the minimum admission requirements to other professional colleges offering degrees in these health sciences. However, 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 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, human anatomy, physiology, embryology, and histology) and in chemistry (qualitative analysis and biochemistry). For general electives, courses in mathematics (particularly calculus), foreign language, literature, philosophy, 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 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. However, The University of Tennessee Center for Health Sciences 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) and psychology are strongly recommended.

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 47, 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 biochemical 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 stromatology. 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.

**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. However, students wishing to do so 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.

**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:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English, Biology 121, 122, 123, 124, 14, 15</td>
<td>12</td>
</tr>
<tr>
<td>Biology 311, 312</td>
<td>4</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>
<tr>
<td>Electives</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
</tr>
</tbody>
</table>

*Courses in human anatomy and physiology, physics, English, speech, mathematics, organic chemistry, and social sciences strongly recommended.*
Pre-Dental Hygiene

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

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 121, 122, 123, 124</td>
<td>8</td>
</tr>
<tr>
<td>Biology 191, 192, 193</td>
<td>3</td>
</tr>
<tr>
<td>Biology 210 or 311</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 101 and one additional psychology course</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 151 and one additional sociology course</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
</tr>
</tbody>
</table>

*Courses in mathematics and social sciences strongly recommended.

**Pre-Nursing**

Students wishing to prepare for the Bachelor of Science degree 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 page 150.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 121, 122, 123, 124 and Biology 191, 192, 193</td>
<td>16</td>
</tr>
<tr>
<td>Biology 210</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>3</td>
</tr>
<tr>
<td>English 101, 102</td>
<td>8</td>
</tr>
<tr>
<td>Psychology 101, 221, 222</td>
<td>9</td>
</tr>
<tr>
<td>Sociology 151, 215</td>
<td>6</td>
</tr>
<tr>
<td>Home Economics 105</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
</tbody>
</table>

*Courses in physics, mathematics and social sciences strongly recommended.

Pre-Pharmacy

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

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 121, 122, 123, 124</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 351, 352</td>
<td>5</td>
</tr>
<tr>
<td>Physics 103</td>
<td>4</td>
</tr>
<tr>
<td>English 101, 102</td>
<td>8</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>3</td>
</tr>
<tr>
<td>One course from Theatre and Speech 107, 108, 109, 306</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 201</td>
<td>2</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
</tbody>
</table>

*Mathematics strongly recommended.

Pre-Physical Therapy

Students may be admitted to the Physical Therapy School of The University of Tennessee Center for Health Sciences upon completion of 90 semester hours which include the following courses or their equivalents:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 121, 122, 123, 124</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>3</td>
</tr>
<tr>
<td>Physics 103, 104</td>
<td>8</td>
</tr>
<tr>
<td>English 101, 102, 103</td>
<td>8</td>
</tr>
<tr>
<td>Psychology 101 and one additional psychology course</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 151 and 1 additional sociology course</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
</tr>
</tbody>
</table>

*Mathematics 140, social sciences, organic chemistry, and advanced biology such as genetics, embryology, or cell biology strongly recommended.

Radiologic Technology.

Two years (64 semester hours) of preparation are required for admission to the Radiologic Technology program at The University of Tennessee Center for Health Sciences including the following courses or their equivalents:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 121, 122, 123, 124</td>
<td>8</td>
</tr>
<tr>
<td>Biology 311</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 121, 122</td>
<td>3</td>
</tr>
<tr>
<td>English 101, 103</td>
<td>8</td>
</tr>
<tr>
<td>Physics 103, 104</td>
<td>8</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>3</td>
</tr>
<tr>
<td>Sociology,</td>
<td>3</td>
</tr>
<tr>
<td>Social sciences,</td>
<td>3</td>
</tr>
<tr>
<td>Speech,</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
</tr>
</tbody>
</table>

Certification by National Registry required; competency in college algebra required.

Honors and Honor Societies

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.

Academic Recognition and Honor Societies

The University recognizes scholarly achievement in a number of ways. Each semester the Dean's List is published, including 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*, national recognition society for men and women.
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 semester or a cumulative average of 3.50 at the end of the freshman year.

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)
- Gamma Gamma Delta (home economics)
- Kappa Delta Pi (education)
- Lambda Iota Tau (literature)
- Omicron Delta Epsilon (economics)
- Phi Alpha Theta (French)
- Pi Delta Phi (social sciences)
- Pi Mu Epsilon (mathematics)
- Psi Chi (psychology)
- Scabbard and Blade (military science)
- Sigma Delta Pi (Spanish)
- Sigma Pi Sigma (physics)
- Sigma Xi (sciences)

Departmental Honors

The Departmental Honors program provides an opportunity for 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 examination in their major field. 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 nonspecialist. The thesis will be defended by means of an oral examination administered by the major department. Each candidate's knowledge of a broad area of study is measured by a general departmental examination which may be written or oral, or may involve any nonroutine demonstration of general competency which is considered to be appropriate by the department.

The chairman 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.

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 chairman of the Departmental Honors Committee.

A progress report to the adviser and the chairman of the Departmental Honors Committee is due the Monday two weeks 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 over-all 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 over-all 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.

Forms for admission to Departmental Honors candidacy can be obtained from the Office of Records. After the Director of Records has certified the candidate's academic standing and grade-point averages, the application should be 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.
Library research is an important part of the college experience
The atmosphere at UTC is what one would expect to find at a small, private institution. This is so because that is what UTC was, for 83 years. The merger with The University of Tennessee in 1969 has resulted in physical changes since then, with new, beautiful buildings, expanded programs, and faculty who have trained in prestigious universities around the world. But students are not surprised when professors call them by name in the classrooms and in the University Center.

Although the primary goal of the University is excellence in education, other concerns, such as the desire to develop leaders, and the willingness to assist students on an academic and personal level are equally important. In the sections of the catalog which follow, Student Life information is organized under the broad headings of Student Activities, Student Services, and General Regulations. Student Activities describes a few of the many possibilities at UTC for getting involved in social and service pursuits. Student Services contains descriptions of the variety of student related services available, such as health service, placement service for those students seeking off-campus employment, and counseling and career services. General Regulations discusses parking, student government groups, The Student Handbook, and the Honor Code. As stated in the Handbook, "The student becomes subject to the rules and regulations of the Honor Code upon registration." It goes on to explain that "the Honor Code of the University is based upon the assumption that the student recognizes the fundamental importance of honesty in all dealings within this community." The honor system is administered by a student-faculty Honor Court, which meets to hear cases of suspected violations of the Honor Code.

Student Activities

Athletics
As a member of the Southern Conference, the University maintains a vigorous intercollegiate athletic program with varsity teams in baseball, basketball, cross-country, tennis, football, track, rifle, wrestling and golf. The University also has women's intercollegiate athletic programs in basketball, volleyball 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. Scappy 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 Courts and Field House, located at the north end of Douglas Street along the Tennessee River, are unequalled in the South. Eight tennis courts, four all-weather, hard-surface courts, three grass courts and two indoor courts are available throughout the year. The courts are used for local and regional tournaments. Use of these courts is limited to students enrolled in tennis classes.

Macellon Gymnasium, constructed in 1965, provides facilities needed for the University's physical education program and various varsity sports.

Cultural Opportunities
The University, its departments, and organizations sponsor many activities centered around music and the arts and directed not only toward the University community, but also to 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 department of theatre and speech in conjunction with the UTC Theatre, an organization open to students and faculty as well as members of the larger community. Students may participate as performers and crew members in these presentations.

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, while 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.

Students may purchase tickets at reduced prices to attend programs of the Chattanooga Symphony Orchestra and 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. Campus visits and lectures by outstanding poets are scheduled two or three times yearly by Dr. Paul Ramsey, Poet-in-Residence, and director of the Tennessee Poetry Circuit. Lectures, 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 six national fraternities and seven national sororities that individually and collectively, through the Interfraternity Council and Panhel lenic, contribute to the social and cultural life of the campus. Many traditional events, All-Sing, Blue Key Follies and Greek Week, are supported by and depend to a great extent on the participation of these groups.

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

Fraternities at UTC include Alpha Phi Alpha Tau Omega, 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 the following activities: flag football, tennis, handball, water basketball, swimming, volleyball, basketball, racquetball, badminton, wrestling, softball and golf. These activities are available to both men and women with the following exceptions: flag football and wrestling are available to men only.
Facilities for tennis, swimming, wrestling, handball, racquetball and water basketball are excellent.

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, which is 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.

Recreation
Through the use of facilities located in Maclellan Gymnasium, recreational activities are available to students, faculty and staff. Because of the heavy schedule of the physical education, continuing education and athletic departments, recreational activities are limited to certain hours during the school day. All facilities are open for recreational use, however, when not in use by these departments.

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 smaller Danforth Chapel offer appropriate settings for worship services. The Baptist Student Union, United Methodist Student Center, Newman Foundation 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 B’nai Brith Hillel, the Christian Science Organization and the Moccasin Christian Fellowship.

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 Governing Board
The University Center Governing Board 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 board to serve all elements of the campus community and, further, to aid those newly developing or less popular activities which might otherwise be neglected. There are many opportunities for students to serve on the board. Programs are operated by various project committees and approximately sixty students are required to staff all committee positions.

Students can make their greatest contribution to center programs if they begin their involvement with a committee when they are freshmen. Interviews are held early each fall to assist interested students to find a committee assignment in which they can aid the development of campus life. In addition, new workers for the center committees are needed from time to time during the remainder of the year. Students can contact the board for an interview by leaving a message addressed to the president of the board, at the Information Desk.

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. The bookstore also has a Lobby Shop conveniently located in the new University Center. 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 Master Charge and BankAmericard.

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. Punch-out meal 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 University 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 hospitali-
zation 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 Sciences office is located at 628 Vine Street.

Housing

The University is attempting to provide a variety of residence facilities for its expanding enrollment. It feels that a valuable part of the University experience 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 mid-year 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, a new single-student apartment complex; 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 fully carpeted, air conditioned and surrounded by parking and recreation areas. Each apartment contains four single bedrooms, a living room and a kitchen area.

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 type facility with double rooms off a common hall. In the last few years considerable funds have been expended to make this unit more comfortable and attractive.

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 are available from the Housing Office.

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 pop-pers, immersion heaters or other cooking equipment.

Further information concerning housing 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 indicates the individual's right to use University facilities.

I.D. cards for new 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.

Part-time students use their fee payment receipt as their I.D. card.

Placement Services

The University maintains a free year-round placement service which assists degree candidates and alumni in finding permanent employment while helping students to secure full-time, part-time and summer jobs on and off campus.

Individuals are requested to register with the placement service early in their final year in order to take full advantage of the employment recruiting season, Job Opportunities bulletin, and various seminars and workshops. Individual employment counseling is also available.

Non-degree job orders are placed on the bulletin board in the Office of Placement Services for students to peruse at their convenience. Part-time institutional on-campus jobs, as well as typing, tutoring and baby-sitting jobs, are handled by this service.

Located in the University Center, the Office of Placement Services is an equal opportunity employment service for UTC students.

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 Programs 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

The fee receipt is required for general identification on campus for part-time students. It is used for checking out books at the library, for cashing checks at the bookstore, and for gaining entrance into exams where an I.D. is required for identification.

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 mainte-
nance fee, or $10.00, 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, 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 student, 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.

The Student Handbook
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.

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
The University of Tennessee at Chattanooga endeavors to provide adequate facilities for the increasing number of vehicles being operated by students and staff. However, because of the constant need to expand the teaching and research facilities for an ever-growing campus, the areas available for parking are necessarily limited. In an effort to provide parking facilities and to reduce the traffic congestion within the campus area, large parking areas for students, faculty and staff are located on the perimeter of the campus.

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, and this information is published each year in the University Traffic and Parking Regulations.

The large volume of vehicles operated in and around the University campus necessitates strict adherence to the University Traffic and Parking Regulations. Therefore, a system of fees for violations of these regulations is established by the University. Copies of the Regulations will be available at the time students, faculty and staff register their vehicles for classes each semester.
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 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 former students who were in attendance at least two semesters or 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

Richard W. Buhrman ’63, ....................... President
Earl A. Marler, Jr. ’58, ....................... President-Elect
Patricia Bender Cooper ’67, ................ Secretary
David Lee Hopkins, Jr. ’58, .................... Treasurer

Graduate Studies

The Graduate Division is the administrative unit which coordinates and supervises activities relating to the graduate degrees offered by The University of Tennessee at Chattanooga.

Graduate Degree Programs Offered

M.B.A. Business Administration
M. Ed. Administration & Supervision
Elementary Education
Secondary Education
Guidance and Counseling
  Community
  Elementary
  Secondary
Secondary Education
  Art
  Business
  English
  Health
  History
  Math
  Natural Science
  Physical Education
  Social Science
Special Education
  Diagnostic & Prescription
  Gifted
  Severely Mentally Retarded
M.S.C.J. Criminal Justice
  Correctional Psychology
  Education
  Planning & Evaluation
  Systems Application
M.M. Music
  Education
  Performance
M.S. Engineering
  Chemical Sciences
  Electrical
  Engineering Administration
  Industrial
  Mechanical
Psychology
  Clinical
  Organizational/Industrial
School
  Research

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, education, and engineering 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 catalog.
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 baccalaureate 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 or summer term 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 returned.

For additional information or application materials, write or call:

Director of Graduate Admissions
116 Race Hall, UTC
615 McCallie Avenue
Chattanooga, Tennessee 37402
Preparing essays and research papers is a common task.
Academic Organization and Departments

The University of Tennessee at Chattanooga has the following academic organization:

**College of Arts and Sciences**

Eugene Lubot, *Acting Dean*

- **Art**
- **Biology**
- **Chemistry**
- **English**
- **Fine Arts**

**Foreign Languages and Literature**

- Classical Civilization
- Greek
- Latin
- Modern Languages
- French
- German
- Spanish

- **Geosciences**
- **Geology**
- **Geography**

**History**

- **Interdisciplinary Studies**
  - American Studies
  - Communications
  - Environmental Studies
  - Humanities
  - Institute for International Studies
  - University Scholars Program
  - University Studies

- **Mathematics**

- **Music**
  - Cadek Department of Music
  - Graduate Programs in Music

- **Philosophy and Religion**
  - Philosophy
  - Religion

- **Physics and Astronomy**
  - Astronomy
  - Physics
  - General Science

- **Political Science**

- **Psychology**
  - Graduate Programs in Psychology

- **Sociology and Anthropology**
  - Sociology
  - Anthropology
  - Institute of Archeology
  - Theatre and Speech

**University Studies**

- **Cadek Department of Music**
  - Graduate Programs in Music

**Philosophy and Religion**

- **Interdisciplinary Studies**
  - American Studies
  - Communications
  - Environmental Studies
  - Humanities
  - Institute for International Studies
  - University Scholars Program
  - University Studies

- **Mathematics**

- **Music**
  - Cadek Department of Music
  - Graduate Programs in Music

- **Philosophy and Religion**
  - Philosophy
  - Religion

- **Physics and Astronomy**
  - Astronomy
  - Physics
  - General Science

- **Political Science**

- **Psychology**
  - Graduate Programs in Psychology

- **Sociology and Anthropology**
  - Sociology
  - Anthropology
  - Institute of Archeology
  - Theatre and Speech

**Foreign Languages and Literature**

- Classical Civilization
- Greek
- Latin
- Modern Languages
- French
- German
- Spanish

William Black, *Head*

**History**

- Ronald O. Moore, *Acting Head*

- Peter Consacro, *Head*
  - Arlie Herron, *Coordinator*
  - Sid Hetzier, *Coordinator*
  - Patricia Perfetti, *Coordinator*
  - Robert Fulton, *Coordinator*
  - Merilee Banoun, *Director*

- James G. Ware, *Head*

- Renee S. Cox, *Coordinator*

- Donald S. Klinefelter, *Head*

- Grayson Walker, *Head*

- David M. Brodsky, *Head*
  - Edward J. Green, *Head*
  - Ralph W. Hood, Jr., *Coordinator*

- Edward E. Cahill, *Head*

- Jeffrey L. Brown, *Coordinator*
  - David W. Wiley, *Head*
School of Business Administration

Kermit Cudd, Dean
Accounting and Finance
Economics
Management & Marketing
Office Administration/Business Education
Graduate Program in Business Administration

James Moon, Head
Ziad Keilany, Head
Lawrence Ettkin, Head
Kermit Cudd, Head
Richard Casavant, Coordinator

School Of Education

Roy Stinnett, Dean
Certification and Field Services
Curriculum and Instruction
Educational Administration and Supervision
Health, Physical Education/Recreation
Special Education and Counseling
Graduate Programs in Education

Thomas Bibler, Director
Eugene Bartoo, Head
William Hales, Head
Robert Norred, Head
Earl Davis, Head
William Hales, Coordinator

School of Engineering

Lynn Russell, Dean
Cooperative Engineering Program
Engineering Management Program
Graduate Programs in Engineering

John N. Lovett, Jr., Director
Norbert Koch, Coordinator
Eric Schonblom, Coordinator
M. Rex Jones, Head

Division of Human Services

William Butterfield, Director
Criminal Justice
Home Economics
Human Services
Military Science
Social Work
Graduate Programs in Criminal Justice

Kenneth Venters, Head
Mary Jo Cochran, Head
Lewis Sumberg, Coordinator
Dannie B. Morris, Head
Tommie Brown, Head
David L. Anderson, Coordinator

Department of Nursing

Marjorie Sczekan, Director

Other Educational and Public Service Units

Cadek Conservatory of Music
Center for Economic Education
Child Development Institute

William Riddlespurger, Coordinator
William H. Peterson, Director
Janice Davis, Director

Division of Continuing Education

Joel Cunningham, Dean
Conferences and Non-Credit Programs
Individualized Education Program (IEP)

Jerry Weeks, Director
Ron Area, Assistant Dean

Division of Special Services/Upward Bound
Learning Center
Library

Paul Beasley, Director
Nancy Bibler, Coordinator
Joseph Jackson, Director
Art (B.F.A.)

General Education (see pages 27-29 for list of approved courses):

- **Category A**: 2 approved courses in written communication in the English language, at least one at the freshman level (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**: 2 approved mathematics or natural or applied science courses (6 hours)
- **Category E**: 1 approved interdisciplinary or non-Western course (3 hours)

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

Foreign language through second college year

**Major:**

66 hours art including 101, 105, 106, 205, 206, 207, 208, 305, 333, 334, 498r; 12 hours from 211, 212, 213, 413, 414, 431, 432; remaining hours to total 66 from one of the following areas:

- Painting: 205r, 206r, *303, *307r, *308r
- Graphic Design: *303r, 306, *309, 310r, *381r
- Sculpture: *227, 228r, *343, 344r, *435r (six hours)
- Maximum 12 hours in any one area course

Participation in senior art show.
Electives to complete 128 hours

See typical courses of study in art (B.F.A.) below.

* Indicates required within area of concentration.

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>*Art 101</td>
<td>3</td>
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<tr>
<td>•Art 105 Drawing</td>
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<tr>
<td>General Education</td>
<td></td>
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<tr>
<td>Category A</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
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<tr>
<td>General Education</td>
<td></td>
</tr>
<tr>
<td>Category C</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
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<tr>
<td>Sophomore</td>
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<tr>
<td>*Art 205 Advanced Drawing</td>
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</tr>
<tr>
<td>*Art 207 Beginning Painting</td>
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</tr>
<tr>
<td>*Art History</td>
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<td>General Education</td>
<td></td>
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<tr>
<td>Category B</td>
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<tr>
<td>Elective</td>
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<td></td>
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<td>Total</td>
<td>18</td>
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**Art (B.F.A.): Painting**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td></td>
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<tr>
<td>•Art 101 Visual Fundamentals</td>
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</tr>
<tr>
<td>•Art 105 Drawing</td>
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<tr>
<td>General Education</td>
<td></td>
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<tr>
<td>Category A</td>
<td>3</td>
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<tr>
<td>Foreign Language</td>
<td>4</td>
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<tr>
<td>General Education</td>
<td></td>
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<tr>
<td>Category B</td>
<td>3</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>*Art 205 Advanced Drawing</td>
<td>3</td>
</tr>
<tr>
<td>*Art 207 Beginning Painting</td>
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<tr>
<td>*Art History</td>
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<td>General Education</td>
<td></td>
</tr>
<tr>
<td>Category C</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>JS</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
</tbody>
</table>

**Senior**

| Art 307r Advanced Painting |                 |
| Art 205r Advanced Drawing |   |
| General Education |     |
| Category C | 3 |
| General Education |   |
| Category D | 3 |
| Elective |                 |
| JS |                 |
| Total | 16 |

* - Indicates required course in area of concentration

/ta/ - Indicates course selected in area of concentration

See typical courses of study in art (B.F.A.) below.
Art (B.F.A): Sculpture

First Semester | Second Semester
--- | ---
Freshman | *Art 101 Visual Fundamentals 3 | *Art 106 Drawing 3
*Art 105 Drawing 3 | General Education Category A 3
General Education | Category A 3
Foreign Language 4 | Foreign Language 4
General Education | Category B 3
Category C 3 | Physical Education 021 1
Arts Education (B.A.) | Elective 3
Sophomore | *Art 205 Advanced Drawing 3 | *Art 206 Advanced Drawing 3
*Art 333 3-D Design 3 | *Art 334 3-D Design 3
*Art History 3 | *Art History 3
Foreign Language 3 | *Art 227 Introduction to Crafts 3
General Education | Foreign Language 3
Category B 3 | Elective 3
junior | Category B 3 | Elective 3
Senior | *Art 433r Sculpture 3 | *Art 498r Individual Studies 3
Art 344 Advanced Ceramics 3 | Art 433r Sculpture 3
General Education | Art 228 Advanced Crafts 3
Category C 3 | General Education Category D 3
General Education | Category E 3
Category D 3 | Elective 4
Elective 3 | Elective 4
15 | 16
TOTAL 128

- Indicate required course in art
 Italics - Indicate course selected in area of concentration
 *with /ta//cs - Indicate course required within area of concentration

Art (B.A.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Electives to complete 128 hours

Art Education (B.F.A.)

First Semester | Second Semester
--- | ---
Freshman | General Education Category A 3 | General Education Category A 3
Mathematics 115 3 | Education 102 2
Science Elective 4 | Science Elective 4
Physical Education 021 1 | Physical Education Activity 1
Art 105 Drawing 3 | Art 106 Drawing 3
Art 101 Visual Fundamentals 3 | Art 103 Introduction to Art Education 3
17 | 16
Sophomore | Humanities/Fine Arts Elective 3 | Apply for Admission to TEP
Education 204 or 203 3 | Humanities/Fine Arts Elective 3
Social Science Elective 3 | Education 207 3
Art 205 or 206 3 | Art 208 Beginning Painting 3
Advanced Drawing 3 | Art History 3
Art 207 Beginning Painting 3 | 18
Art 227 Introduction to Crafts 3 | 15

Major:
40 hours Art including 105, 106, 205r, 206r, 207, 208, 305, 498r; 9 hours from 211, 212, 213, 413, 414, 431, 432; 6 hours from 333, 334, 433r, and 3 hours from 303, 309, 343.
Participation in senior art show.
Electives to complete 128 hours

*Art 101 not required for the B.A.
Junior

Apply for Student Teaching

Art History 3

Interdisciplinary/
Non-Western

Art 333 3-D Design

Education 301

Humanities/Fine Arts Elective

Art 323 Materials & Procedures in Art Education

Art History

3

3

3

3

3

3

3

3

18

Senior

Education 430

Education 431

Education 438

Art 303 2-D Design or

Art 305 Printmaking or

Art 309 Advertising Design or

Art 343 Intro to Ceramics

Art 149S Seminar/Art Education

Fine Arts Elective

Elecctive

Elecctive

Senior Art Show

14

TOTAL 128

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: 105 prerequisite to 106.

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 preception, 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, 106.

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, 106. Courses are sequential for art majors; 207 prerequisite to 208.

211 Prehistoric through Byzantine (3)

The arts of the prehistoric, ancient Near Eastern, Egyptian, Greek, Roman, Early Christian, and Byzantine periods.

212 Romanesque through Baroque (3)

Romanesque, Gothic, Renaissance, and Baroque art.

213 European Art from 1700 to the Present (3)

The more decisive styles and movements in western European art from the early eighteenth century to the present with emphasis on the most influential artists and groups of artists and their principal works.

222 Art Education (3)

Contemporary concepts of art education at the elementary level of instruction. General consideration of problems in selecting, organizing, guiding, and evaluating individual and group activities in art. Lectures, reading reports, discussion, and studio projects.

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.

301 Art Structure (3)

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.

303 Two-Dimensional Design (3)

Experimentation with the elements of design; continued problem solving and exploration in a variety of two-dimensional media. Emphasis on technical and conceptual development. Studio hours six. Prerequisites: 101, 105, 106.

305 Printmaking (3)

Work in linoleum block and woodcut, using black and white and multicolor techniques. Work in intaglio, including line etching, aquatint, and drypoint processes. Studio hours six. Prerequisites: 101, 105, 106 or approval of department head.

306 Advanced Printmaking (3)

Work in intaglio, with special emphasis on multicolor printing techniques and experimental methods. Work in serigraphy, including screen printing using various stencil methods. Studio hours six. Prerequisites: 305 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)

The basic elements in advertising layout and illustration. Problems in magazine, newspaper, and poster advertising; exercises in the styles of lettering; problems in rendering aimed at improving technical facility. Studio hours six. Prerequisites: 101, 105, 106.

310r Advanced Graphic Design (3)

Intermediate typographic design, layout, and production. Introduction to illustration. Prerequisite: 309.

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. Courses need not be taken in sequence.

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 (3)

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.

381r Photography (3)
Introduction to photography as an art form with emphasis on composition. Basic camera operation, film processing, and printing. Prerequisites: 101, 105, 106 (for art majors). 35mm camera required.

413, 414 American Art from Pre-Columbian Times to the Present (3)
The visual arts of the United States, beginning with a brief survey of the arts of the American Indian from prehistoric times, followed by the arts of the European settlers in the Colonial period, and concluding in the first semester with the increasingly complex and diversified period from the end of the Revolutionary War through the Civil War. In the second semester the developments from about 1865 until the present are explored, emphasizing those artists whose works in painting, sculpture and architecture comprise the key monuments of the last one hundred years. (Either course may be taken independently.)

422 Three-dimensional Art for Elementary Education (3)
Introduction to techniques of woodworking, metalworking, ceramics and weaving. Individual research in new materials. Special emphasis placed on equipment and designs suitable for classroom use.

431, 432 Arts of the Far East (3-3)
A selective presentation of the visual arts of China, Japan, India and other culturally significant regions of Asia. First semester devoted to the earlier phases of Chinese and Japanese art and the art of India from the Indus Valley Civilization through the Medieval period. Second semester presents developments in China from the Han Dynasty onward, and in Japan from the Heian period to the present. (Either semester may be taken independently.)

433r Sculpture (3)
Development of student’s individual style in three-dimensional art. Emphasis on technical skills. Prerequisite: 333 or 334.

452 Research and Studio Problems in Elementary School Art (1-3)
Assigned projects in the history, theory and innovative approaches in art education at the elementary level. Emphasis on studio problems directed toward the individual's need. See "Departmental Honors," page 33.

490 Seminar in Art Education (3)

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Biology

Professor Franke, Head
Professors Freeman, Garth, Nelson, Perfetti
Associate Professors Durham, M. Edwards, Litchford, Van Horn, Vredevedl
Assistant Professors Kupor, Walton

The Department of Biology offers two degrees: a B.A. in biology and a B.S. in medical technology. The course requirements are listed below.

Students are urged to consider attendance at one of the two institutions affiliated with UTC’s Department of Biology that offer field course experience in the life sciences:

Gulf Coast Research Laboratory, Ocean Springs, Mississippi, offering courses in marine biology, and Tech-Aqua, Smithville, Tennessee, a field station offering educational research opportunities in inland, freshwater field biology.

Well-prepared students in biology should avail themselves of the Biology 121, 122, 123 and 124 waiver examination offered at the beginning of each semester.

Pre-professional programs in forestry, dentistry, medical technology, medicine, cytotechnology, dental hygiene, nursing, pharmacy, physical therapy and radiologic technology are described on pages 30-32.

Biology (B.A.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses other than biology (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western 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 125, 126 or 140, 150; 140, 150 recommended for prospective graduate students
Chemistry 121, 122, 351 and one other course
Physics 103, 104, or Geology 111, 112
Biology-32 hours including 121, 122, 123, 124; 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: Organismic Biology: One botany course chosen from 207, 208, 311, or 352. One zoology course chosen from 225, 226, 302, or 342. (Courses in organismic biology offered at Gulf Coast Research Laboratory may be substituted. Permission of department head required.) Physiology: 304, 328, 405, 421, 422, Chemistry 466
Population Interaction: 306, 308, 352, 416, 450
Genetics and Development: 301, 315, 325, 425, 462
Recommended electives: Mathematics 210 and Computer Science 121
2.0 average in major and related courses
Electives to complete 128 hours

See typical course of study in biology (B.A.) below.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Freshman</td>
<td>General Education</td>
</tr>
<tr>
<td>Category A</td>
<td>3</td>
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<tr>
<td>Chemistry 121 (Category D)</td>
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<td>Biology 121, 123</td>
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### Medical Technology (B.S.)

**General Education (see pages 27-29 for list of approved courses):**

<table>
<thead>
<tr>
<th>Category</th>
<th>Approved Courses</th>
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<tr>
<td><strong>A</strong></td>
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<tr>
<td><strong>B</strong></td>
<td>3 approved courses: 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>2 approved mathematics, natural or applied science courses (6 hours; approved courses below may apply)</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>1 approved interdisciplinary or non-Western course (3 hours)</td>
</tr>
</tbody>
</table>

Additional requirements:
- Health and Physical Education 021 plus one additional semester physical education activity
- Majors and related courses: Mathematics 125, 126 or 140, 150 recommended for prospective graduate students
- Additional requirements: Mathematics 104, 16 hours of chemistry including 121, 122, 351, 352, or 341
- Biology courses including 100, 121, 122, 123, 124, 192, 311 or 405, 328 or 422; one course from 301, 315, 325, 425, and 426, and one course from 240, 306, 308; 30 hours from approved school of medical technology
- Electives to complete 128 hours

See typical course of study in medical technology (B.S.) below.

<table>
<thead>
<tr>
<th>Freshman</th>
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<td>Biology 122, 124</td>
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<tr>
<td>Physical Education 021</td>
<td>Physical Education Activity</td>
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</tbody>
</table>

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

### 100 Opportunities in Biology (0)

Introduction to opportunities and professions in the life sciences. Required of biology and medical technology majors. Lecture one hour.

121 **Principles of Biology I (3)**

Examination of major biological principles. Lecture three hours. Corequisite: 123.

122 **Principles of Biology II (3)**

Examination of major biological principles. Lecture three hours. Prerequisites: 121, 123; Corequisite: 124

123 **Investigations in Biology I (1)**

Laboratory investigations of significant biological ideas. Laboratory two hours. Pre-or corequisite: 121.

124 **Investigations in Biology II (1)**

Laboratory investigations of significant biological ideas. Laboratory two hours. Prerequisites: 121, 123; Pre-or corequisite: 122.

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. Pre-or corequisite: 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, Chemistry 121.

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

Maximum credit four hours. Prerequisite: approval of instructor.

200 **Agriculture and Environment (3)**

The study of how human beings have modified plants, animals, microorganisms and soil to serve their own purposes. Lecture three hours. Prerequisites: 122, 124 or equivalent.

207 **Morphology of Non-vascular Plants (3)**

A study of the forms, reproductive processes, and evolutionary relationships of the non-vascular plants. Lecture two hours, laboratory two hours. Prerequisites: 122, 124 or equivalent.

208 **Morphology of Vascular Plants (3)**

A study of the form, reproductive processes and evolutionary relationships of the vascular plants. Lecture two hours, laboratory two hours. Prerequisites: 122, 124 or equivalent.
210 Microbiology and Health (3)
Microorganisms as related to disease, immunity, food preservation, and sanitation. Lecture two hours, laboratory two hours. Credit not allowed toward a biology or medical technology major. Prerequisites: 122, 124, Chemistry 121 or equivalent.

215 Human Genetics (2)
A study of human genetics and its practical applications. Topics include sex chromosome anomalies, biochemical genetics, gene frequencies in populations, race, genetics of development and maldevelopment, multifactorial inheritance and teratology. Lecture two hours. Credit not allowed toward major.

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. Prerequisites: 122, 124 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. Prerequisites: 122, 124 or equivalent.

240 Symbiosis (3)
The study of the intimate living arrangements between and among plants, animals, fungi, protists and monerans. Lecture three hours. Prerequisites: 122, 124.

301 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. Prerequisites: 122, 124, 226 or 302 recommended.

302 Comparative Anatomy of Vertebrates (4)
Structure and evolution of vertebrates. Dissection of dogfish, amphibian, and cat. Lecture two hours, laboratory four hours. Prerequisites: 122, 124 or equivalent.

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, 124, Chemistry 121, 122 or equivalent. Co-or Prerequisite: Chemistry 351.

306 Ecology (4)
The community concept studied with reference to structure, energy, cycles, and populations; the distribution of plants and animals with analyses of the factors involved. Lecture three hours, laboratory two hours. Field trips. Prerequisites: 122, 124 or equivalent, or approval of instructor.

308 Parasites of Man (4)
Life cycles, ecology and physiology of the parasites of human beings including the diseases caused by these organisms. Lecture two hours, laboratory four hours. Prerequisites: 122, 124 or equivalent, or approval of instructor.

311 Principles of Microbiology (4)
Taxonomy and physiology of microorganisms. Lecture two hours, laboratory four hours. Credit not allowed in both Biology 210 and 311. Prerequisites: 122, 124; 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. Prerequisites: 122, 124 or equivalent.

325 Genetics (3)
The structure and function of the gene and chromosomes; control of protein synthesis; mutation; genetic regulation; genetic transfer and recombination. Viruses, bacteria and higher organisms will be discussed. Lecture three hours. Prerequisites: 122, 124; Chemistry 122 or equivalent.

326 Genetics Laboratory (1)
Genetics investigations utilizing viruses and bacteria. Laboratory two hours. Prerequisites: 122, 124 or equivalent; Co-or prerequisite: 325.

328 Cellular Biology (3)
Morphological and chemical organization of the cell: cellular metabolism; metabolic energy relationships, nature of enzymes; fermentative and oxidative metabolism; photosynthesis. Lecture two hours, laboratory two hours. Prerequisites: 122, 124, Chemistry 122 or equivalent. Co-or prerequisite: Chemistry 351.

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, 124, and 226 or equivalent recommended.

332 Field Biology (3)
Methods of field investigation of vertebrate fauna and vascular flora. Laboratory emphasis on identification, taxonomy and preparation of museum specimens. Lecture one hour, laboratory four hours. Prerequisites: 122, 124 or equivalent.

342 Entomology (4)
Principles of entomology including the morphology, development, taxonomy, ecology and importance of insects. Lecture three hours, laboratory two hours. Prerequisites: 122, 124 or equivalent.

352 Taxonomy of Vascular Plants (4)
Speciation; breeding systems; pollination systems; edible and poisonous plants; and origin of flowering plants. Laboratories emphasize identification of flowering plants, conifers and ferns. Some field work required. Lecture two hours, laboratory four hours. Prerequisites: 122, 124 or equivalent.

405 Microbial Physiology (4)
Bacteria and viruses as biological organisms: physiology, control mechanisms, genetics, ultrastructure, biochemistry, pathogenicity, and immunological response to infection. Lecture three hours: laboratory two hours. Prerequisites: 122, 124, or equivalent and 311 or 328 or 351.

408 Protozoology (4)
The taxonomy, morphology, physiology and culture of freshwater protozoa. Three lecture hours, two lab hours. Prerequisites: 20 semester hours of biology; 76 semester hours of chemistry.

416 Biogeography (3)
A study of the distribution of plants and animals from a climatic and historical perspective. Lecture three hours. Prerequisites: 122, 124.

417 Comparative Invertebrate Physiology (4)
Studies will emphasize the complexity of systems exhibited by the invertebrates that meet their physiological requirements. Lecture two hours, laboratory four hours. Prerequisites: 122, 124,225 or equivalent.

422 Comparative Vertebrate Physiology (3)
Behavioral and physiological adaptations to environmental and homeostatic stresses faced by vertebrates. Lecture three hours. Prerequisites: 122, 124 or equivalent, 226 or 302, and 328.

425 Developmental Biology (3)
Principles of development with emphasis on casual factors in plant and animal embryogenesis. Lecture two hours, laboratory two hours. Prerequisites: 122, 124, Chemistry 122 or equivalents and 8 additional semester hours of biology. Co-or prerequisite: Chemistry 351.

426 Plant Development and Tissue Culture (3)
Developmental morphology of plants considering growth, differentiation and other morphogenetic phenomena as related to such physical and chemical factors as light, water, and growth substances. Introduction to tissue culture. Lecture two hours, laboratory two hours. Prerequisites: 122, 124, Chemistry 122 or equivalents and 8 additional semester hours of biology. Co-or prerequisite: Chemistry 351.

444 Psychobiology (4)
Bioelectrical theory. Integrative activities, receptor and effecter process 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, 124, 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, 124 or equivalent.

463 Endocrinology (3)
The hormones of animals with emphasis on those of mammals. Lecture three hours. Prerequisites: 122, 124; Chemistry 122.

494r Biology Seminar (1)
Presentation of programs of current biological interest by students, faculty and outside speakers. Prerequisite: 78 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 33.

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. Prerequisites: 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 CCRL Z0141.) Prerequisites: 122, 124.

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 CCRL BOT 341.) Prerequisites: 122, 124. Credit not allowed for 341 and 207.

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 CCRL Z0361.) Prerequisite: Fifteen 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 CCRL 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 CCRL MSE431.) Prerequisites: 122, 124, 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 BOT441.) Prerequisites: 122, 124, 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 decision. Lecturers will include specialists in biology, fisheries statistics, sanitation and marine law. (Same as GCRL Z0442.) Prerequisite: 122, 124.

452 Marine Microbiology (6)
A general course designed to introduce the student to the role of microorganisms in the overall ecology of the oceans and estuaries. Lecture and laboratory work includes sampling procedures, taxonomy of 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)
A consideration of the relationship of marine organisms to their environment, includes the effects of temperature, salinity, light, nutrient concentration, currents and food on the abundance and distribution of marine organisms. (Same as GCRL Z0460.) Prerequisites: 207, 225, 306, Chemistry 342.

464 Aquaculture (6)
A lecture, laboratory, and field course designed to introduce aquatic and marine biology students to the history, principles, problems and procedures relating to the culture of commercially important crustaceans, fish, and mollusks along the Gulf Coast. (Same as GCRL Z0464.) Prerequisites: 122, 124.

Business Administration
See School of Business Administration, page 99.

Chemistry

Professor Cross, Head
Professors Boyer, McNeely
Associate Professor Waddell
Assistant Professors Dalby, Kutz, Lynch
Lecturer Yeakel

The chemistry curriculum provides programs leading to B.A. and B.S. degrees. The BA 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.
Pre-professional programs in forestry, dentistry, medical technology, medicine, cytotechnology, dental hygiene, nursing, pre-pharmacy, physical therapy and radiologic technology are described on pages 30-32.

Chemistry (B.A.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses other than chemistry (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western 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 140, 150, 160
Physics 103, 104

32 hours chemistry including 121, 122, 341, 351, 352, 371, 372, 443, 2 hours of Mathematics 140, 150, 160

Electives to complete 128 hours

See typical course of study in chemistry (B.A.) below.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>Freshman</td>
<td>General Education</td>
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<tr>
<td>Chemistry 121</td>
<td>Category A</td>
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<tr>
<td>Foreign Language</td>
<td>Mathematics 140</td>
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<td>Mathematics 140</td>
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<td>Physical Education 021</td>
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<tr>
<td>Electives</td>
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Chemistry (B.S.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses other than chemistry (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
German through 102
English 200
Mathematics 150, 160, 250
Physics 103, 104
Computer Science 121
One upper level course in biology, engineering, geosciences, or physics

40 hours chemistry including 121, 122, 341, 351, 352, 371, 372, 436, 443, one hour of research; one additional hour of research or seminar
E lectives to complete 128 hours

See typical course of study in chemistry (B.S.) below.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
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<td>Freshman</td>
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<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
</tbody>
</table>

51
111 Chemistry and the Environment (3)
Basic concepts and methods of investigation with applications of chemical principles to the environment. Lecture three hours.

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. Some sections designated to require high school chemistry. Some sections designated as self-paced instruction.

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.

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

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: 122; 351 is prerequisite to 352.

371, 372 Physical Chemistry (4, 4)
Thermodynamic, kinetic, and other descriptions of laws governing physical and chemical change. Lecture three hours, laboratory three hours. Prerequisites: Chemistry 341, Physics 104, Mathematics 160; Chemistry 371 is prerequisite to Chemistry 372.

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: twenty-four semester hours of chemistry.

436 Advanced Inorganic Chemistry (3)
Advanced concepts in theoretical and descriptive inorganic chemistry with emphasis on valence bond, molecular orbital, and crystal field theories. Lecture three hours. Prerequisite: 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; signifi-
cance 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: twenty-four 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 33.

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.

498 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.

Classical Civilization
See Foreign Languages and Literatures, page 55.

Communications
See Interdisciplinary Studies, page 65.

Computer Science
See School of Engineering, page 137.

Criminal Justice
See Division of Human Services, page 140.

Education

Engineering
See School of Engineering, page 129.
English

Professor T. Ware, Head

Professors: Bach, Connor, Herron, Ramsey, Tinkler
Associate Professors: Barrow, Consacro, Dowse, Fulton, Richards, Sanderlin, Vallier
Assistant Professors: Jackson, Rosa Ann Moore, Shawen, Totten

Lecturers: Meacham, Pierce, Waddey

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

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

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Health and Physical Education 021 plus one additional 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; 207 or 442r; 211 and 212; 213 or 214; 350 or 351; 360 or 361.
Senior seminar: English 400
At least nine (9) of the remaining hours must be in 300-and 400-level courses, with one course in English literature before 1800.
Twelve hours additional in supporting courses beyond the general education requirements: these courses chosen in conjunction with the academic adviser.
Electives to complete 128 hours

See typical course of study for English and American Language and Literature (B.A.) below.

Freshman

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>English 101-102</td>
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<tr>
<td>Behavioral Science</td>
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<tr>
<td>Humanities, Fine Arts</td>
<td>6</td>
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<tr>
<td>Mathematics, Natural Science</td>
<td>6-8</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>8</td>
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<td>Physical Education</td>
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<td>English 203</td>
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<tr>
<td>English 211, 212</td>
<td>6</td>
</tr>
<tr>
<td>English 213 or 214</td>
<td>3</td>
</tr>
<tr>
<td>Humanities, Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>English 207 or 442r</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>6</td>
</tr>
<tr>
<td>Support course (chosen with adviser)</td>
<td>3</td>
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<tr>
<td>Electives</td>
<td>6-9</td>
</tr>
<tr>
<td>English 360 or 361</td>
<td>3</td>
</tr>
<tr>
<td>English 400</td>
<td>3</td>
</tr>
<tr>
<td>English Electives (300-400 level)</td>
<td>9</td>
</tr>
<tr>
<td>Support course (chosen with adviser)</td>
<td>3</td>
</tr>
</tbody>
</table>

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 (2) courses at the 300 or 400 level to be chosen in conjunction with an academic adviser. A total of 21 hours.

100 Special Skills in Basic English (2)
Graded on a credit/no credit basis. Does not count for general education credit. Designed for those students whose writing skills are deemed insufficient for successful completion of English 101.

101 Rhetoric and Composition (3)
The principles and practice of effective reading and writing. Frequent themes, exercises, selected readings. Attention to individual problems of grammar and usage. In rare instances exemption from English 101 may be recommended by the department.

102 Rhetoric and Composition (3)
Review of competencies stressed in English 101 with emphasis on the extended essay: use of research matter in writing; attention to diction, figurative and symbolic language, relationship of style and meaning. Prerequisite: English 101.

103 Introduction to Literature (3)
Readings from poetry, fiction and drama, to demonstrate how the writer speaks of and to the human condition.

161 Written and Oral English for Foreign Students (6)
A rapid review of English grammatical structures and pronunciation with intensive oral and written drill. Required during the first term of residence of all foreign students who are not excused from it on the basis of the English proficiency examination offered during each fall term. Meets ten hours a week.
199 Special Projects (1-4) 
Individual or group projects. Maximum credit four hours for B.A. in English or B.S., Secondary Education in English. By permission of department head.

200 Practical English for the Professional (3) 
Practice in the forms of writing and reading commonly used in various professions. Includes business letters and reports, technical and scientific reports, development of vocabularies, etc. Prerequisite: 101 or equivalent experience.

203 Literature of the Western World (3) 
Selections from the Bible, from Creek and Latin classics in English translation, and from Medieval and Renaissance literature.

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

207 Shakespeare: an Introduction (3) 
Prerequisite: 101 or equivalent experience.

211 Survey of English Literature to 1800 (3) 

212 Survey of English Literature since 1800 (3) 

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

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

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

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

230 Popular Fiction (3) 
Science fiction, detective fiction, fantasy fiction or other types studied in relation to the genre and to the literary value of the genre.

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

232 Introduction to Journalism (3) 
History of American journalism; examination of current issues in journalism; practice in journalistic techniques.

300 Advanced Expository Writing (3) 
Review and extension of basic composition skills designed to take the student beyond the competence demanded for satisfactory completion of an introductory course in English composition and to perfect skills in the several modes of expository, argumentative, narrative, and descriptive prose.

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.

323 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.

371 News Writing and Reporting (3) 
Instruction and practice in reporting news gathered from the traditional news beats (courts, county-city government, university, city, etc.) Prerequisite: permission of instructor.

372 Editorial Writing and Editing (3) 
Instruction and practice in analytical, interpretive, persuasive writing; concepts of editorial responsibility.

374 Feature Writing (3) 
Non-fiction writing for magazines and for specialized publications. Prerequisite: permission of instructor.

375 Creative Writing: Poetry (3) 
Instruction and practice in the understanding and writing of poetry. Prerequisite: 270 or permission of instructor.

376 Creative Writing: Fiction (3) 
Instruction and practice in the understanding and writing of fiction. Prerequisite: 270 or permission of instructor.

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.

396 Classical Mythology (3) 
See Classics 396.
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, 1660-1800 (3)
Study of English drama from the Restoration through the 18th and 19th centuries.

422 Eighteenth-Century English Novel (3)

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

430 Nineteenth-Century English Novel (3)
Representative novels of the Victorian era.

431 Twentieth-Century British Novel (3)

433 Modern Poetry, British and American (3)

434 Twentieth-Century American Novel (3)

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

442 Shakespeare: Special Topics (3)
Maximum credit six hours for the degree.

443 Major British Figures (3)
A reading course in the works of a major British writer. Maximum credit six hours for the degree.

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

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

471 Writing: Workshop (3)
An advanced seminar in writing with individual projects in imaginative, expository, or critical writing. Prerequisite: 2 writing courses above the 100 level.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 33.

497r Research (1-3)
Individual research projects by special permission of department head. Maximum three hours for B.A. in English or B.S., Secondary Education in English.

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

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

Environmental Studies
See Interdisciplinary Studies, page 65.

Foreign Languages and Literature

Associate Professor Bohrer, Head
Professor Seay
Associate Professor Cam pa
Assistant Professors Banoun, T. Jones, Sturzer, Tandy

The department offers the B.A. degree in French, Greek and Latin, Latin and Spanish. A student may also pursue a B.A. in Humanities degree with an emphasis in Classical Civilization. Elementary and Intermediate German are offered and may be chosen to fulfill the foreign language requirement. Modern Language courses, taught in English, which deal with foreign literatures and civilizations, afford the non-foreign 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.

Classical Civilization

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

300 Scientific Terminology (3)
Designed to meet the needs of non-language 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.

307 Ancient History (3)
See History 307
308 Ancient History (3)
See History 308

395 Creek 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.

3% Classical Mythology (3)
A study of the origins of Greek and Roman myths, their importance in
antiquity, and their influence on later literature. May be registered as
English 396.

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 33.

497r Research (1-4)

499r Individual Studies (1-4)

499r Group Studies (1-4)

French

Foreign Languages: French (B.A.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language,
at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major:
22 hours French beyond 211, 212
Electives to complete 128 hours

See typical course of study in Foreign Languages: French (B.A.) below.

For a student with 2 years of high school French

First Semester

Freshman

English 101 3
General Education Category B 3
French 211 3
Physical Education 021 1
General Education Category C 3
Elective 3

Second Semester

General Education Category A 3
General Education Category B 3
French 212 3
Physical Education Activity 1
General Education Category C 3
Elective 3

Sophomore

Advanced French Category B 3
General Education Category D 4
Electives 6

Junior

2 Advanced French Courses 6
General Education Category E 3
Electives 7

Senior

2 Advanced French Courses 6
Electives 10

Minor:
23 hours of French with at least 9 hours at the 300 level or above.

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: reading in French with oral drills and conversation in French.
Prerequisites: 101, 102 or two years high school French.

211x, 212x, Intermediate French for Reading Knowledge (3, 3)
Grammar: reading in French with discussion in English. Prerequisites:
101, 102. May be substituted for 211, 212.

311, 312 Composition and Conversation (2, 2)
Intensive active practice in the language. 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 back-
grounds 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. Prere-
quites: 211, 212 or approval of the department.

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.

412 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 33.

497r Research (1-4)
Foreign Languages: Greek and Latin (B.A.)

General Education (see pages 27-29 for list of approved courses):

**Category A**
2 approved courses in written communication in the English language, at least one at the freshman level (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**
2 approved mathematics or natural or applied science courses (6 hours)

**Category E**
1 approved interdisciplinary or non-Western course (3 hours)

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

**Major:**
18 hours Latin beyond 101, 102
12 hours Greek
Electives to complete 128 hours

See typical course of study for Foreign Languages: Greek and Latin (B.A.) below.

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

**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

**Sophomore**
- Latin 201 3
- General Education Category B 3
- General Education Category D 4
- Electives 6
- 16

**Junior**
- Advanced Latin 3
- Greek 101 3
- General Education Category E 3
- Electives 7
- 16

**Senior**
- Advanced Latin 3
- Advanced Greek 3
- Electives 10
- 16

**Italian**

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

211, 212 Intermediate Italian for Conversation (3, 3)
Grammar, reading in Italian with oral drills and conversation in Italian. Prerequisites: 101, 102.
Latin

Foreign Languages: Latin (B.A.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language,
at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Major:
21 hours Latin beyond 101,102; 9 hours from Classics 307,308, 395,396,
Category D
General Education (see pages 27-29 for list of approved courses):

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

Sophomore
Latin 201 3
General Education Category B 3
General Education Category D 4
Electives 6

Junior
Advanced Latin 3
Classical Civilization 3
General Education Category E 3
Electives 7

Senior
2 Advanced Latin Courses 6
Electives 10

Minor:
21 hours of Latin with at least 9 hours at the 300 level or above.

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

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

201 Intermediate Latin (3)
Intensive review of basic Latin grammar; selections from Cicero, Livy,
Pliny and Ovid. Prerequisites: Latin 101, 102 or two years of high school
Latin. At the discretion of the department properly qualified students
with only one year of high school Latin may be admitted.

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

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

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

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

312 Latin Prose and Composition (3)

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

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

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

495r Departmental Honors (1-3 hours per term, 4 hours for the two
terms).
See "Departmental Honors," page 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

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.

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)

499r Group Studies (1-4)

Spanish

Foreign Languages: Spanish (B.A.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major:
22 hours Spanish beyond 211, 212.
Electives to complete 128 hours

See typical course of study in Foreign Languages: Spanish (B.A.) below.

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

First Semester

Freshman
English 101 3
General Education Category B 3
Spanish 211 3
Physical Education 021 1
General Education Category C 3
Elective 3

Second Semester

General Education Category A 3
General Education Category B 3
Spanish 212 3
Physical Education Activity 1
General Education Category C 3
Elective 3

Sophomore

Advanced Spanish 3
General Education Category B 3
General Education Category D 4
Electives 6

Junior

2 Advanced Spanish Courses 6
General Education Category E 3
Electives 7

Senior

2 Advanced Spanish Courses 6
Electives 10

Minor:
23 hours of Spanish with at least 9 hours at the 300 level or above.

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, reading in Spanish with oral drills and conversation in Spanish. Prerequisites: 101, 102 or two years high school Spanish.

211x, 212x Intermediate Spanish for Reading Knowledge (3, 3)
Grammar, reading in Spanish with discussion in English. Prerequisites: 101, 102. May be substituted for 211, 212.

311, 312 Composition and Conversation (2, 2)
Intensive active practice in the language. Prerequisites: 211, 212 or approval of the department.

321 Advanced Spanish Grammar (3)
Special problems in syntax, illustrative reading, 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 backgrounds. 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, or on teaching methods. 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 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)
Geosciences

Assistant Professor Black, Head
Professor Wilson
Associate Professors Bergenback, McDowell

The Geosciences Department offers the Bachelor of Science degree in geology and participates in programs leading to the Bachelor of Science degree in education and environmental studies. The department also offers a Minor in geology and geography.

Geology (B.S.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level or one at freshman level plus English 300 (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
Chemistry 121, 122

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
34 hours of geology: Geology 111, 112, 113, 114, 321, 330, 341, 342, 351, 352, 490
Biological 121, 122, 123, 124
Physics 103, 104 or Physics 230, 231
Mathematics 126, 125, 225, or Mathematics 140, 150, 160
English 200 or 300
Computer Science 121 and Computer Science 122 or 231

An emphasis of 18 or more hours forming a coherent program of courses, half at the 300 or 400 level, which will provide a focus for the students’ interest in an area of potential professional expertise. Up to 8 hours of the required courses outside geology may be used. Approval of the head of the Department of Geosciences is required.

Participation in a summer field course is highly recommended.

See typical course of study for geology (B.S.) below.

<table>
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<tr>
<th>First Semester</th>
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<tr>
<td>Freshman</td>
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<td>Biology 123</td>
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<td>Physics 103 or 230</td>
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<tr>
<td>Mathematics 126 or 150*</td>
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<td>15-16</td>
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</tbody>
</table>

111 General Geology: Physical (3)
Introduction to geosciences; earth materials, processes, and structures. Lecture three hours. Corequisite: 113.

112 General Geology: Historical (3)
Origin of the earth and its geologic history, the concept of geologic time, the fossil record. Lecture three hours. Corequisite: 114.

113 Investigations in Geology: Physical (1)
Laboratory investigations in physical geology. Laboratory 2 hours. Corequisite: 111.

114 Investigations in Geology: Historical (1)
Laboratory investigations in historical geology. Laboratory 2 hours. Corequisite: 112.

199r Special Projects (1-4)
Individual or group projects. Maximum credit four hours. Graded on a satisfactory/no credit basis. Maximum of 4 hours.

208 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. Corequisite: 111.

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.

Additionally, geology majors are encouraged to enroll in a field geology course during the summer following the junior or senior year (if the latter, graduation would be postponed until August). Through an agreement with Memphis State University, UTC students are accepted preferentially for Memphis State’s Geology Field Camp (Geology 4622, 6 hours credit) held each summer in the Black Hills of South Dakota. Additional information and application forms are available at the Geosciences Department office.

Geology Minor:
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 Minor:
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.

*Mathematics 107 may be recommended to precede Mathematics 125 or 140, depending on preparation of the individual student.
303 Stratigraphy (4)
Sedimentary rocks with emphasis on stratigraphic classification, the facies concept, correlation and paleo-reconstruction techniques. Lecture 3 hours, laboratory 2 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: 330 or equivalent.

321 Paleobiology (4)
Characteristics of the fossil record, principles of taxonomy, population analysis, interpretation of faunal assemblages, and biostratigraphy. Morphology and time range of major fossil groups. Lecture two hours, laboratory two hours. Prerequisites: Geology 111, or Biology 121, 122, or equivalent.

330 Sedimentation (4)
Modern environments of sedimentation such as beaches, tidal flats, stream channels and their recognition in ancient rocks. Field trips.

341 Mineralogy and Petrology I (4)
Crystallography, physical properties and geochemistry of minerals and their occurrence and classification in natural rocks. Lecture 3 hours, lab 2 hours. Field trips on weekends. Prerequisite: 111. Prereq or coreq: Chemistry 121.

342 Mineralogy and Petrology II (4)
Continuation of 341. Lecture 3 hours, Laboratory 2 hours. Field trips on weekends. Prerequisite: 341.

343 Optical Mineralogy Lab (1)
An optical laboratory experience in the identification of minerals by optical methods to accompany 341. Co- prereq: 341.

344 Petrography Lab (1)
An optional laboratory in methods for the study of rock thin sections by optical methods to accompany 342. Co- prereq: 342.

351 Field Methods and Structural Geology I (4)

352 Field Methods and Structural Geology II (4)
Continuation of 341. 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. Lab is oriented toward a group field project. Lecture 3 hours, laboratory 2 hours. Prerequisite: 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)
Field study 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. Prerequisite: approval of instructor.

405 Principles of Geochemistry (4)
Origin and distribution of the elements. Applications of chemistry to geological problems. Prerequisites: 201 and 205 and one year of chemistry or equivalent.

431 Sedimentary Petrology (3)
Genesis of sedimentary rock clans including arkose, graywacke, orthoquartzite, and carbonates. Microscopic analysis and field studies. Prerequisite: 330 or equivalent.

433 Geology of Hydrocarbon Fuels of the Cumberland Plateau (4)
Stratigraphic and sedimentologic study of the three-dimensional distri-

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

445 Hydrology (3)

460 Environmental and Urban Geology (4)

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 and receipt of an acceptable proposal.

495r Departmental Honors (1-4)
A culminating senior experience giving students an opportunity to exercise judgment in solving geological problems. Consent of instructor and receipt of an acceptable proposal. See “Departmental Honors,” page 33.

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, receipt of an acceptable proposal and permission of the department head. Maximum of 4 hours.

Geography

101 Physical Geography (3)
The physical environment with emphasis on processes that influence the distribution and pattern of landforms, water, climate, vegetation and soil.

198r Special Projects (1-4)
Individual or group projects. Maximum credit four hours. Graded on a satisfactory/no credit basis.

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 Weather and Climate (3)
Weather elements, wind circulation, air masses, fronts, and general climatic regions of the world. Daily weather maps and methods of forecasting.

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 2 hours, laboratory 4 hours. No familiarity with drafting or computer techniques required.

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

409 Economic Geography (3)
Economic activities and their relation to the physical environment. Location of the world’s major types of products, agriculture, manufacturing, mining, forest products, and fisheries.

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 415.

465 Remote Sensing and Imagery Analysis (3)
Principles of aerial and satellite photography and infra-red, multispectral, and microwave sensing. Interpretation of remotely sensed data, including application to problems in a variety of environmental sciences. 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, receipt of an acceptable proposal and permission of the department head. Maximum of 4 hours.

German
See Foreign Languages and Literature, page 55.

Greek
See Foreign Languages and Literature, page 55.

Health, Physical Education and Recreation
See page 123.

History

Associate Professor Lubot, Head
Professors Bowman, Harbaugh
Associate Professors Deierfi, Ingle, Linnemann, Moore, Russell, Ward, Wright

History (B.A.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (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 cognate 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 cognate courses will vary according to a student’s program and will be determined by a student’s adviser.
Electives to complete 128 hours

See typical course of study in history (B.A.) below.

First Semester  Second Semester

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African response to social, political, and economic modernization;

History of Subsaharan Africa to 1880 (3)
A survey of the major trends of Islamic and Indian history. Emphasis 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.

Introduction to Asian Civilizations: 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.

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.

History of Subsaharan Africa to 1880 (3)
Geography and peoples of Africa; examination of traditional African society and culture; Sudanic and West African empires; Arabic and Islamic impact on Africa; early European exploration and expansion into Africa; the slave trade; growth of commercial centers; later African states.

History of Subsaharan 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.

Introduction to Asian Civilizations: Middle East and India (3)
A survey of the major trends of Islamic and Indian history. Emphasis 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.

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.

History of Subsaharan Africa to 1880 (3)
Geography and peoples of Africa; examination of traditional African society and culture; Sudanic and West African empires; Arabic and Islamic impact on Africa; early European exploration and expansion into Africa; the slave trade; growth of commercial centers; later African states.

History of Subsaharan 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.
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.

331 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.

333 U.S., 1776-1815 (3)
Founding 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.

337,338 Twentieth Century American History (3,3)
The United States in the 20th century; a survey of domestic developments and foreign relations from 1888 to the present. Second semester starting c. 1939.

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, social, 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.

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, MaoTse-tung and the Chinese Communists.

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; post-independence years including the government of Indira Gandhi.

385r 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 Carter. Prerequisites: 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: 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 War 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.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 33.
Home Economics
See Division of Human Services, page 142.

Humanities
See Interdisciplinary Studies, page 65.

Human Services
See Division of Human Services, page 139.

Interdisciplinary Studies

Associate Professor Consacro, Head

The Department of Interdisciplinary Studies coordinates a number of programs leading to baccalaureate degrees as well as several other non-degree 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.); Environmental Studies (B.S.); Humanities (B.A.). Non-degree programs: Institute for International Studies; University Scholars Program; University Studies.

American Studies

Professor Herron, Coordinator

The American Studies major is a Bachelor of Arts degree consisting of two parts: 1) a core curriculum required of all majors and 2) a concentration of study in one of the following areas: American literature, American history, 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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (6 hours)

Category B
3 approved courses; one from humanities, one from fine arts, and one from either (3 hours each; approved related courses below may apply)

Category C
2 approved behavioral or social science courses (6 hours; approved related courses below may apply)

Category D
2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours; approved related courses below may apply)

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

Foreign Language through second college year.

Major:
The following core courses are required of all majors:
American Studies 200: Introduction to American Studies
American Studies 400: American Studies Seminar
American Studies 499r: Topics in American Studies
Computer Science: 100; Computers and Problem Solving
Economics C101, C102: Principles of Economics
Education 301: History of Education in U.S.
English B213, B214: American Literature
Geography 204: Geography of North America
History B203, B204: United States History
Mathematics: D210 Introductory Statistics
Philosophy 360: American Philosophy
Political Science 131: Problems in American Politics
Religion 151: Principles of Sociological Analysis

2 courses from
Art 413, American Art from Pre-Columbian times to 1865; Art 414, American Art from 1865; Music 212, America's Musical Heritage; Music 317, Survey of American Jazz.

*May also be fulfilled by BusA 211 for those in Business-Economics concentration.

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


American Literature: English 332, 370, 423, 434, 435, 445r

Business-Economics: Business Administration 201, 202, 302, 313, 315; Economics 301, 306, 453, 470

Philosophy and Religion: Philosophy 353; Religion 232, 337, 362, 401, 467, 482, 491r

Political Science: 213, 214, 222, 234, 235, 322, 331, 332, 333 431r

Sociology-Anthropology: Anthropology 333r, 334r, 425r; Sociology 215, 305, 345, 365, 394, 400r

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

*Only when appropriate topics offered.
See typical course of study in American studies (B.A.) below.

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 years.

American Studies (B.A.): American History 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>
<tr>
<td>Economics 101</td>
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<td>Psychology 103</td>
<td>Geography 204</td>
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<tr>
<td>American Literature 213</td>
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<td>Computer Science 100</td>
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<td>French 102</td>
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<td>French 211</td>
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<td>History 333</td>
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<td>American Studies 400</td>
<td>American Studies 499r</td>
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<td>History 412</td>
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<td>History 419</td>
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<td></td>
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<tr>
<td>199r Special Projects (1-4)</td>
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<tr>
<td>Individual and Group Studies</td>
<td></td>
</tr>
<tr>
<td>200 American Ideals in the Arts (3)</td>
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<tr>
<td>Specific works of art drawn from music, painting,</td>
<td></td>
</tr>
<tr>
<td>architecture, theater, and literature considered in</td>
<td></td>
</tr>
<tr>
<td>relation to each other and to American social and</td>
<td></td>
</tr>
<tr>
<td>social and spiritual ideals.  In addition to the</td>
<td></td>
</tr>
<tr>
<td>instructor, specialists from various disciplines and</td>
<td></td>
</tr>
<tr>
<td>the community will serve as guest lecturers.</td>
<td></td>
</tr>
</tbody>
</table>

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: 200.

499r Departmental Honors (1-3 hours per term, 4 hours for the two terms).

See "Departmental Honors," page 33.

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.

499r Topics in American Studies (3)

Special topics, themes, and studies.

Communications

Assistant Professor Sidney N. Hetzler, Jr., Coordinator

The Communications major is a Bachelor of Arts degree consisting of two parts: 1) a core curriculum required of all majors and 2) a concentration of study in one of the following areas: Advertising, Broadcasting and Film, Broadcast Journalism, Journalism, and Public Relations. Communications majors are recommended to establish a second major or at least one strong minor in a related field.

Communications (B.A.)

General Education (see pages 27-29 for list of approved courses)

Category A

2 approved courses in written composition, at least one at the freshman level (6 hours; approved related courses below may apply.)

Category B

3 approved courses: one from humanities, one from fine arts, and one from either. (3 hours each; approved related courses below may apply.)

Category C

2 approved behavioral or social science courses (6 hours; approved related courses below may apply)

Category D

2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E

1 approved interdisciplinary or non-Western 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

Computer Science 100: Computers and Problem Solving
Economics C101, C102: Principles of Economics
English A300: Advanced Expository Writing
History B203, B204: United States History or B101, B102: Emergence of the Modern World
Mathematics D210: Introductory Statistics
Sociology 314: Research Methods

45 hours of approved courses including:

Communications 351: Legal and Ethical Aspects of Mass Media
Communications 485: Individual Internship
English 360: Introduction to Linguistics
English 371: News Writing & Reporting
English 372: Editorial Writing and Editing
Speech 270: Introduction to Mass Communication

24 semester hours of courses chosen for their appropriateness to the student’s selected sequence and with the approval of the communications coordinator from the following list of approved courses:

Art 101: Visual Fundamentals
Art 105, 106: First Year Drawing
Art 303: Two-Dimensional Design
Art 309: Commercial Design
Art 310r: Graphic Design
Art 333: Three-Dimensional Design
Art 334: Three-Dimensional Design
Art 381r: Photography
Business 313: Basic Marketing
Business 361: Principles of Selling
Business 362: Advertising
Communications (B.A.): Advertising Concentration

General Education
Sophomore
Theatre and Speech 280: Introduction to Film
Theatre and Speech 200r: Performance and Production
Theatre and Speech 107: Voice and Diction
Theatre and Speech 273: Creative Writing: Poetry
Theatre and Speech 485: Film Topics
Electives

May not include more than nine (9) hours in addition to Communications 495r from:

Communications 199r: Individual and Group Studies (1-4)
Communications 495r: Honors (1-4)
Communications 497r: Research (1-4)
Communications 498r: Individual Projects (1-4)
Communications 499r: Group Projects (1-4)

Electives

Communications (B.A.): Broadcast Journalism Concentration

First Semester
Freshman
English 101 Category A
History 203 or 101
Economics 101 Category C
Foreign Language 101
Theatre and Speech 270
Physical Education 021

Sophomore
Foreign Language 211
Mathematics 210 Category D
Foreign Language 102
Art 101
Physical Education Activity

Junior
General Education Category D
English 372
Sociology 314
Communications 351
Business Administration 362
Public Relations

Senior
Advertising Elective
Communications 485
Elective
Elective
Elective
Elective

Communications (B.A.): Broadcasting and Film Concentration

First Semester
Freshman
English 101 Category A
History 203 or 101
Economics 101 Category C
Foreign Language 101
Theatre and Speech 270
Physical Education 021

Sophomore
Foreign Language 211
Mathematics 210 Category D
Foreign Language 102
Art 101
Physical Education Activity

Junior
General Education Category D
English 372
Sociology 314
Communications 351
Broadcast Journalism Elective

Senior
Communications 485
Elective
Elective
Elective

See typical courses of study in communications (B.A.) below.
### Communications (B.A.): Journalism Concentration

#### First Semester

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<th>Credits</th>
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<td>Category B</td>
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<td>Foreign Language 101 Category D</td>
<td>4</td>
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#### Second Semester

<table>
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</table>

### Communications (B.A.): Public Relations Concentration

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Freshman English 101 Category A</td>
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</tr>
<tr>
<td>History 203 or 101</td>
<td>3</td>
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<tr>
<td>Category B</td>
<td>3</td>
</tr>
<tr>
<td>Economics 101 Category C</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language 101 Category D</td>
<td>4</td>
</tr>
<tr>
<td>Theatre and Speech 270</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
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</tr>
<tr>
<td>Elective</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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#### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<tr>
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<td>15</td>
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<tr>
<td><strong>Total</strong></td>
<td>18</td>
</tr>
</tbody>
</table>

19r Special Projects (1-4)

Individual or group studies.

### 271 Principles and Practices of Public Relations (3)

History and present practices in business, government, non-profit areas. Comparison of agency and departmental forms. Fundamentals of publicity, campaign planning, and opinion research methods. Case studies used for analysis.

### 351 Legal and Ethical Aspects of Mass Media

Rights and privileges; secrecy and censorship; libel; privacy; contempt; broadcasting law; commerce provisions; copyright. Contemporary case studies.

### 485 Individual Internship (6)

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.

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

See "Departmental Honors," page 33.

### 497r Research (1-4)

Prerequisite: approval of coordinator and department head.

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

Prerequisite: approval of coordinator and department head.

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

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Environmental Studies

Associate Professor Perfetti, Coordinator
Professors Franke, Freeman, Wilson
Associate Professors Brown, McNeely, Pate

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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (6 hours)

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

Category C
2 approved behavioral or social science courses other than discipline concentration (6 hours; approved related courses below may apply)

Category D
2 approved mathematics or natural or applied science courses other than discipline concentration area (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours; approved related courses below may apply)

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

Major:
The following core courses are required of all students.

Biology 306
Computer Science 121
Economics 101
Engineering 311
Environmental Studies 150, 153, 360, 361, 390, 401, 402, 490
Mathematics 140-150', 210
Political Science 101

In addition, each major must complete the requirements for one of the following concentrations.

Biology
Chemistry 121, 122, 241, 351
Chemistry 121, 122, 311, 332
Two courses from Biology 207, 304, 352
Two courses from Biology 225, 226, 342

Chemistry
Biology 121, 122
Chemistry 121, 122, 241, 342, 351, 352, 443
3 hours chemistry elective

Engineering Science
Biology 122
Chemistry 121, 122, 241
Engineering 103, 104, 225, 272, 303, 307, 322, 325, 431
Mathematics 160, 250, 260
Physics 231, 232

Geoscience
Chemistry 121, 122
Physics 318
Geology 111, 113, 208, 225, 341, 342, 351, 404, 425, 445, 460
Geography 101, 206, 221, 407, 465

Mathematics
Computer Science 231
Mathematics 160, 195, 250, 260, 308, 350, 407, 408, 412; one course from 414, 445, 460, or 470
1 two semester sequence from biology, chemistry, engineering, geology, physics

*Majors in the biology or sociology-anthropology concentration may substitute Mathematics 125-126

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

Physics
Chemistry 121, 122
Mathematics 160
Physics 103, 104, 231, 232; 12 hours from 301, 303, 304, 307, 310, 318, 324, 411, or 412

Sociology-Anthropology
Sociology 151, 314, 394; either Anthropology 152 or 208; either Anthropology 300 or Sociology 312; additional 15 hours from Anthropology 211, 335, 356, 410, 425t and Sociology 209, 219, 305, 317, 326, 331, 340, 400t, 415, 430, 440, 455t (minimum 9 hours selected from these additional courses at 300-400 level); 1 two semester sequence from biology, chemistry, geology, or physics

Electives to complete 128 hours.

See typical courses of study in environmental studies (B.S.) below.

Environmental Studies (B.S): Biology Concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<td>Biology 121</td>
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<td>Category A</td>
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<tr>
<td>Mathematics 140</td>
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</tr>
<tr>
<td>Chemistry 241</td>
<td>4</td>
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<td>Biology 207</td>
<td>3</td>
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<tr>
<td>Political Science 101</td>
<td>14</td>
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<td>Environmental Studies 490</td>
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<td>Biology 311</td>
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<td>Environmental Studies 401</td>
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Electives to complete 128 hours.
### Environmental Studies (B.S.): Chemistry Concentration

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<td>Biology 121</td>
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<td><strong>Junior</strong></td>
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<td>Physics 103/Geology 111</td>
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### Environmental Studies (B.S.): Engineering Concentration

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<tr>
<td>Mathematics 150</td>
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<tr>
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<td><strong>Sophomore</strong></td>
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### Environmental Studies (B.S.): Physics Concentration

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<tbody>
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<tr>
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<tr>
<td>Chemistry 121</td>
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<td>Physics 103</td>
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<td>Physics 231</td>
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<td>Chemistry 121</td>
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<td>Mathematics 160</td>
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<tr>
<td>Engineering 311</td>
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<tr>
<td>Physics 301</td>
<td>4</td>
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<tr>
<td>Computer Science 121</td>
<td>3</td>
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<tr>
<td>Biology 121/Geology 111</td>
<td>4</td>
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<tr>
<td>Mathematics 210</td>
<td>3</td>
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<tr>
<td>Environmental Studies 390</td>
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<tr>
<td>Physics 318</td>
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<tr>
<td>Environmental Studies 401</td>
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<tr>
<td>Elective</td>
<td>3</td>
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</tbody>
</table>

150 Introduction to Environmental Problems (3)  
Peoples' dependence and effect on the natural environment. Problems related to population size, structure and distribution; energy sources; environmental threats to the human population; social, political and economic changes as related to the above. Corequisite for majors: 153.

153 Environmental Problems Laboratory (1)  
Laboratory investigations of significant environmental problems and practices. Includes on-site observation of industrial and governmental methods and practices. Corequisite: 150.

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

360 Environmental Monitoring and Survey (3)  
Monitoring methods for air and water quality: to include sample taking, analytical testing and observation of procedures practice in established community laboratories. Lecture two hours, laboratory three hours.

361 Environmental Survey Methods (3)  
Field survey methods for compiling of botanical, zoological, geologic and archeological data. To include mapping, sampling and recording. Lecture two hours, laboratory three hours.

390 Environment in Human Behavior (3)  
Psychological, social, and cultural factors which affect the emergence and perpetuation of environmental problems and which enter plans for solution. Attention to the specifically psychological or sociocultural pollutions which are effects of modern urban life such as over-stimulation, stress, noise, crowding and alienation. Consideration of work, residential, recreational and other institutional settings as they affect behavior.

401 Environmental Laws 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.
402 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. Prerequisite: 401.

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.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 33.

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)

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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western 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 of approved program studies related to a cultural area: American, European, non-Western or to a subtopic within these areas. Achievement of specific knowledge of chosen area and comprehension of human experience: religious, intellectual, aesthetic, linguistic and social. 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. Electives to complete 128 hours.

See for typical course of study in humanities (B.A.) below.

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 his/her study on Medieval and Renaissance Europe, the course of study might look like this.

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>General Education Category A</td>
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<tr>
<td>Philosophy 101</td>
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</tr>
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<td>General Education Category D</td>
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</tr>
<tr>
<td>Foreign Language</td>
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Second Semester

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<tr>
<th>Course</th>
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<tr>
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<tr>
<td>History 101</td>
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</tr>
<tr>
<td>Foreign Language</td>
<td>3-4</td>
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<td>Elective</td>
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</table>

Sophomore

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Foreign Language 211</td>
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</tr>
<tr>
<td>English 203</td>
<td>3</td>
</tr>
<tr>
<td>Art 211</td>
<td>3</td>
</tr>
<tr>
<td>History 321</td>
<td>3</td>
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<tr>
<td>General Education Category C</td>
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</tr>
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<td>Elective</td>
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Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 301</td>
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</tr>
<tr>
<td>History 351</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language 331</td>
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</tr>
<tr>
<td>Political Science 312</td>
<td>3</td>
</tr>
<tr>
<td>Theatre and Speech 211</td>
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<td><strong>Total</strong></td>
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Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Religion 355</td>
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<tr>
<td>Humanities 497r</td>
<td>3</td>
</tr>
<tr>
<td>Humanities 498r</td>
<td>3</td>
</tr>
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<td>Elective</td>
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<td>Humanities 490</td>
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<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

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

490 Senior Educational Experience (3)
Thesis; oral and written presentation of progress required. The complete project will be presented for approval to the Faculty Board for the Humanities in the student's final semester. Prerequisite: senior standing, final semester. May not be taken concurrently with 497r.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 33.

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.

499r Group Studies (1-4)
Institute for International Studies

Assistant Professor Banoun, Director

The Institute for International Studies provides various possibilities for pursuing an interest in the culture, business, industry, or government of the international community. These include credit and non-credit courses, travel-study programs, lectures, advisory services and others. The Institute also coordinates a number of activities and services for foreign students on The University of Tennessee at Chattanooga campus.

Current offerings are listed in the schedule or are publicized through the media.

University Scholars Program

Associate Professor Consacro, Head
Participating Faculty 1979-80

Associate Professor Fulton (English)
Assistant Professor Renee Cox (Music)

University Scholars are those students who have been awarded membership in the University’s four-year honors program. The courses listed below are restricted to University 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. Satisfy general education requirement of Category B.

105 A 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. Together with 105 satisfies general education requirement of Category C.

107, 108 Modern Science and Technology I & II (3, 3)
Selected topics in science and technology designed to illustrate methods, purposes, philosophical foundations and implications of scientific and technological research. Consideration of societal influences and restraints on and cultural impact of science and technology. Laboratory included. Satisfy general education requirement of Category D.

109 Mathematics in the Modern World (3)
The nature of mathematics; some basic concepts from modern algebra, probability and statistics, geometry and number theory; and some applications of mathematics, including computer programming in Basic.

University Studies

Associate Professor Consacro, 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 especially useful.

For current offerings see schedule of classes.

Mathematics

Professor J. Ware, Head
Professor Jayne

Associate Professors C. Brown, Joel Cunningham, Detmer, W. Edwards, Hutcherson, Kirk, McIntosh, D. Nymann, Rozema, Sellers, Smullen
Assistant Professors Kuhn, Landgren, Schlereth

Mathematics Learning Center Coordinator Sheriff

The Department of Mathematics offers two degree programs, the BA and the B.S. in applied mathematics.

The BA is the traditional liberal arts degree with a major in mathematics.

The B.S. 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 an option in one of the following areas: actuarial science, business administration, computer science, systems analysis.

It is also possible for a student to receive a B.S. degree in education with a teaching area in mathematics. (See Education listing.)

The Department of Mathematics also offers a minor in mathematics.

Applied Mathematics (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 may apply)
**Category D**
2 approved natural or applied science courses (6 hours; approved related courses below may apply)

**Category E**
1 approved interdisciplinary or non-Western course (3 hours; approved related courses below may apply)

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

**Major and related courses:**
2 Mathematics courses elected from 303,321,322,418,440,445,450,454, 460, 470
Economics 101, 102; Computer Science 121; Engineering 311
One of the following options:
1. Actuarial Science: Business Administration 201, 202, 302, 321, 336, 337; Business Administration 450 or Economics 460; two electives from: Business Administration 303,304,422, Economics 301,324,429, Computer Science 231.
2. Business Administration: Business Administration 201,202,302,311, Economics 324, 429; Business Administration 450 or Economics 460; two electives from business administration or economics 300-400 level courses (excluding Business Administration 356.)
3. Computer Science: Computer Science 122, 201, 231, 251, 252, 303, 301; two electives from Computer Science 300-400 level courses.
A student may not elect both the business administration and the actuarial science options.
2.00 average in all 300, 400-level mathematics courses Electives to complete 128 hours.

See typical courses of study in applied mathematics below.

**Applied Mathematics (Actuarial Science Option) (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>Economics 101 Category C</td>
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<tr>
<td>General Education Category A</td>
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<tr>
<td>Mathematics 140 (150)*</td>
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<tr>
<td>General Education Category D</td>
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<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td>Physical Education 021</td>
<td>1</td>
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<tr>
<td>18</td>
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</tbody>
</table>

Sophomore
Mathematics 160 (250) | 4 | Mathematics 250 (260) | 4 |
Mathematics 195 | 3 | Mathematics 308 | 3 |
General Education Category B | 3 | Fine Arts Category B | 3 |
Business Administration 201 | 3 | Business Administration 202 | 3 |
Elective | 3 | General Education Category B | 3 |
| 16 | | 16 |

Senior
Mathematics 414 | 3 | Mathematics 408 | 3 |
Mathematics Elective | 3 | Mathematics 412 | 3 |
Business Administration 337 | 3 | Business Administration 321 | 3 |
Engineering 311 | 3 | Business Administration 336 | 3 |
Category E | 3 | Option Elective | 3 |
Elective | 3 | | 6 |
| 15 | | 15 |

*Mathematics sequence may begin with 150 rather than 140 depending on preparation.*

**Applied Mathematics (Business Administration Option) (B.S.)**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td></td>
</tr>
<tr>
<td>Economics 101 Category C</td>
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</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 140 (150)*</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>General Education Category D</td>
<td>4</td>
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<tr>
<td>Physical Education 021</td>
<td>1</td>
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<tr>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Sophomore
Mathematics 160 (250) | 4 | Mathematics 250 (260) | 4 |
Mathematics 195 | 3 | Fine Arts Category B | 3 |
General Education Category B | 3 | Business Administration 202 | 3 |
Business Administration 201 | 3 | General Education Category B | 3 |
Elective | 3 | Mathematics 308 | 3 |
| 16 | | 16 |

**Senior**
Mathematics 414 | 3 | Mathematics 408 | 3 |
Mathematics Elective | 3 | Mathematics 412 | 3 |
Business Administration 337 | 3 | Business Administration 321 | 3 |
Engineering 311 | 3 | Business Administration 336 | 3 |
Category E | 3 | Option Elective | 3 |
Elective | 3 | | 6 |
| 15 | | 15 |

*Mathematics sequence may begin with 150 rather than 140 depending on preparation.*

**Applied Mathematics (Computer Science Option) (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>
<tr>
<td>Economics 101 Category C</td>
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</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 140 (150)*</td>
<td>4</td>
</tr>
<tr>
<td>General Education Category D</td>
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</tr>
<tr>
<td>Computer Science 121</td>
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</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
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<tr>
<td>18</td>
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</tr>
</tbody>
</table>

Sophomore
Mathematics 160 (250) | 4 | Fine Arts Category B | 3 |
Mathematics 195 | 3 | Mathematics 250 (260) | 4 |
Computer Science 201 | 3 | Computer Science 321 | 3 |
General Education Category B | 3 | General Education Category B | 3 |
Computer Science 251 | 3 | Mathematics 308 | 3 |
| 16 | | 16 |

*Mathematics sequence may begin with 150 rather than 140 depending on preparation.*

**Applied Mathematics (Engineering Option) (B.S.)**

<table>
<thead>
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<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>Economics 101 Category C</td>
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<tr>
<td>General Education Category A</td>
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<tr>
<td>Mathematics 140 (150)*</td>
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<tr>
<td>General Education Category D</td>
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<tr>
<td>Computer Science 121</td>
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<td>Physical Education 021</td>
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</table>
Senior
Mathematics Elective 3 Mathematics Elective 3
Mathematics 414 3 Computer Science Elective 3
Computer Science Elective 3 Electives 6
Electives 6
15 12

*Mathematics sequence may begin with 150 rather than 140 depending on preparation

Applied Mathematics
(Systems Analysis Option) (B.S.)

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 150 4 Mathematics 160 4
Elective 3 Computer Science 121 3
General Education Category B 3 Physics 230 Category D 4
Physical Education 021 1 Physical Education Activity 1
17 18

Sophomore
Mathematics 250 4 Mathematics 260 4
Mathematics 195 3 Physics 232 Category D 4
General Education Category B 3 Engineering 272 4
Physics 231 4 Mathematics 308 3
Elective 3 Fine Arts Category B 3
Electives 3 17 18
17 18

Junior
Mathematics 407 3 Mathematics 408 3
Mathematics 350 3 Mathematics 412 3
Engineering 303 4 Engineering 311 Category E 3
Engineering 325 4 Electives 6
Elective 3

Senior
Mathematics 414 3 Mathematics Elective 3
Mathematics Elective 3 Mathematics Elective 3
Engineering 380 4 Electives 7
Elective 3

Mathematics (B.A.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved natural or applied science courses (6 hours) excluding Physics 101, 102, 103, 104

Mathematics Elective 3 Mathematics 424 3
Mathematics 414 3 Computer Science Elective 3
Computer Science Elective 3 Electives 6
Electives 6
15 12

1 approved interdisciplinary or non-Western course (3 hours)

See typical course of study in mathematics (B.A.) below.

First Semester Second Semester

Freshman
General Education Category A 3 General Education Category A 3
Mathematics 140 (150)* 4 Mathematics 150 (160)* 4
Language 101 4 Language 102 4
General Education Category C 3 General Education Category C 3
Elective 3 Computer Science 121 3
Physical Education 021 1 Physical Education Activity 1

Sophomore
Mathematics 160 (250) 4 Mathematics 250 (260) 4
Mathematics 195 3 Fine Arts Category B 3
General Education Category B 3 General Education Category B 3
Elective 3 Physics 230 Category D 4
Language (2nd year) 3 Language (2nd year) 3
Physical Education Activity 1

(3 hours each)
16

Senior
Mathematics Elective 3 Mathematics Elective 3
Electives 12 Electives 12
15 12

107 Algebra (2)
Review of high school algebra; selected topics from college algebra. Graded on satisfactory/no-credit basis. Lecture and laboratory.

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 college preparatory mathematics or 107. Mathematics 115 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 college preparatory mathematics or 107. (Effective August 1979-replaces Mathematics 115 requirement for secondary education majors.)

124 Elementary Linear Programming (1)
Linear programming and other selected topics covered in Mathematics 125 which would not be covered in a traditional college algebra or precalculus course. Includes use of mini-computer. By permission of the department may be taken in lieu of 125 by transfers and others with sufficient backgrounds. May be taken concurrently with 126. Credit not allowed in both 124 and 125.

125, 126 Finite Mathematics with Calculus (3, 3)
Designed for students of the behavioral, biological and managerial sciences. Relations and functions, inequalities, matrix theory and systems of linear equations, linear programming, introduction to probability, introduction to differential and integral calculus with applications. Includes use of mini-computer. Prerequisites: two years of high school algebra and acceptable test scores or 107. 125 is prerequisite to 126. Not open to mathematics majors. Credit is not allowed in 125 after 140, and in 126 after 150.

140 Pre-Calculus Mathematics (4)
Functions and their graphs; trigonometric, logarithmic, and exponential functions; inverse functions; parametric equations; complex numbers; polar coordinates; solutions of systems of linear equations; mathematical induction; inequalities; partial fractions; progressions; binomial theorem; other selected topics. Prerequisites: three years of college preparatory mathematics and acceptable test scores or 107. Credit not allowed in 125 after 140, and in 126 after 150.

150 Calculus I with Analytic Geometry (4)
Topics in analytic geometry; limits; derivatives of algebra functions and their applications; integrals of algebraic functions. Prerequisites: four years of college preparatory mathematics and acceptable test scores or 140. Credit not allowed in 126 after 150.

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.

195 Foundations of Mathematics (3)
Introductory concepts of sets, functions, equivalence relations, ordering relations, logic, methods of proof, and axiomatic theories. Prerequisite: 150. This course is a prerequisite for 321, 322, 350, 412 and 452.

199r 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. Prerequisite: two years of high school algebra or 107.

225 Topics in Finite Mathematics (3)
Designed for students in the behavioral, biological, managerial, and computer sciences. Topics taken from probability, Markov processes, linear programming, game theory, and other topics in finite mathematics. Prerequisites: Mathematics 126 or Mathematics 124 and 150.

250 Calculus III (4)
Topics in linear algebra and in differential equations. Prerequisite: 160.

260 Calculus IV (4)
Vector analysis, three dimensional analytic geometry, polar coordinates, multiple integration and partial differentiation. Prerequisite: 250.

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 and Computer Science 121.

308 Numerical Methods (3)
Accuracy of approximate calculations, finite differences, interpolation, summation of series, simultaneous equations, numerical differentiation and integration, significance of numerical results. Prerequisite: Computer Science 121 or equivalent. 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.

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.

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, 260.

407 Introduction to Probability and Statistics (3)
Permutations, combinations, finite sample spaces, averages, variance, binomial and normal distributions, random variables, statistical inference. Prerequisite: 260.

408 Mathematical Statistics (3)

412 Introduction to Linear Algebra (3)

414 Operations Research I (3)
Methods of obtaining optimal solutions for systems involving linear inequalities, with applications. Prerequisite: Computer Science 121, Mathematics 412 or approval of instructor.

415 Numeric Concepts for Elementary Teachers (3)
Designed to re-enforce 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 or equivalent teaching experience. Not applicable on mathematics major.

416 Geometric Concepts for Elementary Teachers (3)
Designed to re-enforce 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 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 on the methods of obtaining numerical solutions of ordinary and partial differential equations, and systems of linear equations. Prerequisite: 260, 308, or approval of instructor.

424 Operations Research II (3)
Review of linear programming; topics in advanced linear programming including degeneracy, postoptimality analysis, and large scale decompositions; network flow and integer programming problems; queuing theory and some applications; inventory theory. Prerequisites: 414 and 407. Pre- or corequisite: 408 or consent of instructor.
440 Applied Analysis (3)
Limiting processes precisely defined; interchange of limit processes; vector calculus through Stokes’ Theorem and the Divergence Theorem; extremal problems for functions of several variables; implicit functions and the Jacobians; uniform convergence of series of functions. Prerequisite: 260.

445 Advanced Differential Equations (3)
Systems of differential equations; existence and uniqueness theorems; linear systems; phase plane analysis; stability theory; applications. Prerequisite: 350 or 440.

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.

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 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 or approval of instructor.

460 Techniques of Applied Mathematics (3)
Additional topics in vector calculus; series of orthogonal functions; integral transforms; treatment of some elementary partial differential equations arising in applications. Prerequisite: 350 or 440.

470 Introductory Complex Variables (3)
Complex numbers; differentiation and integration of functions of a complex variable; analytic functions; Cauchy’s Theorem; power series; residues and poles; conformal mapping, contour integration. Prerequisite: 260.

475 Research Seminar (3)
Investigation of special topics in mathematics using the directed research technique. Prerequisite: approval of department.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See “Department Honors,” page 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Music

Cadek Department of Music

Professor Peter Cerschefski, Head
Professor Draper

Associate Professors Abril, Brelend, B. Jones, Miller, D. Riddlespurger, Rivituso, Stroud, Temko

Assistant Professors Bales, Bowles, Cox, Creider, Jennings, D. Pennebaker, Sahadi, Spalding, Stryker

Instructors Aley, J. Farr

Lecturers Aaron, Austin

Director of Bands B. Jones

Director of Choral Activities Draper

The requirements for entrance and graduation as set forth in the catalog are in accordance with the published regulations of the National Association of Schools of Music and the Tennessee regulations for certification of teachers.

The Cadek Department of Music offers three degree programs at the undergraduate level: Bachelor of Arts with a major in music, Bachelor of Music and Bachelor of Science in Music Education. The B.M. degree provides four emphases for the major: instrumental performance, vocal performance, sacred music and theory/composition. The B.S. degree in music education provides two emphases 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 and will take an entrance test in music theory. 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

Military Science

See Division of Human Services, page 147.
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 determined by the student and academic adviser; such 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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (6 hours)

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

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

Category D
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (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
8 semesters (8 hours) ensemble participation
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
Electives to complete 128 hours

See typical course of study in music (B.A.) below.

First Semester

Freshman
General Education Category A 3
Foreign Language 101 4
Physical Education 021 1
Music 000 0
Music 107 4
Applied Music (Primary) 1
Ensemble 17

Second Semester

General Education Category A 3
Foreign Language 102 4
Physical Education Activity 1
Music 000 0
Music 108 4
Applied Music (Primary) 1
Ensemble 17

Sophomore

Foreign Language 211
General Education Category D 3-4
Music 000 0
Music 207 4
Music 315 3
Applied Music (Primary) 1
Ensemble 1

15-16

3-4

Music (B.M.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (6 hours)

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

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

Category D
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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; 8 semesters (8 hours) ensemble participation; 4 semesters (4 hours) piano study for non-keyboard 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 Emphasis: 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 Emphasis: 8 semesters (32 hours) voice study; Music 217, 218, 333. 13 hours music electives
3. Sacred Music Emphasis: 8 semesters (24 hours) organ or voice study; Music 302; 2 hours of 305r; 309, 310; 312r (field work); 404, 405, 406. 12 hours music electives
4. Theory and Composition Emphasis: 8 semesters (8 hours) primary instrumental or voice study; Music 302; 4 hours of 305r; 307; 4 hours from 309, 310, 327, 328; 8 hours of 401 r or 407, 408, 409, 410. 20-21 hours music electives

Electives to complete 128 hours.

See typical courses of study in music (B.M.) below.

Music (B.M.)

Instrumental Performance Emphasis

First Semester

Freshman
General Education Category A 3
Foreign Language 101 4
Physical Education 021 1
Music 000 0
Music 107 4
Applied Music (Primary) 1
Ensemble 1

Second Semester

General Education Category A 3
Foreign Language 102 4
Physical Education Activity 1
Music 000 0
Music 108 4
Applied Music (Primary) 1
Ensemble 1

17

17-18

1

1

1
### General Education Category A 3

<table>
<thead>
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<tbody>
<tr>
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<td>Music 315</td>
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<tr>
<td>Music 131*</td>
<td>Music 132*</td>
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### Junior

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### Senior

<table>
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<td>Music 000</td>
<td>Music 000</td>
</tr>
<tr>
<td>Music 315</td>
<td>Music 316</td>
</tr>
<tr>
<td>Applied Music (Secondary)</td>
<td>Applied Music (Primary)</td>
</tr>
<tr>
<td>Music 141 or 251</td>
<td>Music 142 or 251</td>
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<tr>
<td>Music Elective</td>
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### First Semester

<table>
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<td>Music 207</td>
<td>Music 208</td>
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<tr>
<td>Music 315</td>
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<tr>
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<td>Applied Music (Primary)</td>
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<tr>
<td>Ensemble</td>
<td>Ensemble</td>
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### Second Semester

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<td>Music 107</td>
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<td>Ensemble</td>
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<td>Music 131 or 251</td>
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### Sophomore

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<tr>
<td>Foreign Language 211</td>
<td>Foreign Language 212</td>
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<td>Music 315</td>
<td>Music 316</td>
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<tr>
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<td>Applied Music (Primary)</td>
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<tr>
<td>Ensemble</td>
<td>Ensemble</td>
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<tr>
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### Junior

<table>
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<tr>
<td>General Education Category D 3</td>
<td>General Education Category C 3</td>
</tr>
<tr>
<td>Music 000</td>
<td>Music 000</td>
</tr>
<tr>
<td>Music 332**</td>
<td>Applied Music (Primary)</td>
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<td>Applied Music (Primary)</td>
<td>Ensemble</td>
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<tr>
<td>Music Elective</td>
<td>Music Elective</td>
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### Senior

<table>
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<tbody>
<tr>
<td>General Education Category C 3</td>
<td>General Education Category E 3</td>
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<tr>
<td>Music 315</td>
<td>Music 316</td>
</tr>
<tr>
<td>Applied Music (Secondary)</td>
<td>Applied Music (Primary)</td>
</tr>
<tr>
<td>Music 131 or 251</td>
<td>Music 132 or 251</td>
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### Music (B.M.)

#### Sacred Music Emphasis

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<tr>
<td>General Education Category A 3</td>
<td>General Education Category A 3</td>
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<td>Physical Education 021</td>
<td>Physical Education Activity</td>
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<td>Music 207</td>
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<tr>
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### Music Electives

- 6

### Music Elective

- 3

### Second Semester

<table>
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<th>Freshman</th>
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### Vocal Performance Emphasis

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<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 Elective</td>
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### Sophomore

<table>
<thead>
<tr>
<th>First Semester</th>
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<tr>
<td>Foreign Language 211</td>
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<tr>
<td>Music 315</td>
<td>Music 316</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>
</tr>
<tr>
<td>Music 131 or 251</td>
<td>Music 132 or 251</td>
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</tbody>
</table>

*For composition majors.
**For theory majors.
Junior
General Education Category B 6
General Education Category C 3
Music 000 0
Applied Music (Primary) 4
Ensemble 1
Music 217 2
Music 141 or 251 1
Total 17
General Education Category B 3
General Education Category C 3
Music 000 0
Applied Music (Primary) 4
Ensemble 1
Music 218 2
Music 142 or 251 1
Total 17
Senior
General Education Category C 3
Music 000 0
Applied Music (Primary) 4
Ensemble 1
Music 333 2
Music Electives 6
Total 16

Music Education (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 6 hours

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

Category D
2 approved natural science courses to total 8 hours in natural sciences plus Mathematics 115

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Major and related courses:
Music 107, 108, 209, 210, 315, 316
20 hours applied music including: 8 semesters (8 hours) ensemble participation
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 options:
1. Instrumental Emphasis: Music 221; 3 hours of 223r, 3 hours of 224r; 2 hours of 222r; 226; 307 or 326; 325, 327, 328
2. Vocal Emphasis: 133, 134, 221, 1 hour each of 223r, 224r, 225r; 307, 309, 310, 333, 2 hours applied piano study in addition to piano proficiency study
26 hours Education including 102, 203 or 204, 207, 301, 406, 430, 432, 439, Music 321
2:00 average in teaching fields and in Education courses
Electives to complete 128 hours
See typical course of study in music (B.S.) below.

Music Education* (Instrumental (B.S)

First Semester
Mathematics 115 3
General Education Category C 3
Music 000 0
Ensemble-Marching Band 1
Applied Music (Primary) 1
Music 107 4
Total 16

Second Semester
Education 102 2
General Education Category C 3
Music 000 0
Instrumental Ensemble 1
Applied Music (Primary) 1
Music 108 4
Total 13

Sophomore
General Education Category D 4
Physical Education Activity 1
Music 000 0
Ensemble-Marching Band 1
Music 141 1
Music 207 4
Music 223r (01, 02) 2
Music 226 2
Total 16

Junior
Apply for admission to TEP
Music 208 4
Music 223r (03) 1
Music 224r (01) 1
Total 18

Apply for Student Teaching

Music Education* (Vocal) (B.S.)

First Semester
Freshman
Math 115 3
General Education Category A 3
Music 000 0
Choral Ensemble 1
Music 315 1
Music 107 4
Music 131 1
Total 16

Second Semester
Education 102 2
General Education Category C 3
Physical Education 021 1
Music 000 0
Choral Ensemble 1
Music 141 1
Music 207 4
Music 221 2
Music 133 1
Total 15

Apply for admission to TEP
Education 203 or 204 3
General Education Category B 3
General Education Category C 3
Music 000 0
Choral Ensemble 1
Applied Music (Primary) 1
Music 210 1
Music 209 1
Music 315 3
Music 307 2
Music 251 1
Music 224r 1
Total 16

Junior
Apply for Student Teaching

Natural Science 4
Physical Education Activity 1
Music 000 0
Choral Ensemble 1
Applied Music (Primary) 1
Music 210 1
Music 209 1
Music 315 3
Music 307 2
Music 251 1
Music 224r 1
Total 18
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>Senior</td>
<td>Education 301</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td></td>
<td>General Education Category E 3</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td>Choral Ensemble</td>
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<td>Music Elective</td>
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<td></td>
<td>Music 309</td>
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<td></td>
<td>Applied Music (Primary)</td>
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</tr>
<tr>
<td>020r</td>
<td>Chattanooga Singers (1)</td>
<td>Study of repertoire for small choruses through rehearsal and performance. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>022r</td>
<td>Chamber Singers (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>022r</td>
<td>Chamber Singers (1)</td>
<td>Study of repertoire for small choruses through rehearsal and performance. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>023r</td>
<td>Choral Union (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>025r</td>
<td>Singing Mocs (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>030r</td>
<td>Marching Band (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>031r</td>
<td>Concert Band (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>035r</td>
<td>Wind Ensemble (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>036r</td>
<td>Jazz Band (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>040r</td>
<td>Opera Workshop (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>041r</td>
<td>Opera Theater (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>050r</td>
<td>University Orchestra (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>051r</td>
<td>Chamber Orchestra (1)</td>
<td>Study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>100r</td>
<td>Elements of Notation, Dictation, and Sight Singing (2)</td>
<td>Not to be included as music elective for music majors.</td>
</tr>
<tr>
<td>107, 108</td>
<td>Theory I (4, 4)</td>
<td>Review of the fundamentals of musical grammar. A comprehensive study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: audition.</td>
</tr>
<tr>
<td>111</td>
<td>Introduction to Music (3)</td>
<td>Basic structural and stylistic elements of music. Extensive use of recorded materials. Credit not allowed for music majors.</td>
</tr>
<tr>
<td>115</td>
<td>Introduction to Electronic Music (2)</td>
<td>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 non-music majors. <strong>Prerequisite</strong>: Permission of the instructor.</td>
</tr>
<tr>
<td>121</td>
<td>Music Piano Class (1)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: two.</td>
</tr>
<tr>
<td>131, 132</td>
<td>Piano Class (1, 1)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: two.</td>
</tr>
<tr>
<td>133, 134</td>
<td>Voice Class (1, 1)</td>
<td>For persons without vocal experience. <strong>class hours</strong>: two. <strong>prerequisite</strong>: to 134.</td>
</tr>
<tr>
<td>135, 136</td>
<td>Guitar Class (1, 1)</td>
<td>For persons without guitar experience. An introduction to the technique and classical literature of the guitar. <strong>class hours</strong>: two. <strong>prerequisite</strong>: to 136.</td>
</tr>
<tr>
<td>141, 142</td>
<td>Piano Class (1, 1)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: two.</td>
</tr>
<tr>
<td>199r</td>
<td>Special Projects (1-4)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: four.</td>
</tr>
<tr>
<td>201r</td>
<td>Ensemble (1)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: four.</td>
</tr>
<tr>
<td>207, 208</td>
<td>Theory II (4, 4)</td>
<td>A comprehensive study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: to 208.</td>
</tr>
<tr>
<td>209, 210</td>
<td>Keyboard Harmony (1, 1)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: four.</td>
</tr>
<tr>
<td>211</td>
<td>The Literature of the Symphony Orchestra (3)</td>
<td>A comprehensive study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: to 210.</td>
</tr>
<tr>
<td>212</td>
<td>America's Musical Heritage (3)</td>
<td>A comprehensive study of music of all periods for large mixed chorus. Rehearsal and extensive performance experience emphasized. Performances in Chattanooga and throughout the world. <strong>Prerequisite</strong>: to 212.</td>
</tr>
<tr>
<td>217, 218</td>
<td>Diction for Singers (2, 2)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: two.</td>
</tr>
<tr>
<td>221</td>
<td>String Methods (2)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: two.</td>
</tr>
<tr>
<td>223r</td>
<td>Woodwind Methods (1)</td>
<td>For persons without keyboard or music reading experience. <strong>class hours</strong>: two.</td>
</tr>
</tbody>
</table>
224r Brass Methods (1)  
Class instruction of brass instruments; tuning and care of instruments. Teaching techniques. Piston valve instruments, French horn, and trombone. 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. Class one hour, laboratory one hour.

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

251r Keyboard Instruction (1-4)  
Four hours practice per week required for each hour credit. Prerequisite: 142 or 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.

259r Brass 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, 1979.

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. Offered each spring semester. Prerequisite: 208 and permission of instructor.

305r Composition I (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.

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.

315, 316 History of Music (3, 3)  
A general survey of the history of music in Western civilization. Prerequisite: 106.

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.

325 Band Organization and Management (2)  
The techniques used in the organization, administration, and preparation of school bands. The selection, care, and repair of materials, instruments, and other equipment.

336 Band Arranging (2)  
Band instrumentation and general principles of arranging; special reference to writing for bands having incomplete instrumentation and less experienced players.

337, 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.

332 Piano Pedagogy (2)  
Piano methods and materials. For advanced students planning to teach piano. Offered alternate years: offered fall, 1979.

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: 126, 208 or permission.

401r Composition II (1-4)  
Advanced composition study. Prerequisites: 305, 307. May not be used for graduate credit.

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, 1980.

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, 1979.

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 spring, 1980.

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 1978-79.

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 1979-80.

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. Extensive examination of representative scores. 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.

451r Keyboard Instruction (1-4)
Four hours per week practice required for each hour credit. Prerequisites: 76 hours of 257r and successful audition for the division jury.

453r String Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisites: 76 hours of 255r and successful audition for the division jury.

455r Voice Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisites: 76 hours of 255r and successful audition for the division jury.

457r Woodwind Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisites: 76 hours of 257r and successful audition for the division jury.

459r Brass Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisites: 76 hours of 259r and successful audition for the division jury.

461 Percussion Instruction (1-4)
Four hours practice per week required for each hour credit. Prerequisites: 76 hours of 261r and successful audition for the division jury.

497r Research (1-4)
Four hours practice per week required for each hour credit. Prerequisites: 455r Voice Instruction (1-4).

498r Individual Studies (1-4)

499r Group Studies (1-4)

Nursing
See page 150.

Philosophy and Religion

Associate Professor Burhenn, Head
Professors Hall, Mildram, Weisbaker
Associate Professor Klinefelter

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: Philosophy, Religious Studies, Combined Concentration (B.A.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (6 hours)

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

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

Category D
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Major:
One of the following concentrations:
For Philosophy concentration
30 hours philosophy beyond 100 level including Philosophy 211, 351, 353, 498r; one course in ethics, metaphysics, or epistemology
For Religious Studies concentration
30 hours including: Philosophy 351, 353, 498r or Religion 498
21 hours religion with two courses chosen from each of following groups:
1. Religion 211, 314, 316r, 418
2. Religion 232, 337, 355, 362, 467, 482
For combined concentration
30 hours from 200 level and above
15 hours philosophy including 351, 353, 498r
15 hours religion including 355 or 362 and one course from 337, 467, or 482
(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.)
Electives to complete 128 hours.

See typical courses of study in philosophy and religion (B.A.) below.

Philosophy and Religion (B.A.)

Philosophy Concentration

<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>General Education Category A 3</td>
<td>General Education Category A 3</td>
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<tr>
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<tr>
<td>General Education Category C 3</td>
<td>General Education Category B 3</td>
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<tr>
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<tr>
<td>Philosophy 101* 3</td>
<td>Philosophy 102* 3</td>
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<tr>
<td>Physical Education 021 17</td>
<td>Physical Education Activity 17</td>
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<table>
<thead>
<tr>
<th>Sophomore</th>
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<tbody>
<tr>
<td>Philosophy 201** 3</td>
<td>Philosophy 221** 3</td>
</tr>
<tr>
<td>Foreign Language 3</td>
<td>Foreign Language 3</td>
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<tr>
<td>General Education Category D 4</td>
<td>General Education Category D 4</td>
</tr>
<tr>
<td>Elective 3</td>
<td>Elective 6</td>
</tr>
<tr>
<td>Philosophy 211 3</td>
<td>Philosophy 353 3</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Junior</th>
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<tbody>
<tr>
<td>Philosophy 351 3</td>
<td>Philosophy 341 or 345 3</td>
</tr>
<tr>
<td>Philosophy 341 or 345 3</td>
<td>General Education Category B 3</td>
</tr>
<tr>
<td>General Education Category B 3</td>
<td>General Education Category B 3</td>
</tr>
<tr>
<td>Electives*** 6</td>
<td>Electives*** 15</td>
</tr>
<tr>
<td>Electives*** 6</td>
<td>Electives*** 15</td>
</tr>
</tbody>
</table>
Senior Philosophy (300 or 400 level) 3  Philosophy 498r 3  Philosophy (200 level) or Religion (200 level)** 3
General Education Category E 3  Philosophy (300 or 400 level) 3  or Religion (200 level)** 3
Electives 10  Electives J10  Foreign Language 3
16  16  General Education Category D 4
*This course does not count toward major.
**Major requires at least 15 hours in philosophy and 15 hours in religion including: Philosophy 351, 353, 498r; and Religion 355 or 362 and one course from 337, 467, or 482.
***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.

Sophomore Philosophy (200 level) 3  or Religion (200 level)** 3
General Education Category D 4  Foreign Language 3  General Education Category D 4
Electives*** 6  Electives*** 6
16  16

Junior Philosophy 351 3  Philosophy 353 3
Religion 355 or 362 3  Religion 337, 467, or 482 3
General Education Category C 3  General Education Category C 3
Electives 15  Electives 15

Senior Philosophy (300 or 400 level) 3  Philosophy 498r 3  Philosophy (200 level) or Religion (200 level)** 3
or Religion (300 or 400 level)** 3
or Religion (300 or 400 level)** 3
General Education Category E 3  General Education Category D 4
Electives J10  Electives J10
16  16

Minor:
One of the following concentrations:
For philosophy concentration
18 hours of philosophy beyond 100 level including Philosophy 211,335, 353.
Nine of these hours must be earned in courses at 300 level or above.

For religious studies concentration
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
Religion 232,337,355,362,467,482
Nine of the 18 hours must be earned in courses at 300 level or above.

Philosophy

101,102 The Intellectual Adventure of Man (3, 3)
A thematic study of the great ideas humanity has produced in the attempt to understand itself, the world, and the universe; readings drawn from leading thinkers, ancient and modern.

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

201 Introduction to Philosophy (3)
An approach to the discipline through problems of perennial interest: being, knowledge and meaning; God; freedom and determinism; moral responsibility; perception; body, mind, and death.

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.
320 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 of the epistemological 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-Socratics 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)
The pivotal writings of major historical and contemporary figures; materials chosen from men such as Peirce, James, Royce, Santayana, Whitehead, Dewey, Lewis, and Quine.

364 Existentialism and Phenomenology (3)
Selections from the works of philosophers such as Kierkegaard, Nietzsche, Husserl, Heidegger, Sartre, Jaspers, Merleau-Ponty, 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 general course for students not majoring in philosophy and religion.

481 r 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.

491 r 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 33.

499r Individual Studies (1-4)
Must be taken for at least 3 hours in one semester by all majors.

499r Group Studies (1-4)

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**Religion**

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 cultic practices.

221, 222 Biblical Literature (3, 3)

232 Religion and the Modern Consciousness (3)
Examination of some principal Jewish and Christian beliefs in the light of humanity's current understanding of itself and the world. 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 frontier religion, the rise of fundamentalism, the social gospel, 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 Religious Man (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 analytic, existentialist and process philosophers, 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.

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)

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Physics and Astronomy

Professor Walker, Head
Professor Spangler
Associate Professors Hetzler, Lane

Physics (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses other than physics (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

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Major and related courses:
One of the following options:
1. Reading knowledge of a foreign language
2. Two-course sequence in Computer Science (121, 231)
3. Two-course sequence in Statistics
Mathematics 140, 150, 160 (250, 260 recommended)
Chemistry 121, 122
34 hours physics including 103, 104, 231, 232, plus 18 hours at 300, 400 level including one from each of following categories:
1. Physics 303, 304, 307
2. Physics 301, 309, 310
3. Physics 411, 412, 414
4. Physics 400r
16 additional hours (including 6 at 300, 400 level) from physics, mathematics, biology, chemistry, engineering at 200 level or above; or from other fields with prior approval by the Physics Department of a plan of study in conjunction with physics core
Electives to complete 128 hours

See typical course of study in physics (B.S.) below.

First Semester

<table>
<thead>
<tr>
<th>Course (see below)</th>
<th>Physics 301</th>
<th>Area Concentration Course (see below)</th>
<th>Area Concentration Course (see below)</th>
<th>Computer Science 214</th>
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<tr>
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<td>Mathematics 150</td>
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Second Semester

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Senior

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<tr>
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<tr>
<td>Course (see below)</td>
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Electives

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</thead>
<tbody>
<tr>
<td></td>
<td>Electives</td>
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</tr>
</tbody>
</table>

Area Concentration Courses

**Pre-Medical, Pre-Dental, Pre-Pharmacy**
Physics 318
Biology 121**, 122**, 301, 302, 311, 325, 328, 330
Chemistry 241, 351**, 371, 372, 466**

**Applied Nuclear Physics**
Physics 307, 310, 318**, 414, 419**, 499r
Mathematics 250, 260
Chemistry 241, 371, 372
Biology 121, 122, 311, 325, 326

**Graduate School Preparation**
Physics 307**, 309**, 303, 313, 318, 414, 419
Mathematics 250**, 260**
Foreign Language-French, German
*Required or strongly recommended courses.
Student must consult adviser about area of specialization.
(See pages 30-32 for professional requirements)
Astronomy

101 Introduction to Astronomy—The Solar System (4)
Descriptive and conceptual. The structure and nature of the solar system. Lecture three hours, laboratory two hours including visits to the University observatory.

102 Introduction to Astronomy—Stars and Galaxies (4)
Descriptive and conceptual. The nature of stars, galaxies and the structure of the visible universe. Lecture three hours, laboratory two hours, including visits to the University observatory.

General Science

111, 112 Physical Science (4, 4 with lab) (3, 3 without)
The broad flow of science from its historical beginnings to modern developments on the frontiers of research, emphasizing the influence of technology on society. Includes astronomy, biology, chemistry, geology, and physics. Non-mathematical, non-sequential. Lecture three hours, laboratory two hours.

Physics

101, 102 Introductory Physics (4, 4)
A general education course in classical and modern physics, utilizing demonstrations and simple calculations and emphasizing the impact of physics on society. Lecture three hours, laboratory two hours. Prerequisites: two units of high school algebra.

103, 104 General Physics (4, 4)
The basic principles of physics with applications to problems of modern science and technology. Required in pre-medical, pre-dental, pre-pharmacy and physical therapy programs. Lecture three hours, laboratory two hours. Prerequisites: three units of college preparatory mathematics.

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 2 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 2 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 Physics 104; Mathematics 150, 160.

301 Electricity and Magnetism (4)
Electrical and magnetic fields using vector calculus with applications. Maxwell's equations solved for simple problems in static fields and electromagnetic radiation. Lecture three hours, laboratory two hours. Prerequisites: Physics 104 or 231, 232; Mathematics 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: 101, 102 or 103, 104.

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: Physics 101, 102 or 103, 104; pre- or corequisite: Mathematics 150.

309 Introduction to Theoretical Mechanics (4)
The concepts of theoretical mechanics illustrated with simple problems using vector algebra and calculus. Lecture three hours, laboratory two hours. Prerequisites: Physics 103, 104; Mathematics 150, 160.

310 Introduction to Thermal Physics (4)
The laws of thermodynamics, kinetic theory and statistical mechanics through the macroscopic description and microscopic theory of thermal phenomena. Lecture three hours, laboratory two hours. Prerequisites: Physics 103, 104; Mathematics 150, 160.

313 Introduction to Electronics (4)
Applications of electronic measuring instruments in chemistry, biology and psychology. Basic operations of power supplies, amplifiers, amplifier coupling, amplifier band width, tuned circuits, filters, oscillators, switching circuits, oscilloscopes and electronic voltmeters. Laboratory work involving basic electrical measurements. Simple circuits wired and tested using electronic measuring instruments. Lecture three hours, laboratory two hours. Prerequisites: high school algebra.

318 Radiation Physics: The Nuclear Age (3)
A course covering the history, sources, uses and hazards of nuclear radiation in our environment. The nature of nuclear energy handled in a manner compatible with the abilities of the general student body. Treatment of the impact of nuclear energy in various aspects, including the effects of radiation on life, the control of radiation and the complex balance of hazards and benefits. Technical possibilities and problems juxtaposed with the legal, political and moral decisions which are involved.

324 Physics for Musicians (4)
An intuitive, conceptual approach to the physics of music, rather than a rigorous mathematical treatment. A study of the physical basis of music, simple vibrating systems, waves, and wave propagation. The reception of musical sounds, intensity, and loudness levels, tone, quality, frequency and pitch. Auditorium and speaking room acoustics. Laboratory exercises in the use of the oscilloscope, measurements of velocity of sound, resonance, wave propagation, vibrating strings and reverberation time of various rooms. Lecture three hours, laboratory two hours.

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 (4)
Elements of atomic theory with emphasis on atomic structure, radiation processes, spectroscopic analysis, crystal structure and wave phenomena. Lecture three hours, laboratory two hours. Prerequisites: Physics 103, 104 or 231, 232; Mathematics 150.

412 Nuclear Physics (4)
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, laboratory two hours. Prerequisites: Physics 103, 104 or 231, 232; Mathematics 150.

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 to the predictions. Consequences of the theories obtained for important cases which illustrate the nature of relativistic and quantum physics. Lecture three hours. Prerequisite: Mathematics 160.
419 Introduction to Nuclear Reactor Physics (3)
Nuclear reactions and radiation; fission processes; neutron diffusion; reactor design variables; reactor materials and shielding; reactivity coefficients. Lecture three hours. 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, CRT's floppy-disks, keyboards, music synthesizers, and control devices such as relays, thermostats, stepper motors, oscillators, and power supplies. Considers standard S100, IEE-488, and RS 232C bus structures. Survey of microcomputer applications in industry, business, school and home. Projects involving interfacing instruments with microcomputers. Lecture two hours, laboratory two hours. Prerequisites: Computer Science 100 or equivalent, Physics 104 or 232 or equivalent.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See “Departmental Honors,” page 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Political Science

Associate Professor Brodsky, Head
Associate Professors Carrithers, Moughrabi, Swansbrough, Richard Wilson

Students majoring in political science may earn a B.S. degree, choosing either the public service and analytical option—emphasizing preparation for government service and graduate training—or the pre-professional option—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, 401 r, 402r); Political Theory (212, 213, 214, 312, 313, 314, 411r); Public Law and Administration (222, 223, 322, 323, 324, 421r); American Institutions and Processes (233,234,235,331, 332, 333,431 r); 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.) Pre-Professional Option

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 political science (6 hours)

Category D
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
3 hours from Political Science 101 or 102
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
9 hours from political science courses at the 300 level (excluding 301)
15 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, 471 r, 480, 495, 497r, 498r or 499r

Related Courses (may not be used to fulfill General Education requirements):
3 hours Mathematics 210
6 hours Computer Science 100, 340
3 hours from Sociology 209, 317, 318, 340
3 hours from Philosophy 211, 221, 322
3 hours from Philosophy 348, 425; Human Services 300
6 hours Economics 101,102
6 hours from history at the 200, 300 or 400 level approved by the departmental adviser as consistent with the student’s overall program

Approved program of elective courses outside the Department of Political Science sufficient to fulfill the general University requirement of 128 credit hours necessary for graduation; list of courses normally prepared by the student and approved by the departmental adviser.

For Urban Studies concentration:
6 hours of major courses to be selected from Political Science 101,233, 323, 331, 401 r, 421 r when appropriate to urban studies; and 461 r, 462r, 463, 464 and 471 r.
18 hours additional from Economics 306, 455; Geography 415; Human Services 201, Psychology 316,321,421,431,456r; Sociology 209, 219, 317, 318, 345, 400r, 415, 455r

Recommended: courses in statistics and research methodology

Electives to complete 128 hours

See typical course of study in political science (B.S.) pre-professional option below.

Political Science (B.S.) Pre-professional Option

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
</tr>
<tr>
<td>Political Science 101 or 102</td>
<td>Political Science 201</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>General Education Category A 3</td>
<td>General Education Category B 3</td>
</tr>
<tr>
<td>General Education Category C 3</td>
<td>General Education Category D 4</td>
</tr>
<tr>
<td>General Education Category D 4</td>
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<tr>
<td><strong>Sophomore</strong></td>
<td><strong>Freshman</strong></td>
</tr>
<tr>
<td>Foreign Language</td>
<td>Foreign Language</td>
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<tr>
<td>General Education Category D 4</td>
<td>General Education Category B 3</td>
</tr>
<tr>
<td>2 Political Science courses at the 200 level</td>
<td>General Education Category C 3</td>
</tr>
<tr>
<td>General Education Category B 3</td>
<td>1 Political Science course at the 200 level</td>
</tr>
<tr>
<td>Philosophy 211</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>Political Science 301</td>
</tr>
<tr>
<td>Approved History Requirement 3</td>
<td>18</td>
</tr>
</tbody>
</table>
Political Science (B.S.) Public Service and Analytical Option

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 Political Science

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major courses:
3 hours from Political Science 101 or 102
3 hours from Political Science 201
9 hours from Political Science courses at the 200 level (excluding 201) distributed among three of five subfields
9 hours from political science courses at the 300 level (excluding 301)
15 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, 495, 497r, 498r or 499r

Related courses (may not be used to fulfill General Education requirements):
Two years of one foreign language at the college level
3 hours from Art 111,211, 212,213; Modern Languages 100,110,120; or Classical Civilization 301 or 302
3 hours Philosophy 211
3 hours Philosophy 425 or Human Services 300
3 hours from Economics 101, 102
3 hours English 300
6 hours from history at the 200, 300 or 400 level approved by the departmental adviser as consistent with the student's overall program

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.

First Semester
Freshman
Political Science 101 or 102 3
General Education Category A 3
General Education Category C 3
Economics 101 3

Second Semester
Freshman
Political Science 201 3
Physical Education Activity 1
General Education Category B 3
General Education Category C 3
Economics 102 3
General Education Category A 3

Junior
2 Political Science courses at the 300 level 6
Approved History requirements 3
Economics 101 or 102 3

Senior
2 Political Science courses at the 400 level 6
Electives 9

Minor
Required and elective courses totaling 24 hours

Required:
Political Science 201—Principles of Political Analysis

Elective:
9 hours taken from political science courses at the 200 level (excluding 201) distributed among three of the five subfields which follow: Political Behavior and Methodology (202, 203); Political Theory (212, 213,214); Public Law and Administration (222,223); American Institutions and Processes (233, 234, 235); and International Relations and Comparative Government (242, 243, 244).
12 hours from political science courses at the 300 level or above with no more than six hours from Political Science 461r, 462r, 463, 464, 471r, 480, 495, 497r, 498r or 499r

101 Problems in American Politics (3)
Contemporary issues in American national politics, with emphasis on national political processes and institutions.

102 Problems in World Politics (3)
Contemporary issues in world politics, with emphasis on the problems of the developing nations as well as the competing ideologies of the 20th century: communism, fascism and democracy.

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

201 Principles in Political Analysis (3)
Language, symbols, methods and data of political discourse and analysis. Required for political science majors.

202 Political Behavior (3)
Methods of participation in the political process.

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

212 Theories of Politics (3)
The theoretical bases of political science. The various models employed by historical and contemporary political analysts.

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.

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.

235 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 for reform.

242 International Relations (3)
The thoughts of behavioral scientists, historians and philosophers
about war and peace.

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 de­
veloped 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 con­
temporary 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.

333 Political Parties and Elections (3)
The evolution of American political parties, political machines and third
parties. Campaign techniques.

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 empha­
sis 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.

401 r Advanced Topics in Political Behavior (3)
Selected topics in political behavior. May be repeated once.

402r Advanced Topics in Research Methods (3)
Selected topics in applied research. May be repeated once. Prerequi­
sites: 201 and 301.

411r Advanced Topics in Political Theory (3)
Selected topics in political theory. May be repeated once.

421 r Advanced Topics in Public Law and Administration (3)
Selected topics in public law and administration. May be repeated once.

431 r Advanced Topics in American Institutions and Processes (3)
Selected topics in American institutions and processes. May be re­
peated once.

441 r 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.

461 r, 462r, 463, 464 State Government Internship Program (3)
(No more than 6 credit hours may apply toward the major degree
requirements in the department.) Prior approval of instructor. Intern­
ship conducted during the legislative session in Governor's and legisla­
tive offices in Nashville.

471 r Metropolitan Government Internship Program (3-6)
(No more than 6 credit hours may apply toward the major degree
requirements in the department.) Prior approval of instructor. Intern­
ship conducted in various governmental offices in Chattanooga.

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 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)
Psychology

Professor Green, Head
Professor Fjeld
Associate Professors Biderman, Hood, Ourth
Assistant Professors Hall, Helton, Ozbek, Watson

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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6-8 hours)

Category E
1 approved interdisciplinary or non-Western 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 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 distribution 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
6. Including non-English Department literature courses

27 hours psychology including 101, and one laboratory or research methods course; 9 hours must be upper level courses. Maximum of 6 hours of one psychology course labeled “r” and maximum of 9 hours of all psychology courses labeled “r” will count toward the 27 hours required for the major

Recommended: courses in statistics and research methodology
Electives to complete 128 hours

See typical course of study in psychology (B.A.) below.

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 models around which a student may construct his own program. Indicated are the general requirements for hours, limitations upon major hours for the B.A. and general education requirements.

First Semester  Second Semester

Freshman
| Psychology 101 | 3 | Psychology 201 | 3 |
| Foreign Language | 4 | Foreign Language | 4 |
| General Education Category A | 3 | General Education Category A | 3 |
| General Education | 3 | General Education Category B | 3 |
| Elective | 3 | Elective | 3 |
| Physical Education 021 | 1 | Physical Education Activity | 1 |
| | 17 | | 17 |

Sophomore
| Psychology 202 or 203 | 3 | Psychology | 3 |
| Psychology | 3 | Psychology | 3 |
| General Education Category D | 4 | General Education Category D | 4 |
| General Education Category B | 3 | General Education Category C | 3 |
| Foreign Language | 3 | Foreign Language | 3 |
| | 16 | | 16 |

Junior
| Psychology | 3 | Psychology | 3 |
| Psychology | 3 | Psychology | 3 |
| General Education Category C | 3 | General Education Category E | 3 |
| Elective | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 15 | | 15 |

Senior
| Psychology | 4 | Psychology | 4 |
| Psychology | 3 | Psychology | 3 |
| Major related course | 3 | Major related course | 3 |
| Major related course | 3 | Elective | 3 |
| Elective | 3 | Elective | 3 |
| | 16 | | 16 |

Psychology (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6-8 hours)

Category E
1 approved interdisciplinary or non-Western 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 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 distribution 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

*Including non-English Department literature courses

33 hours psychology including 101, 201, or equivalent, and an additional research methods course; 9 hours must be upper level courses. Maximum of 6 hours of one psychology course labeled “r” and maximum of 9 hours of all psychology courses labeled “r” will count toward the 33 hours required for the major.

Electives to complete 128 hours.

See typical course of study in psychology (B.S.) below.

<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>General Education Category A</td>
<td>General Education Category A</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>General Education Category B</td>
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<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Psychology 202 or 203</td>
<td>Psychology</td>
</tr>
<tr>
<td>Psychology 3</td>
<td>Elective</td>
</tr>
<tr>
<td>General Education Category D</td>
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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.

201 Research Methodology: Introductory Statistics in Psychology (3)
Descriptive and inferential statistics, research design, and computer analysis of psychological data. Unique applications of quantitative analysis to problems in research techniques in psychology, consideration of requirements for rigorous analysis of special problems in research in behavioral processes. Prerequisite: 2 years of high school algebra or Mathematics 107.

202 Research Methodology: Laboratory Techniques (3)
A study of laboratory methods making use of both human and infra-human organisms. Conducting original research through the process of laboratory experimentation, analysis of data for preparation of research reports. Prerequisites: 101 and 201 or equivalent.

203 Research Methodology: Field Research Techniques (3)
A study of psychological research methods appropriate to non-laboratory settings. Emphasis on research utilizing both quantitative and qualitative methods of analysis. Conducting original research; critical evaluation of the research of others. Prerequisite: 101 and 201 or equivalent.

221 The Psychology of Child Development (3)
Infancy through childhood. Concepts of development and functioning derived from both research and clinical observation. Emphasis on cognitive, social and emotional development. Child-rearing applications. Prerequisite: 101 or equivalent. Credit not allowed in both Education 203 and Psychology 221.

222 The Psychology of Adolescence and Adulthood (3)
Psychodynamic principles of adolescent functioning. Evaluation of various theories of adolescence. Consideration of life-span developmental concepts and the adjustment problems related to aging. Emphasis on age-related changes. Prerequisite: 101 or equivalent. Credit not allowed in both Education 204 and Psychology 222.

241 Differential Psychology (3)
Consideration of individual differences in the dimensions of intelligence, personality, interests and values. Discussion of group differences related to sex, age, race, social class and intelligence. Examination of genetic and environmental factors influencing these differences. Prerequisite: 101 or equivalent.

251 The Psychology of Adjustment (3)
An integration of material from personality, social, abnormal and developmental psychology that contributes to understanding normal development and functioning as an adult. Institutional impact, such as college life, included in this analysis. Prerequisite: 101 or equivalent.

308 Principles of Abnormal Psychology (3)
A bio-social approach to theories of causation, development and symptomatic behavior in emotional disorders; theoretical bases of the various therapies and of positive means of prevention. Prerequisite: six hours of psychology.

311 Learning and Motivation (3)
Study of the effective conditions for various learning phenomena; roles of motivation, reinforcement, and punishment in learning. Prerequisite: 101 or equivalent; 201 recommended.

312 Sensation and Perception (3)
Study of sensory and perceptual processes; examination of the sense organs and related neurophysiological mechanisms, and of the necessary stimulus conditions for particular perceptual phenomena. Laboratory. Prerequisite: 101 or equivalent; 201 recommended.

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

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. Laboratory using human and/or animal subjects. Prerequisites: 101 and 201 or six hours of college biology courses, or permission of instructor.

316 Systems and 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. 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. Maybe registered for as Sociology 331. Prerequisites: 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, errors 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.

351 Psychology of Women (3)
Analysis of empirical data and theoretical viewpoints concerning the psychological development of women. Psychological effects of sex roles, achievement motivation and abilities of women; models of socialization practices, personality development, and stages of adjustment. Prerequisite: 6 hours of psychology and junior standing.

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: 9 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: 6 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.

448 Theories of Personality (3)
Survey of basic theories of personality including the psychoanalytic, sociocultural, factor analytic, the bio-social, and the phenomenological. Strongly suggested for guidance majors. Prerequisite: six hours of psychology.

456r Individual Practicum (1-3)
Supervised contact program in community schools or social service agencies. Academic and personal development sought in the individual or small group activities conducted in this program. An activities log and final written report required. Prerequisites: six hours of upper division psychology and approval of instructor. Maximum credit six hours. Course graded on a satisfactory/no credit basis.

460 Systems of Psychology (3)
The historical development, major theses, elements of strength, shortcomings, and current trends of the principal schools of psychological thought. Reading and discussion course for psychology majors and graduate students. Prerequisites: nine hours of psychology.

461 Philosophical Psychology (3)
Critical analysis of philosophical aspects of current systems of psychology. Particular focus upon assumptions and consequences of various modes of explanation and description. Prerequisite: 460.

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 for as Religion 470.

484 Social Psychology of Education (3)
Topics in the social psychology of education with particular emphasis on educational issues and problems from a social psychological perspective. Prerequisite: 9 hours of psychology or permission of the instructor.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Social Work
See Division of Human Services, page 148.

Sociality and Anthropology

Professor Cahill, Head
Associate Professors J. Brown, Geeverghese, Kileff, Pate, Thurston
Assistant Professors Miles, Noyes, Robinson

Any student in good standing with the University may be admitted to the major program. Various concentrations within the major field have been designed to meet the special needs of students majoring in either sociology, anthropology or urban studies. (See following concentration programs.)

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 of Archaeology is an instructional and research museum located in Brock Hall. The Institute 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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (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 the following concentrations:

For general concentration:
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.

For anthropology concentration: 33 hours sociology and anthropology including Anthropology 152 and 302; nine hours selected from Anthropology 208, 209, 210 and 211; Sociology 314 and 394 or nine hours of approved anthropology field and laboratory courses; three additional hours of sociology; additional anthropology electives up to 33 hours to complete the concentration.

For sociology concentration:
33 hours sociology and anthropology including Sociology 151, 312, 314, 394; Anthropology 152 or 208 plus 15 hours of electives of which 9 hours are at the 300-400 level; and Mathematics 210

For urban studies concentration:
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.
6 hours of major courses to be selected from Sociology 209, 317, 318, 345, 400r, 415, 455r
18 hours additional from Economics 306, 455; Geography 415; Human Services 201; Political Science 101, 233, 323, 331, 401r and 421r when appropriate to urban studies, 461r, 462r, 453, 464, or 461r; Psychology 316, 331, 421, 431, 456r

Recommended: courses in statistics and research methodology
Electives to complete 128 hours
See typical courses of study for sociology and anthropology (B.A.) below.

Sociology and Anthropology (B.A.)
General Anthropology Concentration

First Semester | Second Semester
--- | ---
**Freshman**
General Education Category A | 3 | General Education Category A | 3
Language 101 | 3 | Language 102 | 3
Anthropology 152 | 3 | Anthropology 208 | 3
General Elective | 3 | General Elective | 3
Elective-Social Science | 3 or 4 | Elective-Social Science | 3 or 4
Physical Education 021 | 1 | Physical Education Activity | 1
16 or 17 | 16 or 17

**Sophomore**
Language (2nd year) | 3 | Language (2nd year) | 3
Elective-Mathematics or Physical Science | 4 | Elective-Mathematics or Physical Science | 4
Anthropology 211 | 3 | Anthropology 210 | 3
Elective-Humanities or Fine Arts | 3 | Elective-Humanities or Fine Arts | 3
General Elective | 3 | General Elective | 3
16 | 16

*May be taken either Junior or Senior Year

Sociology and Anthropology: Anthropology, Sociology, Urban Studies Concentration (B.S)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Computer Sciences 121
English through 102; and one course in written communication above the 100 level.
Mathematics 125, 126: 210 or Sociology 250
Completion of one of following concentrations:

For anthropology concentration (B.S.)
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, anthropology electives up to 33 hours to complete the concentration

For sociology concentration
33 hours sociology and anthropology including 151, 312, 314, 394; Anthropology 152 or 208; plus 15 hours of electives (at least 9 hours at the 300-400 level) with 12 of the 15 hours in sociology.

For urban studies concentration
33 hours sociology and anthropology including Sociology 151, 312, 314, 394; Anthropology 152 or 208; Sociology 312, 314, 394 or nine hours of approved anthropology field and laboratory courses.

6 hours of major courses to be selected from Sociology 209, 219, 317, 318, 345, 400, 415, 455r.
18 hours additional from Economics 306, 455; Geography 415; Human Services 201; Political Science 101, 233, 331, 331, 401r or 421r (when appropriate to urban studies), 461r, 462r, 463, 464, 471r; Psychology 316, 331, 421, 431, 456r.
Electives to complete 128 hours

See typical courses of study in sociology and anthropology (B.S.) below.

### Sociology and Anthropology (B.S.)

#### General Anthropology Concentration

<table>
<thead>
<tr>
<th>First Semester</th>
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<tr>
<td><strong>Freshman</strong></td>
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<tr>
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<tr>
<td>Anthropology 152 3</td>
<td>Anthropology 208 3</td>
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<td>Mathematics 125 3</td>
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| Sophomore | | |
|-----------|-----------|
| Mathematics or Physical Science Elective 4 | Mathematics or Physical Science Elective 4 |
| Anthropology 211 3 | Anthropology 209 3 |
| Humanities or Fine Arts Elective 3 | Humanities or Fine Arts Elective 3 |
| General Elective 3 | General Elective 3 |
| Computer Sciences 121 3 | English 200 3 |
| 16 | 16 |

| Junior | | |
|--------|-----------|
| Anthropology 366r 3 | Anthropology 302 3 |
| Anthropology Elective 3 | Anthropology Elective 3 |
| Social Science Elective 3 | Social Science Elective 3 |
| General Electives 4 | General Electives 4 |
| Mathematics 210 or Sociology 250 3 | General Electives 4 |
| 16 | 16 |

| Senior | | |
|--------|-----------|
| Anthropology 498r | Humanities or Fine Arts Elective 3 |
| Humanities or Fine Arts Elective 3 | Sociology Elective 3 |
| General Electives 6 | General Electives 6 |
| 13 | 15 |

Elective 3

Anthropology 335 in summer school (6 hours)*

*Sociology 314 and 394 may be taken in lieu of nine hours of anthropology field and laboratory courses.

#### Sociology and Anthropology (B.S.)

#### Sociology Concentration

<table>
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<tr>
<td><strong>Freshman</strong></td>
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<tr>
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<td>Anthropology 152 or 208 3</td>
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<td>Mathematics 125 3</td>
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<tr>
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<td>16</td>
<td>Computer Science 121 17</td>
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| **Sophomore**  | | |
|----------------|-----------|
| Sociology Elective 3 | Sociology 209 or Elective 3 |
| Mathematics 210 (Statistics) or Sociology 250 3 | Sociology Elective 3 |
| Interdisciplinary or Non-Western Elective 3 | Natural or Applied Science Elective 4 |
| Natural or Applied Science Elective 4 | General Electives 6 |
| General Electives 3 | General Electives 6 |
| 16 | 16 |

| **Junior**     | | |
|----------------|-----------|
| Sociology 312 3 | Sociology or Anthropology Electives 3 |
| Sociology 314 3 | Sociology or Anthropology Electives 3 |
| General Electives 6 | General Electives 6 |
| Other Social Science Elective 3 | Other Social Science Elective 3 |
| 15 | 15 |

*Socio 394 or 450 may be taken in lieu of nine hours of anthropology field and laboratory courses.

#### Minors:

**Anthropology**
A student may obtain a minor in anthropology by successfully completing Anthropology 152; nine hours from Anthropology 208, 209, 210 and 211; and six hours of anthropology above the 300 level.

**Sociology**
A student may obtain a minor in sociology by successfully completing Sociology 151 plus 15 other hours in sociology, at least six of which are above the 300 level.
Anthropology

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)

208 Cultural Anthropology (3)
The comparative study of culture; social organization, economics, government, education, religion, language and arts in various primitive and present societies; cultural integration and change.

209 Physical Anthropology (3)
The origins and relationships of extinct and present forms of human kind in the light of evolutionary theory. Includes fossil evidence bearing on human evolution, the nature of human variation, evidence bearing on primate-human relationships and the influence of culture on human evolution.

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.

211 Introduction to Archaeology (3)
The study of human prehistoric and historic past through the archaeological record. Basic techniques, methods, theoretical approaches and major conclusions of archaeological investigation.

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, cove ring the paleolithic in the old and new worlds and the search for the prerequisites of civilization.

333r Peoples and Cultures (3)
Ethnological studies of selected culture areas or dominant peoples of an area. Topics covered vary with need and availability of staff; Sub-Saharan Africa, Southeast Asia, India, Middle East, Mayan Indians, etc. Prerequisite: three hours of anthropology or approval of instructor.

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 in Society and Culture (3)
A study of the relationships between language and society and language and culture. Materials drawn from modern sociolinguistics and ethnolinguistics.

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.

360r 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 culture 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.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Sociology

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, theory and their interpretation. 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 physical and social environment; examination and clarification 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 on economics, social structures and environmental 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 socio-metric 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: Computer Sciences 121 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. Prerequisite: Sociology 151; or Anthropology 152 or 208, or approval of instructor.

320 Sociology of Law (3)
Law as a social phenomenon and as a social process. Historical and cross-cultural comparison of law, legal institutions and enforcement of law. Special attention given to American law enforcement. 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: Sociology 250.

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: Sociology 250.

360 Social Gerontology (3)
A study of the role of the aged in modern society. 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 urban problems; the urbanization process; comparative studies of urban communities; urban anthropology. 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: 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; emphasis on insights into major socio-cultural phenomena. Prerequisite: 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 selected in the previous semester by the Department of Sociology and Anthropology. Organization of a University-wide multi-day 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)
Investigation and reporting on specialized topics in research or theory under faculty direction. Primarily for seniors. Prerequisite: permission of instructor. Maximum credit six hours.

499r Group Studies (1-4)
See "Departmental Honors," page 33.

497r Research (1-4)

4S8r Individual Studies (1-4)
Spanish
See Foreign Languages and Literature, page 59.

# Theatre and Speech

**Associate Professor Wiley, Head**  
**Assistant Professors Lewis, Putnam, Vick**

## Theatre and Speech (B.A.)

**General Education** (see pages 27-29 for list of approved courses):

<table>
<thead>
<tr>
<th>Category A</th>
<th>2 approved courses in written communication in the English language, at least one at the freshman level (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category B</td>
<td>3 approved courses other than theatre and speech: 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>2 approved mathematics or natural or applied science courses (6 hours)</td>
</tr>
<tr>
<td>Category E</td>
<td>1 approved interdisciplinary or non-Western course (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:**  
36 hours theatre and speech with 30 hours above 100 level  
Two courses outside department may count toward major with approval of department head  
Electives to complete 128 hours

See typical course of study in theatre and speech (B.A.) below.

### First Semester

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101</td>
<td>Written Composition</td>
</tr>
<tr>
<td>Foreign Language 101</td>
<td>Elective</td>
</tr>
<tr>
<td>Behavioral/Social Science Elective</td>
<td>Foreign Language 102</td>
</tr>
<tr>
<td>Theatre and Speech</td>
<td>Humanities Elective</td>
</tr>
<tr>
<td>Theatre emphasis: 101 or 103</td>
<td>Physical Education 021</td>
</tr>
<tr>
<td>Speech communication emphasis: 107 or 108.</td>
<td>Mathematics Elective</td>
</tr>
<tr>
<td></td>
<td>Theatre and Speech</td>
</tr>
<tr>
<td></td>
<td>Theatre emphasis: 102 or 103; Speech communication emphasis: 108 or 109.</td>
</tr>
</tbody>
</table>

16  
17

### Sophomore

<table>
<thead>
<tr>
<th>Sophomore</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Language 211</td>
<td>History Elective</td>
</tr>
<tr>
<td>Mathematics/Science Elective</td>
<td>Foreign Language 212</td>
</tr>
<tr>
<td>Behavioral/Social Science Elective</td>
<td>Mathematics/Science Elective</td>
</tr>
<tr>
<td>Recommended Electives</td>
<td>Humanities/Fine Arts</td>
</tr>
<tr>
<td>Theatre emphasis: English 207; Speech communication emphasis: English 370 or 460.</td>
<td>Physical Education Activity</td>
</tr>
<tr>
<td>Theatre and Speech</td>
<td>Theatre and Speech</td>
</tr>
<tr>
<td>Theatre emphasis: 211 or 312; Speech communication emphasis: 109 or 270</td>
<td>Theatre emphasis: 212 or 311; Speech communication emphasis: 111 or 280</td>
</tr>
</tbody>
</table>

16  
17

### Junior

<table>
<thead>
<tr>
<th>Fine Arts Elective</th>
<th>Recommended Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Electives</td>
<td>Theatre emphasis: Classics 395, English 420 or 421; Speech communication emphasis: Political Science 201 or Anthropology 351</td>
</tr>
<tr>
<td>Theatre and Speech</td>
<td>Theatre emphasis: 213 or 313; Speech communication emphasis: 309, 315</td>
</tr>
<tr>
<td>Theatre and Speech Elective</td>
<td></td>
</tr>
</tbody>
</table>

15  
15

### Senior

<table>
<thead>
<tr>
<th>Interdisciplinary/Non-Western Elective</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theatre and Speech Elective</td>
<td>Theatre and Speech Electives</td>
</tr>
<tr>
<td>Theatre and Speech</td>
<td>Theatre emphasis: 317; Speech communication: 498r</td>
</tr>
</tbody>
</table>

17  
15

### 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 Theater productions.

### 103 Fundamentals of Acting (3)
Exercise in traditional and contemporary techniques of theatre speech, movement and gesture, character and scene analysis; emphasis on ensemble acting.

### 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)
Representative types and styles of theatre arts.

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

### 200r Performance and Production (1-3)
Practical application of theatre theory and technique in the mounting of a major production. Course graded on a satisfactory/no-credit basis.

### 203 Advanced Acting (3)
Continued development of vocal technique, movement, and character study through improvisation, self-exploration, and textual analysis. Emphasis on scene work drawn from the modern realist repertory.

### 211 The Theatre to 1700 (3)
History of the theatre as an art and as an institution from its beginnings through the 17th century.

### 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.
213 Scene Design (3)
Introduction to the basic techniques and methods of modern scene design and graphics in interpretation of representative examples of dramatic literature.

214 Costume Design (3)
Basic procedures and principles of costume design for representative types and styles of drama.

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.

270 Introduction to Mass Communication (3)
The history, theory and practice of mass communication, emphasizing radio, television and film.

271 Introduction to Broadcasting (3)

280 Introduction to Film (3)
The history and language of motion pictures, studied by viewing and analyzing selected film masterpieces.

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.

312 Development of Dramatic Art (3)
Types of tragedy, melodrama, and related forms examined in theoretical studies and representative works. Emphasis on theatrical techniques of communicating the tragic 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.

315 Creative Theatre (3)
Performance and production designed primarily for the non-major; emphasis on improvisation and other creative theatre techniques.

317 Directing (3)
Close study of the basic elements of play direction and composition; staging or writing of a short play.

321 The Modern Theatre (3)
Theatre and drama from Ibsen to the present. Emphasis on European and American playwriting and production since 1920.

331 The Shakespearean Theatre (3)
Elizabethan drama, stage and production examined by detailed theatrical study of plays by Shakespeare and his contemporaries. Consideration of problems of modern Shakespearean production.

412 Theatre for Youth (3)
All phases of producing plays for or by junior audiences examined, including the techniques of creative "dramatics.

451r Special Topics in Modern Dramatic Literature (3)
A reading course with emphasis on selected significant modern playwrights.

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 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

University Scholars Program
See Interdisciplinary Studies; page 72.

University Studies
See Interdisciplinary Studies, page 72.
School of Business Administration

Professor Cudd, Dean
Associate Professor Casavant, Coordinator of the MBA Program

The School of Business Administration is organized into four departments, Accounting and Finance, Economics, Management and Marketing, and Office Administration/Business Education. Bachelor of Science degrees in business administration with five concentrations, economics, and office administration, a Bachelor of Arts in economics, a two year office administration certificate, and a Master of Business Administration are offered.

Business Administration

Accounting and Finance
Professor Moon, Head
Professors Fulmer, Hale
Associate Professors McLaurin, Richard
Assistant Professors Gavin, Quinn, Stewart, Willis

Management and Marketing
Associate Professor Ettkin, Head
Professors Cook, Cudd, Geraghty
Associate Professors Ahmadi, Casavant, Hammer, Lewis, Ryan
Assistant Professors Macomber, Thome

The business administration curriculum leading to the Bachelor of Science degree is designed to prepare professional managers for a successful career in the profit and non-profit sectors. Emphasis is placed on breadth in education for life-long professional career development. The curricula also provide essential skills for employment opportunities in selected career fields. Career preparation is emphasized in the following concentrations:

- Accounting
- Finance
- General Management
- Industrial Management
- Marketing

The first two years of study are devoted to course work in foundation subject areas primarily outside the field of business. The junior and senior years are concerned with the core subject matter in business and administrative sciences, including courses in managerial controls, marketing, organizational behavior and theory, operations, and environment. The required and elective courses in the student’s chosen professional curriculum are also taken in the junior and senior years.

Business Administration (B.S.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 may apply)

Category D
2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western 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 101, Psychology 101 or Sociology 151
Mathematics 125, 126
Computer Science 100
One course from English 200, 300, 410, or Office Administration 219 (minimum of 8 hours in written communication including required courses in Category A)
36 hours common body of knowledge in economics and business administration including Economics 101, 102, Business Administration 201, 202, 211, 212, 302, 311, 313, 315, 335, 440
A minimum of 54 hours of the 128 total must be taken at the 300-400 level.

Areas of Concentration
Candidates for the B.S. degree in business administration may choose from five concentrations. In all instances, courses listed for a concentration are in addition to the courses required of all candidates for the B.S. degree in the first two years.

For Accounting concentration
Computer Science 123
6 hours economics including 325, 429
Electives to complete 128 hours

Maximum of 72 hours total accepted in School of Business Administration.

For Finance concentration
3-6 hours additional business administration and economics electives chosen from Economics 304, 306; Business Administration 284, 305, 336, 337, 356, 403, 424.
9 hours additional business administration and economics electives chosen from Economics 304, 306, Business Administration 284, 305, 336, 337, 356, 403, 424.
Electives to complete 128 hours

Maximum of 72 hours total accepted in School of Business Administration.

For General Management concentration
16 hours to include Business Administration 330, 332, 356, 434, 441, Economics 301.
9 hours additional business administration and economics electives chosen from Economics 304, 306; Business Administration 284, 305, 336, 337, 356, 403, 424.
Electives to complete 128 hours

Maximum of 72 hours total accepted in School of Business Administration.

For Industrial Management concentration
19 hours including Business Administration 305, 354, 356, 441, 451, 452, Engineering 458.
9 hours additional business administration and economics electives chosen from Business Administration 319, 332, 410,
434, 435, 454, 456, Economics 429, Engineering 452, 454, 455, 457. Electives to complete 128 hours
Maximum of 72 hours total accepted in School of Business Administration

For Marketing concentration
19 hours including Business Administration 356, 365, either 361* or 362, 441, 450, 461, Economics 425, 6 hours business administration chosen from 318, 319, 361, 362, 363, 364, 415, 417.
*Either 361 or 362 is required. The course not chosen to meet this requirement may be taken as an elective.
Electives to complete 128 hours
Maximum of 72 hours total accepted in School of Business Administration

Business Administration (B.S.)
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>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 101 3</td>
<td>Economics 102 3</td>
</tr>
<tr>
<td>Mathematics 125* 3</td>
<td>Mathematics 126 3</td>
</tr>
<tr>
<td>General Education Category A 3</td>
<td>General Education Category A 3</td>
</tr>
<tr>
<td>Physical Education 021 1</td>
<td>Computer Science 100 3</td>
</tr>
<tr>
<td>General Education Categories** 3-8</td>
<td>Physical Education Activity 1</td>
</tr>
<tr>
<td></td>
<td>General Education Electives 3-6</td>
</tr>
<tr>
<td></td>
<td>13-18</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Business Administration 201 3</td>
<td>Business Administration 202 3</td>
</tr>
<tr>
<td>Business Administration 211 3</td>
<td>Business Administration 212 3</td>
</tr>
<tr>
<td>General Education Categories 6-12</td>
<td>General Education and Electives 3-6</td>
</tr>
<tr>
<td></td>
<td>12-18</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| "If exempted, student may elect Mathematics 124 and 126. **Six hours must be selected from Political Science 101, Psychology 101 or Sociology 151.

Business Administration (B.S.)
Accounting Concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Business Administration 302 3</td>
<td>Business Administration 304 3</td>
</tr>
<tr>
<td>Business Administration 303 3</td>
<td>Business Administration 305 3</td>
</tr>
<tr>
<td>Business Administration 307 3</td>
<td>Business Administration 315 3</td>
</tr>
<tr>
<td>Business Administration 311 3</td>
<td>Business Administration 356 3</td>
</tr>
<tr>
<td>Business Administration 313 3</td>
<td>Computer Science 123 3</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Accounting Elective 3</td>
<td>Business Administration 405</td>
</tr>
<tr>
<td>Accounting Elective 3</td>
<td>Business Administration 440</td>
</tr>
<tr>
<td>Business Administration 335 3</td>
<td>Business Administration 441</td>
</tr>
<tr>
<td>Economics Elective 3</td>
<td>Accounting Elective</td>
</tr>
<tr>
<td>Business Administration 335 3</td>
<td>Accounting or Business</td>
</tr>
<tr>
<td>Elective 3</td>
<td>Administration Economics</td>
</tr>
<tr>
<td></td>
<td>Elective 3</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

| Junior                             |                                      |
| Business Administration 302 3      | Business Administration 330 3        |
| Business Administration 311 3      | Business Administration 335 3        |
| Business Administration 313 3      | Business Administration 332 3        |
| Business Administration 315 3      | Business Administration 356 3        |
| Economics 301 3                    | Electives 3-9                         |
|                                    | 18                                    |

Senior
Business Administration 343 3
General Management
Electives 3-9
Electives 15-18

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

Business Administration (B.S.)
Finance Concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Business Administration 284 3</td>
<td>Business Administration 315 3</td>
</tr>
<tr>
<td>Business Administration 284 3</td>
<td>Business Administration 322 3</td>
</tr>
<tr>
<td>Business Administration 313 3</td>
<td>Economics 325 3</td>
</tr>
<tr>
<td>Business Administration 321 3</td>
<td>Finance Elective 3</td>
</tr>
<tr>
<td>Elective</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Business Administration 284</td>
<td>Business Administration 440 3</td>
</tr>
<tr>
<td>or 337</td>
<td>Business Administration 441 3</td>
</tr>
<tr>
<td>Business Administration 422 3</td>
<td>Business Administration 423 3</td>
</tr>
<tr>
<td>Economics 429 3</td>
<td>Finance Elective 3</td>
</tr>
<tr>
<td>Business Administration 335 3</td>
<td>Elective 3-6</td>
</tr>
<tr>
<td>Finance Elective</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>15-18</td>
</tr>
<tr>
<td>Finance Electives (any 9 hours)</td>
<td></td>
</tr>
<tr>
<td>Economics 304</td>
<td></td>
</tr>
<tr>
<td>Economics 306</td>
<td></td>
</tr>
<tr>
<td>Business Administration 284</td>
<td></td>
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<tr>
<td>Business Administration 305</td>
<td></td>
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<tr>
<td>Business Administration 336</td>
<td></td>
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<tr>
<td>Business Administration 337</td>
<td></td>
</tr>
<tr>
<td>Business Administration 356</td>
<td></td>
</tr>
<tr>
<td>Business Administration 403</td>
<td></td>
</tr>
<tr>
<td>Business Administration 424</td>
<td></td>
</tr>
</tbody>
</table>

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

Business Administration (B.S.)
General Management Concentration

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Business Administration 302 3</td>
<td>Business Administration 330 3</td>
</tr>
<tr>
<td>Business Administration 311 3</td>
<td>Business Administration 335 3</td>
</tr>
<tr>
<td>Business Administration 313 3</td>
<td>Business Administration 332 3</td>
</tr>
<tr>
<td>Business Administration 315 3</td>
<td>Business Administration 356 3</td>
</tr>
<tr>
<td>Economics 301 3</td>
<td>Electives 3-9</td>
</tr>
<tr>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>15-18</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Business Administration 343 3</td>
<td>Business Administration 440 3</td>
</tr>
<tr>
<td>General Management</td>
<td>Business Administration 441</td>
</tr>
<tr>
<td>Electives 3-9</td>
<td>General Management</td>
</tr>
<tr>
<td></td>
<td>Electives 3-9</td>
</tr>
<tr>
<td></td>
<td>15-18</td>
</tr>
<tr>
<td></td>
<td>15-18</td>
</tr>
</tbody>
</table>
A minimum of 54 hours of the total 128 must be taken at the 300-400 level.

Business Administration (B.S.)

Industrial Management Concentration

First Semester | Second Semester
---|---
**Junior** | **Business Administration 451 3** | **Business Administration 440 3**
Business Administration 302 3 | Business Administration 305 3
Business Administration 311 3 | Business Administration 354 3
Business Administration 313 3 | Business Administration 335 3
Business Administration 315 3 | Business Administration 356 3
 Electives 3-6 | Electives 3-6
 15-18 | 15-18

**Senior** | **Business Administration 452 3** | **Business Administration 441 1**
Engineering 458 3 | Business Administration 452 3
Industrial Management | Industrial Management
Electives 3-6 | Electives 3-6
 3-6 | 3-6
 15-18 | 16-19

**Industrial Management**
Electives (any 9 hours)
Business Administration 319
Business Administration 332
Business Administration 410
Business Administration 434
Business Administration 435
Business Administration 454
Business Administration 456
Economics 429
Engineering 452
Engineering 454
Engineering 455
Engineering 457

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

Business Administration (B.S.)

Marketing Concentration

First Semester | Second Semester
---|---
**Junior** | **Business Administration 302 3** | **Business Administration 315 3**
Business Administration 311 3 | Business Administration 356 3
Business Administration 313 3 | Business Administration 361 or 362 3
Business Administration 335 3 | Business Administration 365 3
 Electives 3-6 | Electives 3-6
 3-6 | 3-6
 15-18 | 15-18

**Senior** | **Business Administration 440 3** | **Business Administration 441 1**
Economics 425 3 | Business Administration 441 1
Business Administration 450 3 | Business Administration 461 3
Marketing Electives 3-6 | Marketing Electives 3-6
 Electives 3-6 | Electives 3-6
 15-18 | 13-19

*Either Business Administration 361 or 362 is required. The course not chosen to meet requirement may be taken as an elective.*

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.

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. 207 is prerequisite to 202.

211 Statistical Methods for Business I (3)
Basic concepts of descriptive and inferential statistics including frequency, probability, and sampling distributions, estimation theory, and introduction to hypothesis testing. Emphasis on business applications. Prerequisite: Mathematics 125.

212 Statistical Methods for Business II (3)
Probability and statistical inference with emphasis on decision-making in business. Computer application of statistical analysis. Prerequisites: Business Administration 211; Mathematics 126.

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 Business 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: Economics 101, 102; Business Administration 202, 212.

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, 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: 212, 203.

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, responsibility accounting; operational and capital budgeting 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.

311 Operations Management (3)
An introduction to the design, operation and control of a product or service environment. Major emphasis is placed on the following decision tools and/or models: forecasting, linear programming, simulation, quality control, inventory control, network analysis, job design, and standards. Prerequisites: Economics 101 and 102; Business Administration 212; junior standing.

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: Business Administration 202; Economics 101, 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.

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. Prerequisites: 313.

319 The Logistics of Physical Distribution (3)
The interaction and interdependence of transportation, warehousing, order processing, inventory control, packaging, and plant location in the effective and efficient movement of products and services from producer to consumer. Prerequisite: 313.

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: Economics 101, 102; Business Administration 202; 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: Economics 101, 102; Business Administration 202.

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. Prerequisites: Economics 101, 102, Business Administration 315.

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.

337 Principles of Insurance (3)
Types of insurance, insurance coverage, policy protection, and company organization and regulation. Prerequisites: Economics 101, 102.

354 Industrial Systems Management (3)
A study of the functions of production systems. Investigation of the practices involved in plant location and layout, planning and control purchasing, labor control budgets and incentives, wage and salary administration. Prerequisite: 311.

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.

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.

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. Prerequisite: 313.

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 sociopsychological factors. Prerequisite: 313.

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.

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: 202, 302, senior standing or permission of instructor.
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: Business Administration 302, 305, 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. Prerequisites: senior standing or permission of instructor.

408 Accounting Information Systems
Review of the strategies, goals and methodologies available for designing, installing, and evaluating accounting information systems. Prerequisites: Computer Science 123; Business Administration 304, 305, 356.

409 Accounting Problems (3)
Advanced accounting problems, including problems in areas covered by the C.P.A. examination. Prerequisite: 405.

410 Industrial Relations (3)
Union-management relations including the legal framework, the techniques and practices used and a bargaining simulation. Prerequisite: 332; senior 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 affect 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.

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: Economics 101, 102; Business Administration 202, senior standing or permission of instructor.

423 Financial Management
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 and 321 using the case discussion approach. Prerequisites: 302, 321.

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.

434 Problems in Personnel Management (3)
A case course in human relations dealing with problems drawn from actual business experience. Prerequisite: 332.

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. Prerequisite: 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.

440 Business Policy (3)
An integrating course using cases for management decision-making and management simulation. A culminating educational experience for the senior. Prerequisites: senior standing; 302, 311, 313, 315; 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.

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: 212 and 313.

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: 354 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. Prerequisite: 302, 356, senior standing or permission of instructor.

454 Comparative Industrial Systems (3)
Observe, discuss and describe 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: 354 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: 302, 311, 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. Prerequisite: Completion of 302, 311, 313, 315; and permission of instructor. Maximum credit 6 hours.

461 Marketing Problems (3)
The major marketing problems of representative firms, including manufacturers, wholesalers and retailers. A case course dealing with actual business problems in all phases of marketing activity. Prerequisite: 313.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 33.

497 Research (1-3)

498r Individual Studies (1-3)

499r Group Studies (1-3)
Economics

Professor Keilany, Head
Professors Armstrong, Peterson
Associate Professors Giffin, Pratt
Assistant Professors Birch, Larson, Rabin

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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Foreign language through second college year

Major:
Business Administration 211 and 212 or Mathematics 210
24 hours economics including 101, 102, and electives
Electives to complete 128 hours
Maximum of 72 hours accepted in School of Business Administration with maximum of 42 hours in economics

See typical course of study in economics (B.A.) below.

<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>Economics 101</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>3-4</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>General Education</td>
<td>2-7</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>General Education</td>
<td>12-18</td>
</tr>
</tbody>
</table>

|                     | 6-12            |
|                     | 12-18           |

| **Sophomore**      |                 |
| Mathematics 210 or | 3               |
| Business Administration 211 | 3 |
| Foreign Language | 3               |
| General Education and Electives | 6-12 |
|                     | 12-18           |

Economics Elective 3 12-18
Electives 9-15 12-18

Economics (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Mathematics 125 and 126 or Mathematics 150
Business Administration 201
Business Administration 211 and 212
Computer Science 100
15 hours core courses including Economics 101, 102, 301, 324, 325
Business Administration 202, 356 (other courses may be substituted with approval of department)
Electives to complete 128 hours
Maximum of 72 hours accepted in School of Business Administration

See typical course of study in economics (B.S.) below.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td></td>
</tr>
<tr>
<td>Economics 101</td>
<td>3</td>
</tr>
<tr>
<td>Math 125 or 140</td>
<td>3-4</td>
</tr>
<tr>
<td>General Education</td>
<td>3</td>
</tr>
<tr>
<td>Category A</td>
<td></td>
</tr>
<tr>
<td>Computer Science 100</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>General Education</td>
<td>0-5</td>
</tr>
<tr>
<td>General Education</td>
<td>13-19</td>
</tr>
<tr>
<td></td>
<td>12-18</td>
</tr>
</tbody>
</table>

| **Sophomore**      |                 |
| Business Administration 211 | 3 |
| Business Administration 201 | 3 |
| General Education & Electives | 9-15 |
|                     | 12-18           |

*Prerequisite to Business Administration 211 is Mathematics 125, and 212 is Mathematics 126.
Junior
Economics 324 3
General Education &
Electives 9-15 12-18
Total 12-18 12-18

Senior
Economics Elective 3
General Education &
Electives 9-15 12-18
Total 9-15 12-18

• Students not eligible for Mathematics 125 or 140 must first take Mathematics 107. Students eligible to waive 140 may start in 150.

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 Manpower Economics (3)
Labor problems in the United States and attempts at their solution by employers and government. 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; facism 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: Economics 101, 102; Business Administration 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.

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, Richardo, Marx, Jevons, Marshall, Hicks, 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: Business Administration 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.

495r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See "Departmental Honors," page 33.

497r Research (1-3)

498r Individual Studies (1-3)

499r Group Studies (1-3)

Office Administration/ Business Education

Professor Cudd Dean of the School of Business Administration
Assistant Professors Hagedorn, Nixon
Lecturer Butler

Office Administration (B.S.)
General Education (see pages 27-29 for list of approved courses):
Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Mathematics 125, 126
Computer Science 100

36 hour common body of knowledge in economics and business administration including Economics 101, 102, Business Administration 201, 202, 211, 212, 302, 311, 315, 335 and 440.

Completion of one of following concentrations:
For Secretarial concentration—25-30 hours office administration including 121, 125, 219, 223, 227, 228, 229, 309, and 400.
Students who have had previous training in shorthand or typewriting may be exempted from Office Administration 121, 125.
For Office Management concentration
18-21 hours office administration including 121, 219, 309, 400, 410, 450 and 460.
Students who have had previous training in typewriting may be exempted from Office Administration 121.
(Maximum of 72 hours accepted in economics, business administration and office administration either concentration)
Electives to complete 128 hours.

Office Administration Certificate
60 semester hours with 2.00 average both overall and at UTC; last 30 hours in residence at UTC

English 101
6 hours humanities electives
Computer Science 100, 123
Economics 101, 102
Office Administration 109, 219, 220, 223, 227, 228, 229

Students not meeting the prerequisite standards for advanced typewriting and shorthand (45 words a minute and 90 words a minute, respectively) will be required to take appropriate courses from Office Administration 121, 125, and 223.

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: Secretarial Science; Office Management.

See typical course of study for office administration B.S.: secretarial science concentration below.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Mathematics 126</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 201</td>
<td>3</td>
</tr>
<tr>
<td>Office Administration 219</td>
<td>3</td>
</tr>
<tr>
<td>Electives 6</td>
<td>Behavioral/Social Science Elective 3</td>
</tr>
<tr>
<td>Behavioral/Social Science Elective 3</td>
<td>Electives 6</td>
</tr>
<tr>
<td>Election 18</td>
<td>18</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td></td>
</tr>
<tr>
<td>Business Administration 212</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 335</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 313</td>
<td>3</td>
</tr>
<tr>
<td>Electives 6</td>
<td>Electives 6</td>
</tr>
<tr>
<td>Election 15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td></td>
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<tr>
<td>Office Administration 400</td>
<td>3</td>
</tr>
<tr>
<td>Office Administration 450</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 315</td>
<td>3</td>
</tr>
<tr>
<td>Interdisciplinary or Non-Western 3</td>
<td></td>
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<tr>
<td>Electives 7</td>
<td>7</td>
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<tr>
<td>Election 16</td>
<td>16</td>
</tr>
</tbody>
</table>

*ACT score must be 19 or greater in order to waive Mathematics 107.
*Placement test required.

See typical course of study for office administration B.S.: office management concentration below.

<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>General Education</td>
<td>Category A 3</td>
</tr>
<tr>
<td>Economics 101</td>
<td>Mathematics 125 3</td>
</tr>
<tr>
<td>Humanities Elective 3</td>
<td>Fine Arts Elective 3</td>
</tr>
<tr>
<td>Office Administration 211**</td>
<td>Computer Science 100 3</td>
</tr>
<tr>
<td>Physical Education 021 1</td>
<td>Physical Education Activity 1</td>
</tr>
<tr>
<td>Election 15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Mathematics 126</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 201</td>
<td>3</td>
</tr>
<tr>
<td>Office Administration 228</td>
<td>3</td>
</tr>
<tr>
<td>Office Administration 121**</td>
<td>Behavioral/Social Science Elective 3</td>
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<tr>
<td>Electives 3</td>
<td>3</td>
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<tr>
<td>Election 3</td>
<td>3</td>
</tr>
<tr>
<td>Election 15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td></td>
</tr>
<tr>
<td>Business Administration 212</td>
<td>3</td>
</tr>
<tr>
<td>Office Administration 219</td>
<td>3</td>
</tr>
<tr>
<td>Office Administration 229</td>
<td>3</td>
</tr>
<tr>
<td>Behavioral/Social Science Elective 3</td>
<td>Office Administration 223 3</td>
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<tr>
<td>Electives 3</td>
<td>3</td>
</tr>
<tr>
<td>Election 15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Senior</strong></td>
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</tr>
<tr>
<td>Office Administration 400</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 315</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 302</td>
<td>3</td>
</tr>
<tr>
<td>Interdisciplinary or Non-Western 3</td>
<td></td>
</tr>
<tr>
<td>Electives 12</td>
<td>12</td>
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<tr>
<td>Election 16</td>
<td>16</td>
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<tr>
<td>Election 18</td>
<td>18</td>
</tr>
</tbody>
</table>

*ACT score must be 19 or greater in order to waive Mathematics 107.
*Placement test required.

106
The two year program in office administration is offered to high school graduates who want to earn a certificate in the secretarial field but who do not plan to complete four years of University training and earn a degree. However, credit for all courses may be applied toward a degree should a student desire to complete the four-year program at a later date.

The following program is a typical two-year office administration certificate curriculum guide to follow:

**Office Administration (2-Year Certificate)**

<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>General Education</td>
<td>Economics 102 3</td>
</tr>
<tr>
<td>Category A</td>
<td>Office Administration 109 3</td>
</tr>
<tr>
<td>Office Administration 121</td>
<td>Office Administration 223 3</td>
</tr>
<tr>
<td>Computer Science 100</td>
<td>Office Administration 125 3</td>
</tr>
<tr>
<td>Business Administration 103</td>
<td>Humanities 3</td>
</tr>
<tr>
<td>Economics 101</td>
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<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>Business Administration 335 3</td>
</tr>
<tr>
<td>Office Administration 219</td>
<td>Office Administration 228 3</td>
</tr>
<tr>
<td>Office Administration 220</td>
<td>Humanities 3</td>
</tr>
<tr>
<td>Office Administration 227</td>
<td>Computer Science 123 3</td>
</tr>
<tr>
<td>Office Administration 229</td>
<td>Business Administration 201 3</td>
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<td></td>
<td>15</td>
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</tr>
</tbody>
</table>

**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 hours four. **Prerequisites:** typing speed of 30 net words a minute or corequisite: 121.

**125 Elementary Shorthand (3)**

A study of Gregg shorthand theory, with emphasis on reading and dictation from the beginning. Class hours four. **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 Communications (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, MTST, and transcribing machines. Class hours three. Laboratory hours two. **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 and MTST included. Emphasis on speed development and production. Class hours three. Laboratory hours two. **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 hours three. **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.

**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 non-automated filing; microfilming systems; tape processing; forms design; retention and disposal of records; and supervision, standards and work measurement.

**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.

**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.

**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.

**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.

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

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

**499r Group Studies (1-4)**
School of Education

Professor Stinnett, Dean
Professor Bibler, Director of Student Teaching and Field Services; Certification Officer
Associate Professor Hales, Coordinator of Graduate Education Programs

Organizational Description
All programs leading to initial certification by the Tennessee State Department of Education and programs in Community Counseling and Recreation Education are administered through the School of Education.

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 academic 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 departmental office in which the program is located or the School of Education office.

Curriculum and Instruction
Associate Professor Bartoo, Head
Professors B. Benson, T. Bibler
Associate Professors W. Butterfield, Hunt, Kingdon, Renneisen
Assistant Professors Area, Loewen, McCullough, Slagle, Wofford
Instructor Rowe

Educational Administration and Supervision
Associate Professor Hales, Head
Professors R. Benson, Hyder, C. Temple, Whittacre
Associate Professor L. Davis
Assistant Professors Baker, Quarles, True

Health, Physical Education and Recreation
Associate Professor Norred, Head
Professors Averitte, Stinnett
Associate Professor L. Fanning
Assistant Professors Ford, Wood
Instructor Virgets

Special Education and Counseling
Professor E. Davis, Head
Associate Professors DeVivo, Ruby
Assistant Professors J. Davis, T. Miller, Sitzman
Instructor Taylor

Recommendation For Teacher Certification
The University will recommend for teacher certification and for graduation with a teaching major only those students who earn at least a 2.00 academic average in their teaching major area and at least a 2.00 academic average in each professional education course offered for certification or required for graduation and meet all requirements of appropriate approved program. Certification requirements for Georgia include a minimum of 'C' in each professional education course. These requirements apply to both undergraduate (B.A. and B.S.) and post-baccalaureate students. Programs at UTC leading to initial teacher certification are accredited by the National Council for Accreditation of Teacher Education.

The Tennessee State Board of Education in November, 1977, set forth a regulation effective November, 1978, requiring all students preparing for a career in teaching in Tennessee to pass a standardized test of basic skills (mathematics, reading, and language) prior to admission to teacher education programs. In compliance with this regulation, The University of Tennessee will administer such tests each semester.

This standardized test must be passed by every person seeking either initial certification or additional endorsements to certification for Tennessee.

The specific requirements for initial certification in a program are dependent upon the approved programs as certified by the Tennessee State Department of Education. Students seeking certification must meet the academic and endorsement requirements in effect at the time they apply to the State Department for certification. Current catalog requirements reflect only the certification requirements in effect at the time the catalog is printed. These requirements may change by the time a student applies for certification.

Admission to Teacher Education
Applicants who give evidence of possessing qualifications and characteristics reasonably expected for entry into the teaching profession will be admitted to the teacher education program. Selection of qualified students is made on the basis of application during the sophomore year, with the exception of transfer students who are required to complete a semester of study at the University before their applications will be reviewed. Applications must be filed no later than the student's completion of the first semester of the junior year.* 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 applies to every student seeking teacher certification.

Post-baccalaureate students must meet the standards set by the University for admission as well as the requirements of the School of Education. The student who has obtained a degree at another institution and wishes to be recommended for certification by this institution may be required to take at The University of Tennessee at Chattanooga additional courses and student teaching or practicums necessary to demonstrate competency in the appropriate areas of certification.* Programs leading to cer-

*Under special circumstances, policies, procedures, and requirements for admission to the TEP may be waived at the discretion of the dean of the School of Education.
tification are approved by UTC and the State Department of Education. Recommendations for certification through UTC are made only through the approved program approach. Any student seeking certification should consult with the certification officer in the School of Education located in Hunter Hall, Room 207.

A student who wishes to be admitted to the teacher education program (TEP) must file a formal application with the School of Education, present a 2.25 academic average both overall and on courses at UTC, demonstrate competency in basic English communication skills, demonstrate competency in reading skills, show evidences of physical fitness and emotional maturity as well as a professional commitment to education and demonstrate high moral character. In addition, individual certification programs may have specific requirements in relation to their academic specializations. Each student is expected to file with the School of Education his or her current medical examination record signed by a licensed physician. A speech and hearing screening test is also required.

Beginning in November, 1978, an additional requirement for entrance to the teacher education program was made. Under directive from the State Department of Education, persons who desire new certification, or additional endorsements to existing certificates, must pass the California Achievement Test at or above the minimum level established by the State Department. Therefore, the California Achievement Test is now required as one part of the necessary criteria for TEP admission.

The TEP application must be approved one full semester prior to registration for any course for which admission to the teacher education program is a prerequisite. * The School of Education will notify each applicant of the action taken on his or her application.

The professional semester schedule in the Education sequence consists of the following courses for the program listed below:

- Elementary Education: 400, 404, 405.
- Secondary Education: 430, 431, 438.
- Special Education: 440, 460, 461, 469.
- Early Childhood: 400, 404, 419.

Elementary education majors will be scheduled for student teaching in dual school placements, Education 405, for the full semester. The student will be assigned to both an inner-city school and to a suburban or rural school. Each placement will involve eight (8) weeks. Education 400 and 404 will be scheduled on Tuesday and Thursday afternoons during the student teaching period.

Early Childhood majors will be scheduled for student teaching in Education 419 for the full semester. The student will be assigned eight (8) weeks in a kindergarten classroom placement, and eight (8) weeks in an intermediate classroom placement. Education 400 and 404 will be scheduled on Tuesday and Thursday afternoons during the student teaching period.

*Under special circumstances, policies, procedures, and requirements for admission to the TEP may be waived at the discretion of the dean of the School of Education.

Secondary Education majors will be scheduled in Education 430 and 431 during the first eight (8) weeks of the professional semester and in Education 438 in second eight (8) weeks of the term.

Special Education majors will be scheduled in Education 440, 461 and 465 during the first eight (8) weeks of the semester and in Education 469 during the second eight (8) weeks of the term.

The student must obtain a 2.00 minimum grade point average on block courses as prerequisite to continuation.

A 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 that he or she may plan a program appropriately. Requirements to meet out of state certification will be in addition to UTC requirements.

**Admission to Student Teaching**

Applications for admission to student teaching, (Education 405, 406, 419 or 438, 439, 469) must be filed with the School of Education ten (10) months preceding the professional semester. For admission to Education 405, 406, 419, 438, 439, 469, candidates must have a 2.25 academic grade point average both overall and at UTC, evidence reasonably sound mental and physical health, acceptable speech, and have approval of the director of student teaching, and the recommendation of the major department. Students must meet all of the above requirements and be admitted to the teacher education program at least one full semester prior to registration for the semester in which they plan to student teach. All elementary, early childhood, and special education majors must demonstrate competency in manuscript and cursive handwriting. Instruction and remediation, if necessary, are provided so that this competency can be met.

Student teaching may be scheduled according to the schedule below:

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
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</thead>
<tbody>
<tr>
<td>Elementary Education</td>
<td>Business</td>
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<tr>
<td>Art</td>
<td>English</td>
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<tr>
<td>Home Economics</td>
<td>Foreign Language</td>
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<tr>
<td>Science</td>
<td>Health &amp; Physical Education</td>
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<tr>
<td>Social Science</td>
<td>Mathematics</td>
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<tr>
<td>Economics</td>
<td>Music</td>
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<tr>
<td>Geography</td>
<td>Special Education</td>
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<tr>
<td>History</td>
<td></td>
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<tr>
<td>Political Science</td>
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<tr>
<td>Psychology</td>
<td></td>
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<tr>
<td>Sociology</td>
<td></td>
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</tbody>
</table>

Elementary education, including early childhood, may be scheduled in either the fall or spring semester.

General orientation conferences on student teaching will be held for all prospective student teachers during the semester preceding their student teaching. Prospective student teachers are required to attend the scheduled conferences. The dates of these conferences will be posted on the School of Education bulletin board located outside the Certification Office, Hunter Hall, Room 207. It is the responsibility of the student to learn the times and dates of these conferences, and to attend.

*Under special circumstances, policies, procedures, and requirements for admission to student teaching may be waived at the discretion of the dean of the School of Education.
Learning 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 of in the elementary school). The center operates on an appointment basis and provides initial diagnostic services to identify weaknesses.

Certification Office
The Certification Office is responsible for processing initial applications for certification to teach in the State of Tennessee. Students should refer questions concerning Tennessee (COMET) to the Certification Office. This office, located in Room 207, Hunter Hall, will also provide assistance in processing certification applications to states other than Tennessee.

Career Education Laboratory
The Career Education Laboratory 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 laboratory 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 laboratory is located in Hunter Hall.

Clearinghouse on Metric Education for Tennessee (COMET)
Organized in part under a grant from the U.S. Office of Education, 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 for conferences and workshops. Phone request for materials can be made by calling: (615) 755-4211.

Certification Programs
The School of Education offers undergraduate degree programs leading to initial certification in the following areas:
- Elementary education (grades 1-9)
- Early childhood education (grades K-3)
- Art education (grades 1-12)
- Music education (grades 1-12)
- Secondary education (grades 7-12) with teaching majors in biology, business, chemistry, earth & space science, economics, English, foreign language (French, Latin or Spanish), health and physical education, history, home economics, mathematics, physics, political science, psychology and sociology and anthropology

Special Education (General)
In addition to initial certification, the School offers the following certificate endorsement areas:
- Elementary education; early childhood education; secondary education: biology, chemistry, earth and space science, economics, English, foreign language (French, German, Latin, Spanish), general science, guidance associate, health (K-12), physical education (grades 7-12), history, home economics, mathematics, physical education (grades 1-9), physics, political science, psychology, elementary or secondary reading, special education, sociology, social science. See Certification Office for details.

Programs leading to certification requiring a graduate degree are listed on page 39.
The degree requirements and typical four (4) year schedule of classes for each program follows.

Art Education (B.F.A.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 approved natural science courses to total 8 hours in natural science plus Mathematics 120

Category E
1 approved interdisciplinary or non-Western 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:
33 hours art including 101,103,105,106; 205ror207, 208; 9 hours from 111; and 211, 212,213; and 413,414, E431, E432; (suggested: 3 hours from each group); 323,324,333 and 3 hours from 303, 305,309,343.
Participation in senior art show
26 hours education including 102,203 or 204,207,301,430,431,438, (Art 323, 324 may also count as education credit); Education 431, 438 offered in fall only
2 25 average in teaching fields and in education courses
Electives to complete 128 hours
See typical course of study in art education. (B.F.A.) below.

<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 3</td>
<td>General Education Category A 3</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>Education 102</td>
</tr>
<tr>
<td>Science Elective</td>
<td>Science Elective</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>Physical Education 1</td>
</tr>
<tr>
<td>Art 105</td>
<td>Art 106</td>
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<tr>
<td>Art 101</td>
<td>Art 103</td>
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<td>17</td>
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<td>16</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Apply for Admission to TEP.</td>
</tr>
<tr>
<td>Education 204 or 203</td>
<td>Humanities/Fine Arts Elective 3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>Education 207</td>
</tr>
<tr>
<td>Art 205r or 208r</td>
<td>Social Science Elective</td>
</tr>
<tr>
<td>Art 207</td>
<td>Art 208</td>
</tr>
<tr>
<td>Art 227</td>
<td>Art History 111 or 211 or</td>
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<td></td>
<td>212 or 213</td>
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<td>18</td>
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<td></td>
<td>15</td>
</tr>
</tbody>
</table>

110
Junior
Apply for Student Teaching
Interdisciplinary/Non-Western
Art 333
Education 301
Humanities/Fine Arts Elective
Art 323
Art History 111 or 211 or 212 or 213

Senior
Education 430
Education 431
Education 438
Art 303 or 305 or 309 or 343
Art 490
Elective
Elective
Senior Art Show

Total Hours 128

Early Childhood Education (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (6 hours), plus courses in communications and language arts to total 12 hours; must include English 228 with three hours from Theatre and Speech 103, 107, 108, 109, 309, 315, English 360, 361, or 460

Category B
3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each), plus courses in humanities/fine arts to total 15 hours in three fields other than history; must include Art 222 and Music 321

Category C
2 approved behavioral or social science courses (6 hours) plus courses in behavioral or social sciences to total 12 hours in two fields other than education; for certification purposes, 6 of the hours may be in history

Category D
2 approved natural science courses and one course from Biology 306, 313, Environmental Studies 150, or Geography 407, plus an additional natural science course to total 12 hours

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Physical Education 021 plus one additional semester physical education activity

Major and related courses:
Mathematics 115, 116 (alternative: Mathematics 195 and 195 or 195 and upper level mathematics course) 12 hours from health, physical education, family relations including:
4 hours minimum in health: HPE 154 and 302 required
4 hours physical education from HPE 330 required; maximum 2 hours physical activity permitted
Remaining hours from additional Health or Physical Education theory courses (100, 202, 224, 225, 436), Home Economics 105, or Sociology 215
35 hours Education including 102, 202 or 203, 207, 301, 400, 403, 404, 410, 419, 420
2.25 average in all courses
Electives to complete 128 hours

See typical course of study in early childhood education (B.S.) below.

First Semester | Second Semester
--- | ---

Freshman
General Education
Category A 3 | Category A 3
Mathematics 115 3 | Education 102 2
Science Elective 4 | Fine Arts Elective 3
Humanities/Fine Arts Elective 3 | Social Science Elective 3
Social Science Elective 3 | Free Elective 3

Sophomore
English 228 3 | Apply for Admission to TEP
Art 222 3 | Communication Skills 3
Mathematics 116 3 | Education 207 3
Health Education 154 3 | Humanities Elective 3
Education 202 3 | Environmental Science 3
Free Elective 3 | Elective 3

Junior
Apply for Student Teaching
Music 321 3 | Health Education 302 3
Music 321 3 | Education 403 3
Physical Education 330 3 | Education 420 3
Social Science Elective 3 | Education 410 3
Science Elective 3 | Health or Physical Education Elective 3
Physical Education Activity 3 | Education Elective 3
Free Elective 3 | 15

Senior
Education 400 3 | Education 301 3
Education 404 3 | Social Science Elective 3
Education 419 9 | Elective 3
 | Elective 3
 | 15

Elementary Education (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (6 hours), plus courses in communications and language arts to total 12 hours; must include English 228 with three hours from Theatre and Speech 103, 107, 108, 109, 309, 315, English 360, 361, or 460

Category B
3 approved courses: one from humanities, one from fine arts, and one from either (3 hours each) plus courses in humanities/fine arts to total 14 hours in three fields other than history; must include Art 222 and Music 321

Category C
2 approved behavioral or social science courses (6 hours) plus courses in behavioral or social sciences to total 12 hours in two fields other than Education; for certification purposes, 6 of the hours may be in history

Category D
2 approved natural science courses and one course from Biology 306, 313, Environmental Studies 150, or Geography 407 plus an additional natural science course to total 12 hours

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Physical Education 021 plus one additional semester physical education activity
Major and related courses:
Mathematics 115, 116 (alternative: Mathematics 195 and 150 or 195 and upper level mathematics course)
12 hours from health, physical education, family relations including:
4 hours health from Health Education 302 (required), 100, 154, 303, or Home Economics 105
4 hours physical education from HPE 330 required; maximum 2 hours physical activity permitted
Remaining hours from additional health or physical education theory courses or Sociology 215
32 hours Education including 102, 203, 207, 301, 400, 403, 404, 405, 420
2.25 average in all courses
Electives to complete 128 hours

See typical course of study in elementary education (B.S.) below.

First Semester | Second Semester
---|---
Freshman
General Education | General Education
Category A | Category A
Science Elective | Science Elective
Mathematics 115 | Education 102
Physical Education 021 | Fine Arts Elective
Humanities/Fine Arts Elective | Social Science Elective
Social Science Elective | Elective
| | 17 | 18

Sophomore
English 228 | Apply for Admission to TEP
Art 222 | Communication Skills
Mathematics 116 | Education 207
Physical Education Elective | Humanities Elective
Education 203 | Environmental Science
Elective | Elective
| | 18 | 15

Junior
Apply for Student Teaching | Health Education 302
Music 321 | Education 403
Physical Education 330 | Education 420
Social Science Elective | Elective
Science Elective | Health and Physical
Physical Education Activity | Education Elective
Elective | |
| | 16 | 15

Senior
Education 400 | Education 301
Education 404 | Social Science Elective
Education 405 | Elective
| | 15 | 15

Music Education (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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, plus Mathematics 120

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Major and related courses:
Music 107, 108, 207, 208, 209, 210, 315, 316
20 hours applied music including: 8 semesters (8 hours) ensemble participation
8 semesters (8 hours) primary instrumental or vocal study or 6 hours primary and 2 hours secondary
Music 131, 132 plus 141, 142 for piano proficiency
One of the following options:
(1) Instrumental emphasis: Music 221, 3 hours of 223r, 3 hours of 224r; 2 hours of 225r; 226; 307 or 326; 325, 327, 328
(2) Vocal emphasis: 133, 134, 221, 1 hour each of 223r, 224r, 225r; 307; 309, 310, 333, 2 hours applied piano study
26 hours education including 102, 203, or 204, 207, 301, 406, 430, 432, 439, Music 321 (Education 432, 439 offered in spring only)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours

See typical course of study in elementary education (B.S.) below.

Music Education: Instrumental (B.S.)
First Semester | Second Semester
---|---
Freshman
Mathematics 120 | Education 102
General Education | General Education
Category A | Category B
General Education | Category C
Category A | Music 000
Music 000 | Instrumental Ensemble
Ensemble-Marching Band | Applied Music (Primary)
Applied Music (Primary) | Music 131
Music 141 | Music 107
Music 141 | Music 142
| | 17 | 14

Sophomore
General Education | Apply for admission to TEP
Physical Education Activity | Education 203 or 204
Music 000 | General Education
Ensemble-Marching Band | Category B
Applied Music (Primary) | General Education
Music 141 | Category C
Music 207 | Music 00
Music 223 r (01, 02) | Applied Music (Primary)
Music 226 | Instrumental Ensemble
| | 16 | 18

Junior
Apply for Student Teaching | Education 207
Natural Science | General Education
General Education | Category A
Category B | Music 000
Music 000 | Instrumental Ensemble
Ensemble-Marching Band | Applied Music (Primary)
Applied Music (Primary) | Music 210
Music 209 | Music 316
Music 315 | Music 225r (01, 02)
Music 224r (02) | Music 307 or 326
Music 224r (03) | |
Music 221 | Music 224r (01)
| | 17 | 18
Apply for Student Teaching

General Education (see pages 27-29 for list of approved courses):

**General Education**
- 2 approved courses in written communication in the English language, at least one at the freshman level, to total 6 hours

**Music Education: Vocal (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>Mathematics 120</td>
<td>Education 102</td>
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<tr>
<td>General Education Category A</td>
<td>General Education Category B</td>
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<tr>
<td></td>
<td>Physical Education 021</td>
</tr>
<tr>
<td>Choral Ensemble</td>
<td>Music 000</td>
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<tr>
<td>Music 000</td>
<td>Choral Ensemble</td>
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<tr>
<td>Applied Music (Primary)</td>
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<tr>
<td>Music 207</td>
<td>Music 000</td>
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<tr>
<td>Music 221</td>
<td>Choral Ensemble</td>
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<tr>
<td>Music 133</td>
<td>Applied Music (Primary)</td>
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<tr>
<td>Music 131</td>
<td>Music 142</td>
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<tr>
<td>Music 141</td>
<td>Music 208</td>
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<table>
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<tbody>
<tr>
<td>Natural Science</td>
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</tr>
<tr>
<td>Physical Education Activity</td>
<td>Apply for admission to TEP</td>
</tr>
<tr>
<td>Music 000</td>
<td>Education 203 or 204</td>
</tr>
<tr>
<td>Choral Ensemble</td>
<td>General Education</td>
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<tr>
<td>Applied Music (Primary)</td>
<td>Category B</td>
</tr>
<tr>
<td>Music 141</td>
<td>Choral Ensemble</td>
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<tr>
<td>Music 207</td>
<td>Music 000</td>
</tr>
<tr>
<td>Music 221</td>
<td>Choral Ensemble</td>
</tr>
<tr>
<td>Music 133</td>
<td>Applied Music (Primary)</td>
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<tr>
<td>Music 131</td>
<td>Music 142</td>
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<tr>
<td>Music 224r</td>
<td>Music 208</td>
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<tr>
<th>Junior</th>
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<tbody>
<tr>
<td>Apply for Student Teaching</td>
<td>Education 207</td>
</tr>
<tr>
<td>Natural Science</td>
<td>General Education Category A</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>Choral Ensemble</td>
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<tr>
<td>Choral Ensemble</td>
<td>Music 000</td>
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<tr>
<td>Music 000</td>
<td>Applied Music (Primary)</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Music 210</td>
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<tr>
<td>Music 209</td>
<td>Music 316</td>
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<td>Music 315</td>
<td>Music 251</td>
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<tr>
<td>Music 307</td>
<td>Music 225r</td>
</tr>
<tr>
<td>Music 251</td>
<td>Music 333</td>
</tr>
<tr>
<td>Music 224r</td>
<td>Music 134</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior</th>
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</thead>
<tbody>
<tr>
<td>Education 301</td>
<td>Education 430</td>
</tr>
<tr>
<td>General Education Category E</td>
<td>Education 432</td>
</tr>
<tr>
<td>General Education Category C</td>
<td>Education 439</td>
</tr>
<tr>
<td>General Education Category B</td>
<td>Education 431</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>Education 000</td>
</tr>
<tr>
<td>Music 000</td>
<td>Music 310</td>
</tr>
<tr>
<td>Choral Ensemble</td>
<td>Music 321</td>
</tr>
<tr>
<td>Music Elective</td>
<td>Music 000</td>
</tr>
<tr>
<td>Music 000</td>
<td>Music 321</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Music 328</td>
</tr>
<tr>
<td>Applied Music (Primary)</td>
<td>Music 328</td>
</tr>
</tbody>
</table>

**Secondary Education: Biology (B.S.)**

General Education (see pages 27-29 for list of approved courses):

**Category A**
- 2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 approved mathematics or natural or applied science courses other than biology (6 hours; approved related courses below may apply

**Category E**
- 1 approved interdisciplinary or non-Western course (3 hours)

**Major and related courses:**
- Mathematics 125, 126 or 140, 150; Recommended: 140, 150 for prospective graduate students
- 26 hours education including one semester organic chemistry
- Recommended: two semesters organic chemistry
- Physics 103, 104 or Geology 111, 112
- Recommended: Computer Science 100 or 121
- 26 hours education including 121, 122, 123, 124; 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, 208, 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
  - 26 hours education including 102, 204, 207, 301, 430, 431, 438 (Education 431, 438 offered in fall only)
  - 2.25 average in teaching fields and in education courses
  - Electives to complete 128 hours

See typical courses of study in secondary education: biology (B.S.) below
Secondary Education: Business (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 educational (approved related courses below will apply) 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, plus Mathematics 120 or 6 hours approved mathematics

Category E
1 approved interdisciplinary or non-Western course (3 hours)
1 additional course outside teaching field from communications, humanities, mathematics, natural or behavioral sciences

Physical Education 021 plus one additional physical education activity

Major and related courses:
Home Economics 328
Economics 101,102
Business Administration 103 or 325, 201, 202, 335
Office Administration 109, 121, 219, 223
One of the following areas:
Area 1: Office Administration 125, 220, 227, 228, 229
Area 2: Two additional accounting courses for minimum of 10 hours in accounting, Business Administration 336,3 hours economics elective (hours in economics must total 12 for endorsement in this area)
26 hours education including 102,204,207,301,430,431,438 (Education 431, 438 offered in spring only)
2.25 average in teaching fields and in education courses

Electives to complete 128 hours

See typical course of study in secondary education: business (B.S.) below.

First Semester | Second Semester
--- | ---
**Freshman**
General Education 3 | General Education 3
Category A 3 | Category A 3
Mathematics 120 3 | Education 102 2
Science Elective 4 | Economics 101 3
Humanities/Fine Arts Elective 3 | Physical Education Activity 1
Office Administration 109 3 | Office Administration 121 3
 | 17 | 16
**Sophomore**
Office Administration 223 3 | Apply for Admission to TEP
Education 204 3 | Humanities/Fine Arts Elective 3
Humanities/Fine Arts Elective 3 | Education 207 3
Office Administration 125 3 | Economics 102 3
Office Administration 219 3 | Home Economics 328 3
Elective 103 3 | Office Administration 227 3
 | Business Administration 201 3
 | 18 | 18
**Junior**
Apply for Student Teaching 3 | Business Administration 103 or 325 3
Office Administration 228 3 | Office Administration 220 3
Business Administration 335 3 | Elective 3
Education 301 3 | Elective 3
Social Science Elective 3 | Elective 3
Business Administration 202 3 | Elective 3
 | 15 | 15

Senior
Humanities/Fine Arts Elective 3 | Education 430
Office Administration 229 3 | Education 431
Elective 3 | Education 438
Interdisciplinary 3 | 15
Elective 3

Secondary Education: Chemistry (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 approved mathematics or natural or applied science courses other than chemistry (approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Mathematics 140, 150, 160
8 hour sequence in biology or geology (must have 8 hours biology for general science certification)
8 hours physics: 103, 104
24 hours chemistry including 121, 122, 241, 351, 352, 371
Recommended electives: Computer Science 100 or 121
Chemistry 443, 466
26 hours education including 102,204,207,301,430,431,438 (Education 431, 438 offered in fall only)
2.25 average in teaching fields and in education courses

Electives to complete 128 hours

See typical course of study in secondary education: chemistry (B.S.) below.

First Semester | Second Semester
--- | ---
**Freshman**
General Education 3 | General Education 3
Category A 3 | Category A 3
Humanities Elective 3 | Fine Arts Elective 3
Physics 103 4 | Physics D104 4
Chemistry 121 4 | Chemistry 122 4
Physical Education 021 1 | Physical Education Activity 1
 | 15 | 15
**Sophomore**
Mathematics 140 4 | Apply for Admission to TEP
Chemistry 241 4 | Humanities/Fine Arts Elective 3
Biology 121, 123/Geology 111 4 | Biology 122, 124/Geology 112 4
Education 102 2 | Education 204 3
Behavioral Science Elective 3 | Chemistry 351 4
Mathematics 150 4 | Mathematics 150 4
 | 17 | 18
**Junior**
Apply for Student Teaching 3 | Apply for Student Teaching 3
Chemistry 352 4 | Chemistry 371 4
Mathematics 160 4 | Education 301 3
Education 207 3 | Humanities/Fine Arts Elective 3
Behavioral Science Elective 3 | Behavioral Science Elective 3
Electives 3 | Electives 3
 | 17 | 16
Senior
Education 430  3  Interdisciplinary/Non-Western  3
Education 431  6  Chemistry Electives  6
Education 438  6  Electives  6
  15  15

Secondary Education: Earth and Space Sciences (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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
2 approved mathematics or natural or applied science courses other than geology or geography (approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
6-8 hours mathematics from 125, 126 or 140, 150
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
12 hours Geography 101, 206, 221, 407
Recommended elective: Computer Science 100 or 121
26 hours education including 102, 204, 207, 301, 430, 431, 438 (Education 431, 438 offered in fall only)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours

See typical course of study in secondary education: earth and space sciences (B.S.) below.

First Semester
Freshman
General Education 3
Category A 3
Humanities Elective 3
Geography 101 3
Biography 121 and 123 or
Physics or Chemistry 4
Physical Education 021 1
  14

Sophomore
Geology Elective
Astronomy 101 or 102
Education 102
Behavioral Science Elective
Biography or Physics 103 or Chemistry 121
  16

Second Semester
General Education
Category A 3
Fine Arts Elective 3
Geology 111 4
Biography 122 and 124
Physical or Chemistry 4
Physical Education Activity 1
  15

Applying for Admission to TEP
Geology Elective
Education 204 3
Humanities/Fine Arts Elective 3
Geography 206 3
Biography or Physics 104 or Chemistry 122 4
  16

Junior
Apply for Student Teaching
Mathematics 125 or 140 3-4
Education 207 3
Behavioral Science Elective 3
Geography 221 3
Electives 3
  15-16

Senior
Education 430  3  Interdisciplinary/Non-Western  3
Education 431  6  Geography 407  3
Education 438  6  Electives  9
  15  15

Secondary Education: Economics* (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 approved natural science courses to total 8 hours in natural sciences, plus Mathematics 120

Category E
1 approved interdisciplinary or non-Western 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 Administration 211
29 hours education including 102, 204, 207, 301, 421, 430, 431, 438 (fall only 431 and 438)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours

See typical course of study in secondary education: economics (B.S.) below.

First Semester
Freshman
General Education
Category A 3
Mathematics 120 3
Science Elective 4
Humanities/Fine Arts Elective 3
Physical Education 021 1
Economics 101 3
  14

Sophomore
Geology Elective
Astronomy 101 or 102
Education 102
Behavioral Science Elective
Biography or Physics 103 or Chemistry 121
  16

Second Semester
General Education
Category A 3
Mathematics 120 3
Education 102 2
Science Elective 4
Social Science Elective 3
Physical Education Activity 1
Economics 102 3
  17

*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).
See typical course of study in secondary education: English (B.S.) below.

First Semester

<table>
<thead>
<tr>
<th>Freshman</th>
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</thead>
<tbody>
<tr>
<td>General Education</td>
<td></td>
</tr>
<tr>
<td>Category A</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>Theatre and Speech 103 or 107 or 108 or 309</td>
<td>3</td>
</tr>
<tr>
<td>16-17</td>
<td>15-16</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Sophomore</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Education 204</td>
<td>3</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>American Literature</td>
<td>3</td>
</tr>
<tr>
<td>English 203</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

See typical course of study in secondary education: Foreign Language (French, Latin, or Spanish) (B.S.)

First Semester

<table>
<thead>
<tr>
<th>Junior</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply for Student Teaching</td>
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</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Economics Elective</td>
<td>3</td>
</tr>
<tr>
<td>Education 301</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Economics</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Sophomore</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Education 204</td>
<td>3</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>American Literature</td>
<td>3</td>
</tr>
<tr>
<td>English 203</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

Major and related courses:

3 hours from Theatre and Speech 103, 107, 108, 109, 309
33 hours 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 (9) additional hours of English, six (6) of which must be from 300 and 400 levels
29 hours Education including 102, 204, 207, 301, 421, 430, 431, 438 (spring only 431 and 438)
2.50 average in teaching field
2.25 average in education courses
Electives to complete 128 hours
Major and related courses
French and Spanish:

22 hours in one language above the second college year

Latin:
21 hours beyond Latin 101, 102, plus 9 hours from Classics 307, 308, 395, 396, 397
26 hours Education including 102, 204, 207, 301, 430, 431, 438 (Education 431, 438, offered in spring only)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours

See typical course of study in secondary education: foreign language (B.S.) below.

<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>
</tr>
<tr>
<td>General Education</td>
<td>General Education</td>
</tr>
<tr>
<td>Category A</td>
<td>Category A</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>Mathematics 120</td>
</tr>
<tr>
<td>Science Elective</td>
<td>Science Elective</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Humanities/Fine Arts Elective</td>
</tr>
<tr>
<td>French 101</td>
<td>French 102</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Humanities/Fine Arts Elective</td>
</tr>
<tr>
<td>Education 204</td>
<td>Education 204</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Humanities/Fine Arts Elective</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>Interdisciplinary</td>
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<tr>
<td>French 211</td>
<td>French 211</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td><strong>Junior</strong></td>
</tr>
<tr>
<td>Apply for Student Teaching</td>
<td>Apply for Student Teaching</td>
</tr>
<tr>
<td>French 300-400 Elective</td>
<td>French 300-400 Elective</td>
</tr>
<tr>
<td>Education 301</td>
<td>Education 301</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>Social Science Elective</td>
</tr>
<tr>
<td>French 300 Elective</td>
<td>French 300 Elective</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td><strong>Senior</strong></td>
</tr>
<tr>
<td>Education 430</td>
<td>Elective</td>
</tr>
<tr>
<td>Education 431</td>
<td>Elective</td>
</tr>
<tr>
<td>Education 438</td>
<td>Elective</td>
</tr>
<tr>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

Secondary Education: History* (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 history

Category D
2 approved natural science courses to total 8 hours in natural sciences, plus Mathematics 120

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

Second Semester

Apply for admission to TEP

French 300-400 Elective

French 300-400 Elective

Elective

3

3

3

15

15

15

18

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

Major and related courses:
33 hours history including 6 hours History 101, 102, 6 hours American history, History 301
29 hours education including 102, 204, 207, 301, 421, 430, 431, 438 (Education 431, 438 offered in spring only)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours

See typical course of study in secondary education: history (B.S.) below.

<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>
</tr>
<tr>
<td>General Education</td>
<td>General Education</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>Mathematics 120</td>
</tr>
<tr>
<td>Science Elective</td>
<td>Science Elective</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Humanities/Fine Arts Elective</td>
</tr>
<tr>
<td>French 102</td>
<td>French 102</td>
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<td>16</td>
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</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td><strong>Sophomore</strong></td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Humanities/Fine Arts Elective</td>
</tr>
<tr>
<td>Education 204</td>
<td>Education 204</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>Humanities/Fine Arts Elective</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>Interdisciplinary</td>
</tr>
<tr>
<td>American History</td>
<td>American History</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td><strong>Junior</strong></td>
</tr>
<tr>
<td>Apply for Student Teaching</td>
<td>Apply for Student Teaching</td>
</tr>
<tr>
<td>History 300-400</td>
<td>History 300-400</td>
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<td><strong>Senior</strong></td>
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</tr>
<tr>
<td>Education 430</td>
<td>Education 430</td>
</tr>
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<td>Education 431</td>
<td>Education 431</td>
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<td>Education 438</td>
<td>Education 438</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

*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).

Secondary Education: Home Economics (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 101, 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
2 approved mathematics or natural or applied science courses plus Mathematics 120 (approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Biology 121, 122, 123, 124, 210
Chemistry 121, 122
36 hours home economics including 101, 104, 105, 201, 206, 207, 300, 301, 302, 303, 304
26 hours education including 102,204,207,301,430,431,438 (Education 431, 438 offered in fall only)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours
See typical course of study in secondary education: home economics (B.S.) below.

Secondary Education: Home Economics (B.S.)

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Home Economics 101</td>
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<tr>
<td>General Education</td>
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</tr>
<tr>
<td>Category A</td>
<td></td>
</tr>
<tr>
<td>General Education Category B</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>1</td>
</tr>
<tr>
<td>General Education Category C</td>
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<tr>
<td>General Education Category D</td>
<td></td>
</tr>
<tr>
<td>Chemistry 121</td>
<td></td>
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</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Category C</td>
<td></td>
</tr>
<tr>
<td>General Education Category D</td>
<td></td>
</tr>
<tr>
<td>Category D</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
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Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Home Economics 101</td>
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<tr>
<td>General Education</td>
<td></td>
</tr>
<tr>
<td>Category A</td>
<td></td>
</tr>
<tr>
<td>General Education Category B</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>1</td>
</tr>
<tr>
<td>General Education Category C</td>
<td></td>
</tr>
<tr>
<td>General Education Category D</td>
<td></td>
</tr>
<tr>
<td>Chemistry 121</td>
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Sophomore

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Home Economics 105</td>
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</tr>
<tr>
<td>Home Economics 206</td>
<td>3</td>
</tr>
<tr>
<td>Education 204</td>
<td>3</td>
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<tr>
<td>Biology 121</td>
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<td>Biology 122</td>
<td>1</td>
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<tr>
<td>General Education Category C</td>
<td></td>
</tr>
<tr>
<td>(Sociology Elective)</td>
<td></td>
</tr>
</tbody>
</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Economics 304</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics 303</td>
<td>3</td>
</tr>
<tr>
<td>Education 207</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>3</td>
</tr>
<tr>
<td>Home Economics Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Activity</td>
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Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Education 430</td>
<td>3</td>
</tr>
<tr>
<td>Education 431</td>
<td>6</td>
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<tr>
<td>Education 438</td>
<td>6</td>
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<tr>
<td>Elective</td>
<td>6</td>
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<tr>
<td>General Education</td>
<td></td>
</tr>
<tr>
<td>Category E</td>
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</table>

Secondary education: health, physical education and recreation

See page 122.

Secondary Education: Mathematics (B.S.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 approved natural science courses to total 8 hours in natural sciences

Category E
1 approved interdisciplinary or non-Western 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 121
Mathematics (140), 150, 160, 195, 250 and 260

18 hours 300 and 400-level mathematics courses including 321, 350; 2.00 average in all 300 and 400-level mathematics courses
Recommended elective: Mathematics 451, 452
26 hours education including 102,204,207,301,430,431,438 (Education 431, 438 offered in spring only)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours
See typical course of study in secondary education: mathematics (B.S.) below.

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td></td>
</tr>
<tr>
<td>Category A</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>4</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics 140 (150*)</td>
<td>4</td>
</tr>
<tr>
<td>(Mathematics 250)</td>
<td></td>
</tr>
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</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td></td>
</tr>
<tr>
<td>Category A</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Activity</td>
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</tr>
<tr>
<td>Mathematics 150 (160*)</td>
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</table>

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 160 (250)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 195</td>
<td>3</td>
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</table>

Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 260 in summer school if needed.</td>
<td></td>
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</tbody>
</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Education 204</td>
<td>3</td>
</tr>
<tr>
<td>Education 301</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 350</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 321</td>
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</tr>
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</table>

Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 300-400 Elective</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 300-400 Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

*Mathematics sequence may begin with 150 rather than 140 depending on preparation.
Secondary Education: Physics (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 approved mathematics or natural or applied science courses other than physics (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Mathematics 140, 150, 160 (250, 260 recommended)
8 hours chemistry
8 hours biology or geology (biology required for general science endorsement)
22 hours physics including 103, 104, 231, 232, 498 or 499
Recommended physics electives: 301, 303, 307, 318
Recommended elective: Computer Science 100
26 hours education including 102,204,207,301,430,431,438 (Education 431, 438 offered in fall only)
1.5 average in teaching fields and in education courses
Electives to complete 128 hours

See typical course of study in secondary education: physics (B.S.) below.

First Semester  Second Semester

Freshman
General Education 3
Category A 3
Humanities Elective 3
Physics 103 4
Biology 121 and 123 or Geology III 4
Physical Education 021 1

Sophomore
Physics 231 4
Mathematics 140 4
Education 102 2
Behavioral Science Elective 3
Chemistry 121 4

Junior
Apply for Student Teaching
Physics Elective 4
Mathematics 160 4
Behavioral Science Elective 3
Education 207 3
Elective 3

Senior
Education 430 3
Education 431 6
Education 438 6

Second Semester

General Education 3
Category A 3
Fine Arts Elective 3
Physics 104 4
Biological 122 and 124 or Geology 112 4
Physical Education Activity 1

Admission to Teacher Education Program
Physics 232 4
Mathematics 150 4
Education 204 3
Humanities/Fine Arts Elective 3
Chemistry 122 4

Physics Elective 4
Education 301 3
Humanities/Fine Arts Elective 3
Behavioral Science Elective 3
Elective 3

Interdisciplinary/Non-Western Elective 3
Physics 498 or 499r 3
Electives 9

15 15

Secondary Education: Political Science (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 political science; 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, plus Mathematics 120

Category E
1 approved interdisciplinary or non-Western 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:
Three hours from Political Science 101, 102
Political Science 201
Nine hours from political science courses at the 200 level (excluding 201) distributed among three of five subfields
Nine hours from political science courses at the 300 level
 Twelve hours from political science courses at the 400 level, with no more than six hours coming from 461r, 462r, 463, 464, 471r
Three hours from Art 111, 211, 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
29 hours education including 102, 204, 207, 301, 421, 430, 431, 438
(Education 431 and 438 offered in fall only)

2.25 average in teaching fields and in education courses
Electives to complete 128 hours

See typical course of study in political science education secondary education: political science (B.S.) below.

First Semester  Second Semester

Freshman
General Education Category A 3
Mathematics 120 3
Science Elective 3
Humanities/Fine Arts Elective 3
Physical Education 021 1
Political Science 101 or 102 3

Second Semester

General Education Category A 3
Mathematics 120 3
Science Elective 4
Political Science 201 3

Physics Elective 4
Education 301 3
Humanities/Fine Arts Elective 3
Behavioral Science Elective 3
Elective 3

Interdisciplinary/Non-Western Elective 3
Physics 498 or 499r 3
Electives 9

15 15

Sophomore
Humanities/Fine Arts Elective 3
Education 204 3

Junior
Apply for admission to TEP
Political Science 200 Elective 3
Political Science 200 Elective 3
Political Science 200 Elective 3

Senior
Apply for student teaching
Political Science 300 Elective 3
Political Science 300 Elective 3
Political Science 300 Elective 3

3 3 3

15 15
Senior
Political Science 400 Elective 3  Education 430
Political Science 400 Elective 3  Education 431
Political Science 400 Elective 3  Education 438
Sociology 209, 317, 318 or 340 3
Elective 15

'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).

Secondary Education: Psychology* (B.S.)
General Education (see pages 27-29 for list of approved courses):
Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 approved natural science courses to total 8 hours in natural sciences, plus Mathematics 120
Category E
1 approved interdisciplinary or non-Western 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 101,202, or 203,201 (or equivalent), 251, 331, 345 (if a statistics course outside psychology is taken, an additional psychology elective must be completed)
29 hours education including 102, 204, 207, 301, 421, 430, 431, 438 (Education 431 and 438 offered in fall only)
2.25 average in teaching fields and in education courses
Electives to complete 128 hours
See typical course of study in secondary education: psychology (B.S.) below.

First Semester  
<table>
<thead>
<tr>
<th>Freshman</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>General Education</td>
<td>Category A</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>4</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>Psychology 101</td>
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<tr>
<td><strong>Total</strong></td>
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Second Semester  
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<tbody>
<tr>
<td>General Education</td>
<td>Category A</td>
</tr>
<tr>
<td>Education 102</td>
<td>2</td>
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<tr>
<td>Science Elective</td>
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</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
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</tr>
<tr>
<td>Psychology 201</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
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</table>

Sophomore
Humanities/Fine Arts Elective 3  Education 204 3
Humanities/Fine Arts Elective 3  Social Science Elective 3
Interdisciplinary/Non-Western 3  Psychology 251 3
Psychology 202 or 203 3  Elective 3
**Total** 15

Junior
Apply for admission to TEP

First Semester  
<table>
<thead>
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<tbody>
<tr>
<td>General Education</td>
<td>Category A</td>
</tr>
<tr>
<td>Mathematics 120</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>4</td>
</tr>
<tr>
<td>Humanities/Fine Arts Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
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<tr>
<td>Sociology 151</td>
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<td><strong>Total</strong></td>
<td>17</td>
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Second Semester  
<table>
<thead>
<tr>
<th>Freshman</th>
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</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>Category A</td>
</tr>
<tr>
<td>Education 102</td>
<td>2</td>
</tr>
<tr>
<td>Science Elective</td>
<td>4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Activity</td>
<td>1</td>
</tr>
<tr>
<td>Anthropology 152 or 208</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
</tbody>
</table>
Sophomore

Elective 3
Humanities/Fine Arts Elective 3
Education 204 3
Humanities/Fine Arts Elective 3
Interdisciplinary/Non-Western 3
Sociology/Anthropology Elective 3

Applying for admission to TEP: Humanities/Fine Arts Elective 3
Education 207 3
Social Science Elective 3
Elective 3
Sociology/Anthropology Elective 3
Sociology/Anthropology Elective 3

18

Junior

Apply for Student Teaching Elective
Education 301 3
Social Science Elective
Sociology 314 3
Sociology/Anthropology 300-400 Elective

Applying for admission to TEP: Anthropology 302 or Sociology 312 3
Sociology 394 or 450 3
Sociology/Anthropology 300-400 Elective 3
Sociology/Anthropology 300-400 Elective 3

15

Senior

Sociology/Anthropology 300-400 Elective
Education 302 3
Sociology/Anthropology Elective
Education 438 6

Applying for admission to TEP: Education 421 3
Anthropology 302 or Sociology 312 3
Sociology 394 or 450 3
Sociology/Anthropology 300-400 Elective 3
Sociology/Anthropology 300-400 Elective 3

15

Special Education: General (B.S.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 approved natural science courses to total 8 hours natural sciences

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major related courses:
Mathematics 115, 116

6 hours from Psychology 101 (required), 251, 311, 312, 313
8 hours Health and Physical Education 302 and 436 required and courses from 100, 154, 303, 400, 403, 404, 420, 440, 460, 461, 465, 469

2.25 average in education courses and in all courses outside of education
Electives to complete 128 hours

See typical course of study in special education: general (B.S.) below.

First Semester

Second Semester

Freshman

Education 102
General Education
Category A

Physical Education 021

Mathematics 115

Natural Science Elective

Elective

Sophomore

Art 222
Apply for TEP

Education 202 or 203

Humanities Elective

Education 250

Psychology Elective 251, 311, 312, 313

Physical Education Activity

Elective

Junior

Apply for Student Teaching

Education 301

Education 302

Interdisciplinary/Non-Western Elective

Health & Physical Education 302

Elective

Senior

Education 403

Education 404

Education 420

Education 460

Elective

15

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.

102 Orientation to Teaching (2)
Guided observation in classrooms and related school activities as first hand orientation to teaching. A minimum of 15 hours of observation required in addition to scheduled classes.

199r Special Projects (1-4)
Individual projects and field components; maximum credit four hours. Prerequisite: transfer student and approval of dean, School of Education.

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 Education 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 Education 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 Education 204 and Psychology 222.

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.
215 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 leadership; and the global characteristics of the target population. Special education majors only. Credit not allowed in both 250 and 400.

251 Elementary Education and Exceptional Children (3)
Recognition and understanding of educationally handicapping conditions; introduction to field of special education for the regular classroom teacher; focus on types of educational disabilities, general characteristics, and behavioral manifestations commonly encountered in regular classroom; designed for the regular classroom teacher.

301 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.

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 Education Exceptionalities (3)
A study of the psycho-social-educational treatment systems used with educational exceptionalities. Prerequisite: Education 250.

330 Academic and Behavioral Evaluation (3)
A study of the basic principles and techniques of educational evaluation in special education used by the classroom/resource teacher. Prerequisite: Education 250 or 400.

400 Exceptional Children in Regular Classrooms (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. Credit not allowed in both Education 250 and 400.

403 Teaching Language Arts and Social Studies in Elementary Schools (3)
Selection and design of materials and activities for diagnosing, directing, evaluating children’s learning of oral and written language skills and social studies concepts. Selected field experiences. Prerequisites: 420 and admission to teacher education program. May not be used for graduate credit.

404 Methods of Teaching Science and Mathematics in Elementary Schools (3)
Field-based: techniques, programs, innovations and evaluation in teaching science and mathematics. Selected lessons taught to colleagues and school children. 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 ensure experience at two different grade levels, as well as in inner city and suburban or rural schools. Prerequisites: 102, 203, 207, 301, 403, and 420 and admission to teacher education program; notification of intent to engage in student teaching 10 months prior to registration in 405. May not be used for graduate credit.

405X Observation and Student Teaching in Elementary Schools (6)
Selected senior students to teach in classrooms where at least two identified exceptional children are enrolled. Schedules must permit full time involvement with classroom five days a week for 8 weeks; weekly seminars in addition to the one required of each regular elementary education major. (This course cannot be used to meet Tennessee certification requirements for special education). Prerequisite: 251 and 466.

406 Observation and Student Teaching in Elementary School Music (3)
Prerequisites: Music 321; admission to teacher education program. May not be used for graduate credit.

410 Materials and Methods in Early Childhood Education (3)
The objectives, materials, methods, pupil activities and evaluation of pre-school 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: 102, 203, 207, 301, 403, 420; pre or co-requisites 400, 410, 404; admission to teacher education program; notification of intent to student teach 10 months prior to registration in 419. May not be used for graduate credit.

420 The Teaching of Reading in the Elementary School (3)
Survey of methods, strategies, diagnostic-prescriptive procedures and materials for teaching reading. Field component required. Prerequisite: admission to teacher education program. May not be used for graduate credit.

421 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 English education majors and of education majors in all areas of social science. Prerequisite: admission to teacher education program.

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: 420 or equivalent, or permission of instructor; admission to teacher education program. May not be used for graduate credit.

430 Secondary School Curriculum—Guidance (3)
Function and aims of curriculum in junior and senior high schools; emphasis on the learner, particularly the exceptional student, as a major factor in curriculum planning; the role of guidance services. Prerequisite: admission to teacher education program. May not be used for graduate credit.

431 Teaching Strategies and Evaluation in the Secondary School (6)
Prerequisite: admission to teacher education program. 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.

438 Observation and Student Teaching in Secondary School (6)
The student is assigned to a teacher in the secondary school under the supervision of a faculty supervisor assigned by UTC. The student schedule must permit contact with the classroom-laboratory situation full-time for a regular school week for one half of a semester. Prerequisite: 102, 204, 207, 301; Pre corequisites: 430, 431; and official admission to the teacher education program (TEP). Not approved for graduate credit.
439 Observation and Student Teaching in Secondary School Music (3)
See description under 438. Spring semester only.

440 Classroom Management in Special Education (3)
An examination of the adaptation of classroom management tech­
niques in both classroom as well as individual tutorial situations. Prer­
requisites: 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 activ­
ities incorporated. Prerequisite: admission to teacher education pro­
gram.

460, 461 Clinical Teaching (3, 3)
Examination and implementation of the principles of clinical teaching
and the individualizing of instruction. Includes the use of formal and
informal assessment results in planning educational strategy. 460 Prer­
requisites: 320, 330; 461 must be preceded by 460. 461 Corequisite: 465;
Prerequisite: admission to teacher education program.

462 Methods of Teaching Exceptional Children in the Regular Class­
room (3)
Detailed analysis of curriculum adaptation for teaching the exceptional
child in the regular classroom; emphasis on establishing behavioral
objectives, sequencing content and skills; developing procedures to
enhance individualization of instruction and planning pupil experi­
ences. (Course not approved to meet Tennessee certification require­
ments.) Prerequisite: 251 and 466.

465 Special Education Practicum (3)
This course encompasses a practicum experience for special education
students with opportunity for supervised participation in public school,
private school or institutional special educational programs. The stu­
dent will register for this course concurrently with 461. Prerequisite:
460.

466 Elementary Education Practicum with Exceptional Children (3)
Practicum experience for prospective elementary teacher selected for
this special education project: case conference, small group seminars,
one-to-one teaching, part of practicum experiences; not approved for
meeting Tennessee certification requirements for special education.
Corequisite: 251.

469 Observation and Student Teaching in Special Education (6)
Applies competencies that have been developed through preceding
experiences to the actual processes of teaching and guiding children
and youth. Student schedule must permit contact with the same class­
room situation full-time for a minimum of five days per week for at least
one half of the semester. Prerequisite: 465; spring semester only.

480 Teaching Media (3)
The selection, use and evaluation of technological innovations in au­
diovisual media; emphasis on laboratory experiences in communica­
tion 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. Taillored to fit specific school setting. Prerequisite: one year
full-time teaching in certifiable area: approval of dean, School of Educa­
tion.

490r Workshop and Seminar (2-4)
Special problems and discussion of current topics in education. Prer­
requisite: senior or graduate standing.

497r Research (1-4)
Prerequisites: approval of the dean, School of Education.

Health, Physical Education &
Recreation (HPE/R)

Associate Professor Norred, Head
Professors Averitte, Stinnett
Associate Professor Fanning
Assistant Professors Ezell, Ford, Wood
Instructor T. Virgets, Coordinator of Intramurals

Programs and activities within the scope of the Health,
Physical Education, and Recreation Department are ad­
ministered through the School of Education.

A major thrust of HPER is the provision of two distinct
academic career program tracks:
Secondary Education - Health & Physical Education
Recreation Specialist

In addition, HPER offers a diversified service program
of physical recreation activities primarily for the under­
graduate student. Activity courses from this program may
be used to meet the University requirement of two (2)
semester hours. Refer to page 127 within this section of
the catalog for additional information concerning this
requirement.

Furthermore, HPER provides a well-rounded seasonal
intramural activities program and general recreation for the
University community.

Graduate concentrations in either health education or
physical education are possible while earning the Master
of Education in secondary education. Refer to page 39 for
additional information concerning the graduate pro­
gram.

Inquiries and concerns relative to any of these pro­
grams and activities should be directed to the HPER de­
partment head.

The organizational structure within HPER is based
upon program responsibility.

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 cur­
riculum focuses on professional career development in
both health and physical education, yet permits a student
the opportunity to gain cultural breadth through com­
pleting general education 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.

Admission to Teacher Education Program for Health and Physical Education
In addition to meeting criteria for admittance to TEP on page 108, a student desiring certification in health and physical education will be expected to meet these criteria:
A. Have a minimum grade point average of 2.4 in professional health, physical education and recreation course work. At least six (6) of these hours should be from neuromotor skills courses and nine (9) from theory courses within the health, physical education and recreation department.
B. Complete an interview with his or her TEP department committee.
C. Have completed fifty percent (50%) of the skill competencies as outlined in the handbook for health and physical education majors.

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 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 215 (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 121,122 to total 8 hours in natural sciences, plus Mathematics 115

Category E
1 approved interdisciplinary or non-Western 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 and Physical Education 100,154,302,303,317,456, plus approved electives such as Health Education 320, 450, 451,452, 455 Biology 191,192, 313, 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, 318,332,340,401,436 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
Electives to complete 36 hours
26 hours education including 102,204, 207, 301,430 (Physical Education 332 may substitute), 431, 438
2.40 average in teaching fields
2.00 average in education courses
Electives to complete 128 hours

See typical course of study in secondary education: health, physical education and recreation (B.S.) below.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td>Freshman</td>
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<td>Education 102</td>
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<td>Physical Education 318</td>
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Health Education (HE)

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.

199r Special Projects (1-4)
Individual or group projects. Maximum credit four hours. Prerequisite: approval of HPE/R department head.

302 Health Care of Children (3)
In-depth consideration of health problems confronting the classroom teacher. Prerequisite: HE 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 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 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 HPE 100, 302, 303; 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: equivalent of Education 431, 438; 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: HPE senior; approval of instructor or graduate standing.

497r Research (1-4)
Prerequisite: approval of HPEIR department head.

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

499r Group Studies (1-4)
Prerequisite: approval of HPEIR department head.

333 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: PE 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: HE 317 or PE 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 PE 201, 332, Mathematics 115; 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: above junior level or graduate standing.

404 Dynamics of Motor Learning (3)
Psychological aspects of learning, experimental growth and development, as effected by human movement patterns, perceptual mechanisms and cognitive processes. Prerequisite of HE 317 or above junior 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 PE 304 or PE 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 psychocultural force; psychological-sociologic concepts applied to physical education, recreation, sports. Prerequisite: above junior 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 HE 317 or PE 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 HE 302 and above sophomore 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.

497r Research (1-4)
Prerequisite: Approval of HPEIR department head.

498r Individual Studies (1-4)
Prerequisite: Approval of HPEIR department head.

499r Group Studies (1-4)
Prerequisite: Approval of HPEIR department head.

Physical Education (PE)

199r Special Projects (1-4)
Individual or group projects. Maximum credit four hours. Prerequisite: approval of HPEIR 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.

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 HE 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.
Professional Activities (PE)

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 and/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 softball and volleyball. Prerequisite: HPE/R major or approval of instructor.

212 Conditioning and 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: HPE/R major or approval of instructor.

214 Modern Dance and Exercise (2)
Histories, artistic executions and expressions, integrations of ballet and modern dance techniques for communication and creative exercises. Prerequisite: HPE/R 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: HPE/R 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: HPE/R 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: HPE/R or approval of instructor.

228 Aquatics (2)
Development of basic and advanced swimming strokes for teaching and coaching, pool management, direction of swimming programs, emphasis on water safety. Prerequisite: HPE/R 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: HPE/R 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: HPE/R or approval of instructor.

233 Basketball (2)
History; analytical approach to fundamental concepts, basic skills, game strategy for both the five-player and six-player game, coaching techniques and psychology; investigation of contemporary systems of offensive and defensive theories; field experiences. Prerequisite: HPE/R 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 weight lifting. Prerequisite: HPE/R 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: HPE/R or approval of instructor.

237 Field Hockey and Soccer (2)
Histories, basic skill development and application, offensive and defensive theories, field experience. Prerequisite: HPE/R major or approval of instructor.

Recreation Education (RE)

Recreation Specialist
The recreation specialist program is a uniquely structured track for the student with career ambitions for being employed or serving voluntarily an agency, public or private, whose functions include the provision of recreative 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 practicum in recreation are usually scheduled during the senior year. Normally, a student may not gain official approval for enrollment in either internship Re 479 or Re 480 prior to completing at least 12 (12) semester hours of course work within HPER at UTC.

Health, Physical Education: Recreation Specialist
General Education (see pages 27-29 for list of approved courses):

Category A
(2 appropriate courses 3 semester hours each)
English 101
English 102 or approved English course

Category B
(3 appropriate courses/3 semester hours each; other than major)
Humanities
Fine Arts
1 from either humanities or fine arts

Category C
(2 appropriate courses/3 semester hours each; other than major)
Sociology 151
Approved behavioral science

Category D
(2 appropriate courses/3 semester hours each; other than major)
Biology 121

Category E
Interdisciplinary or non-Western
(1 appropriate course/3 semester hours)
Physical education (2 semester) Physical Education 021 (major’s section)
1 additional semester
Electives: (10 hours) may include Computer Science 101, English 200, 300, Psychology/Sociology 331, Recreation 227, 199r, 498r, Sociology 317, 322.
Other courses need approval of HPER department head
Major and Related Courses
Health, physical education, recreation courses (58 semester hours)
Recreation component (30 hours)* to include:
Recreation 200, 202 (2), 220 (2), 223 (2), 304, 305, 470, 479 (6), 480 (6)
Health component (12 hours) to include:
Health 100, 154, 302, 317
Total of 16 semester hours in physical education include:
Physical Education 405, 436 and professional activities (a minimum of 10
hours to be selected by student and assigned academic adviser
Related courses (24 hours including):
Biology 313
Human Services 405
Music 321
Sociology 220
Sociology 305
Theatre and Speech 412
Elective 6 hours: Three hours each from art and office administration.
Elective hours require the approval of the HPER department head
Courses other than listed need approval of HPER department head
See typical course of study in health, physical education: recreation
specialist (B.S.) below.

First Semester
Freshman
General Education Category A 3
Biology 121 4
Health Education 100 3
Humanities 3
Sociology 151 3
Physical Education 021 1
Major's section
17
Sophomore
Sociology 220 3
Health Education 302 3
Physical Education:
Professional Activities 2
Humanities 3
Recreation Education 202 2
Recreation Education 220 2
Elective 1
16
Junior
Elective 3
Health Education 317 3
Electives 3
Bi 3
Human Services 405 3
Physical Education:
Professional Activities 2
17
Senior
Business
Office Administration Elective 3
Electives 4
Recreation Education 470 3
Physical Education 436 3
Elective 1
14
General electives require approval of academic adviser in recreation.
*Confer with assigned academic adviser in recreation for appropriate
course.

Students graduating after July 1, 1978, must complete 6
hours American history if not taken in high school.

Admission to recreation internship—Minimum of 2.25
grade point average on all course work.
*NOTE: REQUIRED FOR GRADUATION-2.00 overall;
2.00 average UTC; 2.00average last30 hours in residence;
2.4 average in recreation component of major courses.

Second Semester
Freshman
General Education Category A 3
Natural Science Mathematics 3
Health Education 154 3
Recreation Education 200 3
Non-Western 3
Physical Education Activity 1
(022-036) 16
Sophomore
Sociology, Fine Arts 3
Physical Education:
Professional Activities 4
Recreation Education 304 3
Sociology 304 3
Music 321 3
Recreation Education 223 2
16
Junior
Elective 3
Theatre & Speech 412 3
Electives 3
*Art Elective 3
Physical Education:
Professional Activities 2
Recreation Education 305 3
Physical Education 405 3
17
Senior
Recreation Education 479 6
Recreation Education 480 6
12

Service Program

(Physical Recreational Activities)
Courses within the service program hold contempor­
ary attractiveness as "lifetime" activities and should ap­
peal to the educated adult for maintaining a healthful and
wholesome lifestyle.
Every undergraduate student will be expected to satis­
factorily complete at least two (2) physical/recreational
activities, one of which must be 021. Refer to page 29 for
complete requirement. Information concerning waiver
of this requirement is found on page 29.
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.

**Course Level Designation**

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, racquetball, riflery, sculling, tennis, 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, senior 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 departmental head approval.

026 or 036 Dance (1)
Square and folk; social modern; contemporary jazz.

039 Varsity Sports (1)
Basketball, baseball, football, golf, tennis, volleyball, cross country/track and field, wrestling, riflery. Prerequisite: approval of head coach of respective varsity sport. Course graded on satisfactory/no credit basis and does not meet PE requirements for graduation. Maximum of eight hours credit may be applied toward the 128 hours required for graduation.
School of Engineering

Professor Lynn D. Russell, Dean
Professors Koch, Rekoff, Russell
Associate Professors Carney, R. Cox, J. Cunningham, M.H. Jones, Schonblom
Assistant Professors Cheng, Forester, Johnson, Lovett, Thomason

The School of Engineering is the organizational unit of the University which is responsible for all engineering programs offered by the University. An outline of the available engineering programs is given in the following. The faculty listed above support all of the engineering programs offered by the University.

The program described below leading to the B.S.E. degree is accredited by the Engineers' Council for Professional Development, 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.

A variety of elective courses for the senior year is also provided for students so that they may prepare for a career or graduate study in several fields of engineering. These elective courses are taken as a package with an orientation toward a field of engineering which the student wishes to pursue after graduation.

Specific areas of concentration which are available in the engineering curriculum are electrical engineering, industrial engineering, mechanical engineering and chemical sciences.

Engineering (B.S.E.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics or natural or applied science courses other than Engineering (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Mathematics 150, 160, 250, 260
Chemistry 121
Physics 231, 232
56 hours engineering core, including 100, 102, 103, 104, 124, 225, 246, 248, 272, 303, 307, 322, 325, 340, 372, 373, 380, 400.
24 hours in specialized engineering area (subject to approval of advisor), including 8 hours in Engineering 490.
134 total hours (144 for Co-op graduate).

See typical course of study in engineering (B.S.E.) below.

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

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td><strong>Freshman</strong></td>
<td></td>
</tr>
<tr>
<td>Engineering 100</td>
<td>0</td>
</tr>
<tr>
<td>Engineering 103</td>
<td>4</td>
</tr>
<tr>
<td>Engineering 124</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 150</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
</tr>
<tr>
<td>General Education Category A</td>
<td>3</td>
</tr>
<tr>
<td>A</td>
<td>15</td>
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<td></td>
</tr>
</tbody>
</table>

129
Areas of Specialization

**Electrical Engineering**

**Senior**
- Engineering 400 Seminar 0  General Education Categories B and E 6
- Engineering 470 3  Engineering 472 4
- Engineering 471 4  Engineering 473 3
- Engineering 475 3  Engineering 490r 4
- Engineering 490r 4  14  17

**Industrial Engineering**

**Senior**
- Engineering 400 Seminar 0  General Education Categories B and E 6
- Engineering 452 3  Engineering 450 3
- Engineering 454 4  Engineering 457 3
- Engineering Elective 3  Engineering 490r 4
- Engineering 490r 4  14  16

**Mechanical Engineering**

**Senior (Mechanics)**
- Engineering 400 Seminar 0  General Education Categories B and E 6
- Engineering 446 3  Engineering 440 3
- Engineering 405 4  Engineering 448 3
- Engineering Elective 3  Engineering 490r 4
- Engineering 490r 4  14  16

**Senior (Thermal Sciences)**
- Engineering 400 Seminar 4  General Education Categories B and E 6
- Engineering 431 3  Engineering 430 3
- Engineering Elective 3  Engineering Elective 3
- Engineering 490r 4  Engineering 490r 4
- Engineering 490r 4  14  16

**Chemical Sciences**

Students in this area generally vary from the engineering core for the first three years by taking Chemistry 121, 122 during the freshman year, Chemistry 351, 352 during the sophomore year, and Chemistry 371, 372 during their junior year. The additional chemistry courses are usually taken in lieu of Engineering 246, 248 and Physics 232. 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><strong>Freshman</strong></td>
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</tr>
<tr>
<td>Engineering 100 Seminar 0</td>
<td>Engineering 102 3</td>
</tr>
<tr>
<td>Engineering 103 4</td>
<td>Engineering 104 4</td>
</tr>
<tr>
<td>Engineering 124 3</td>
<td>Mathematics 160 4</td>
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<tr>
<td>Mathematics 150 4</td>
<td>Chemistry 122 4</td>
</tr>
<tr>
<td>Chemistry 121 4</td>
<td>Physical Education Activity 1</td>
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<tr>
<td>Physical Education 021 1</td>
<td>English 101 3</td>
</tr>
<tr>
<td>English 101 3</td>
<td>16 19</td>
</tr>
<tr>
<td><strong>Sophomore</strong></td>
<td></td>
</tr>
<tr>
<td>Engineering 225 3</td>
<td>Engineering 272 4</td>
</tr>
<tr>
<td>Mathematics 250 4</td>
<td>Mathematics 260 4</td>
</tr>
<tr>
<td>Chemistry 351 4</td>
<td>Chemistry 352 4</td>
</tr>
<tr>
<td>Physics 231 4</td>
<td>General Education</td>
</tr>
<tr>
<td>General Education Category A 3</td>
<td>Categories B and C 6</td>
</tr>
<tr>
<td>Category A 3</td>
<td>18 18</td>
</tr>
<tr>
<td><strong>Junior</strong></td>
<td></td>
</tr>
<tr>
<td>Engineering 303 4</td>
<td>Engineering 307 4</td>
</tr>
<tr>
<td>Engineering 325 4</td>
<td>Engineering 372 4</td>
</tr>
<tr>
<td>Engineering 340 3</td>
<td>Engineering 373 4</td>
</tr>
<tr>
<td>Chemistry 371 4</td>
<td>Engineering 380 3</td>
</tr>
<tr>
<td>General Education Category B 3</td>
<td>Chemistry 372 4</td>
</tr>
<tr>
<td>Chemistry 372 4</td>
<td>18 19</td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td></td>
</tr>
<tr>
<td>Engineering 322 3</td>
<td>Engineering 430</td>
</tr>
<tr>
<td>Engineering 400 0</td>
<td>Engineering 432</td>
</tr>
<tr>
<td>Engineering 405 4</td>
<td>Engineering 490r</td>
</tr>
<tr>
<td>Engineering 431 3</td>
<td>General Education</td>
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<tr>
<td>Engineering 490r 4</td>
<td>Categories B and C</td>
</tr>
<tr>
<td>General Education Category E 4</td>
<td>17 16</td>
</tr>
</tbody>
</table>

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 what has traditionally been considered as the structural area of civil engineering by completing the core program and the electives in the mechanics area listed above, while other 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 pre-medical or pre-law engineering program will provide an excellent background 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.
In general all engineering management students take a common core of courses during their first two years, and then take courses during their last two years leading to either the computer concentration or the management concentration. The typical first two years core for all students is listed below, followed by the typical last two years for each of the two concentrations.

Engineering Management Program

Associate Professor Ronald Cox, Coordinator

The engineering management program is an interdisciplinary program leading to a Bachelor of Science (B.S.) degree. A computer concentration and a management concentration are available in this program.

The computer concentration is designed to prepare graduates for work with computers and information systems for technical management, while the management concentration is designed to prepare graduates for future careers in production, maintenance, sales and other business management functions. In both concentrations, a core of engineering, economics, and business administration courses is provided to give the graduate a broad introduction to engineering and management functions of industry and governmental organizations. These core courses are intended to provide graduates with background so that they can combine and integrate business and technical knowledge as preparation for careers in a society which is increasingly influenced by the computer and by scientific and technological developments.

Engineering Management (B.S.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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; one course in psychology recommended; approved related courses below may apply)

Category D
2 approved mathematics or natural or applied science courses other than engineering (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Mathematics through 160
Chemistry 121

Computer Science 121, 231
Economics 101, 102
Business Administration 201, 202, 211, 212, 311
Engineering 102, 103, 104, 400, 452, 457
Engineering 490r
Either Business Administration 302, 305, 315, Engineering 454 and six additional hours of engineering at the upper level or Computer Science 122, 251, 280, 312, 345, Engineering 108
Electives to complete 128 hours.

See typical program of study in engineering management (B.S.) below.

Engineering Management Core

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td><strong>General Education</strong></td>
</tr>
<tr>
<td>Category A</td>
<td>Category A</td>
</tr>
<tr>
<td>Chemistry 121</td>
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<tr>
<td>Chemistry Laboratory</td>
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<tr>
<td>Computer Science 121</td>
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<tr>
<td>Engineering 102</td>
<td>3</td>
</tr>
<tr>
<td>Graphic Design</td>
<td></td>
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<tr>
<td>Economics 101</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
<td>1</td>
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<td>17</td>
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<tr>
<td><strong>Sophomore</strong></td>
<td><strong>Engineering 103</strong></td>
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<tr>
<td>Engineering 103</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 150</td>
<td>4</td>
</tr>
<tr>
<td>Business Administration 201</td>
<td>3</td>
</tr>
<tr>
<td>General Education</td>
<td>Category B</td>
</tr>
<tr>
<td>Category B</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td><strong>Senior</strong></td>
<td><strong>Business Administration 202</strong></td>
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<tr>
<td>Business Administration 211</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 122</td>
<td>3</td>
</tr>
<tr>
<td>General Education</td>
<td>Category D</td>
</tr>
<tr>
<td>Category D</td>
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<tr>
<td>Electives</td>
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<td></td>
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<tr>
<td><strong>Electives</strong></td>
<td><strong>General Education</strong></td>
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<td></td>
<td>Category B</td>
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<td></td>
<td>3</td>
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<tr>
<td></td>
<td>Elective</td>
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<td></td>
<td>3</td>
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<td></td>
<td>15</td>
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<tr>
<td></td>
<td><strong>Computer Concentration</strong></td>
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<td><strong>Management Concentration</strong></td>
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<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
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<tr>
<td><strong>Junior</strong></td>
<td><strong>Business Administration 212</strong></td>
</tr>
<tr>
<td>Business Administration 211</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 122</td>
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</tr>
<tr>
<td>General Education</td>
<td>Category D</td>
</tr>
<tr>
<td>Category D</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
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<td>15</td>
</tr>
<tr>
<td><strong>Senior</strong></td>
<td><strong>Business Administration 311</strong></td>
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<tr>
<td>Business Administration 311</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 280</td>
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<tr>
<td>Computer Science 312</td>
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<tr>
<td>Engineering 452</td>
<td>3</td>
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<tr>
<td>Engineering 490r</td>
<td>4</td>
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<td>17</td>
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<tr>
<td><strong>Senior</strong></td>
<td><strong>General Education</strong></td>
</tr>
<tr>
<td>Business Administration 302</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration 311</td>
<td>3</td>
</tr>
<tr>
<td>Engineering 452</td>
<td>3</td>
</tr>
<tr>
<td>Engineering 454</td>
<td>4</td>
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<tr>
<td>Engineering 490r</td>
<td>4</td>
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131
Co-operative Engineering Program

Assistant Professor John N. Lovett, Jr., Director

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 twenty 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 2.0 quality point average (out of 4.0) to be enrolled in the program. Further he or she must maintain a 2.0 average to remain on 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 2.0 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 he or she completes at least 75 weeks of co-op work experience.

Degree Requirements
A B.S.E. co-operative engineering graduate completes all degree requirements of the B.S.E. graduate listed above, plus additional hours in Engineering 390R, Co-operative Seminar, to total 144 semester hours for the B.S.E. co-op graduate degree.

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.)

100 Seminar (0) CORE
Professional, ethical, and technical aspects of engineering. Course graded on a satisfactory/no-credit basis.

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 140 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: Mathematics 150, 160.

107 Man-Made World (3)
The interaction between society and modern science and technology. Examination of the systems approach to decision-making and study of selected policies that lead to optimal decisions for important classes of problems, such as transportation and resource management. Examples of recent work in worker-machine integration. Lecture two hours, laboratory two hours.

108 The Digital Computer (3)
Study of the modern digital computer and its logical basis. Capabilities and limits of computers; discussion of present and future implications of computer development for society. Lecture two hours, laboratory two hours.

124 Introduction to Engineering Computations (2) 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. Lecture three hours. Prerequisite: Mathematics 140 or equivalent.

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. Lecture three hours. 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 (2) CORE
Rectilinear, curvilinear and rotary motion. D'Alembert's principles of work and energy. Impulse and momentum, impact. Lecture two hours. Prerequisites: Engineering 246, Mathematics 250.

272 Electrical Networks (4) CORE
An introduction to the theory of circuit analysis including the definition of fundamental parameters, network theorems, general (voltage and current) network analysis techniques, transient solutions, steady-state solutions, complete solutions, a-c circuit analysis using complex algebra, three-phase networks, and linear network models. Lecture three hours, computation and laboratory period three hours. Prerequisite: Physics 231; corequisite: Mathematics 260.

303 Thermodynamics (4) CORE
Classical thermodynamics with emphasis on first and second laws of thermodynamics. Property relationships, chemical equilibrium and cycle analysis. Lecture four hours. Prerequisites: Engineering 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: Engineering 303; Mathematics 260.

311 Pollution Controls (3)
Seminar on the interaction of science, technology, and the public in the problem of pollution control. Investigations of selected areas, first characterizing the problem from a biological and chemical viewpoint and subsequently exploring the available technology for control and the legal control structure. Includes a computer game where the interaction of the important forces in pollution control are studied by observing the effects of realistically constrained policy decisions on the quality of life in a simulated community. Prerequisite: junior standing.

322 Probability and Statistics for Engineering (3) CORE

325 Systems Dynamics (4) CORE
Analytical models for dynamical physical systems with mechanical, electrical, fluid and thermal elements. Fourier and Laplace transforms. Response characteristics, analog and digital simulation. Lecture three hours, laboratory three hours. Prerequisite: Engineering 272, Mathematics 260, either Engineering 225 or Mathematics 308.

340 Engineering Materials Science (3) CORE
Study of the science of solid materials, including metals, ceramics, plastics, and semiconductors. Nature and fundamental characteristics stressed. Atomic and macroscopic perspectives. Lecture three hours. Prerequisites: Chemistry 121, Physics 232 or corequisite: Chemistry 372.

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, lathes, boring, and reaming machines, shapers and planers, gears and gear manufacturing, and inspection of materials. Lecture three hours. 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: Engineering 272, 340, and Physics 232.

373 Linear Systems Analysis and Design (4) CORE
Analysis and synthesis of controlled systems with feedback. Transfer functions and state space descriptions developed and related. Nyquist, Root, Hurwitz, and Routh Locus criteria. Examples of heat exchangers, refrigerators, steam cycle analysis techniques, transient solutions, steady-state solutions, complete solutions, a-c circuit analysis using complex algebra, three-phase networks, and linear network models. Lecture three hours, computation and laboratory period three hours. Prerequisite: Physics 231; corequisite: Mathematics 260.

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 applications. Economic and managerial considerations. Lecture three hours. Prerequisites: completion of 36 hours in Engineering CORE, including Engineering 225.

390 Seminar (0) CORE
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.

400 Seminar (0) CORE
Professional, ethical, and technical aspects of engineering. Course graded on a satisfactory/no-credit basis.

405 Heat and Mass Transfer (4)
Fundamental principles to heat, mass and momentum transfer; application to macroscopic systems. Special emphasis on heat transfer by conduction and convection; analogy between heat and mass transfer. Lecture four hours. Prerequisite: 307.

430 Thermal System Design (3)
Application of systems design techniques to the design of thermal processes. Discussion of case studies including heat exchanger networks, mechanical refrigeration, absorption refrigeration, steam generation and chemical processes. Individual or group design problems. Lecture three hours. Prerequisite: 307.

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 thermodynamics, thermochemistry, heat and economic balances. Lecture three hours. Prerequisite: 303.

432 Chemical Operations (3)
Fundamental variables of chemical operations; generalized treatment of mass-transfer operations including separation processes. Multicomponent phase equilibria. Application of fundamental principles of chemical operations for systems with simultaneous heat, mass and momentum transfer. Lecture three hours. 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. Lecture three hours. Prerequisite: 431.

436 Thermal Component Design (3)
Design of individual components of thermal systems. Economic trade-offs in sizing, choice of materials, number of passes and other design criteria. Examples of heat exchangers, refrigerators, steam cycle components and modern, innovative concepts. Lecture three hours. Prerequisite: 307 and 380.

450 Frontiers of 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 specialization. Laboratory work included. Lecture four hours. Prerequisite: 307.

440 Structural Engineering Design (3)

444 Applied Elasticity (3)
Stress, strain and constitutive equations, yield theories, singularity functions. Bending of beams. Torsion. Lecture three hours. Prerequisites: Engineering 246; Mathematics 260.
445 Structural Dynamics (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. Lecture three hours. Prerequisite: 444.

446 Advanced Mechanics of Materials (3)
Statically indeterminate structures; introduction to theory of elasticity; special topics in mechanics of materials. Lecture three hours. Prerequisites: Engineering 246, Mathematics 260.

448 Elementary Structural Matrix Methods (3)
Review of matrix algebra and vectors; Development of member stiffness and flexibility matrices; assembly of structural stiffness and flexibility matrices. Lecture three hours. Prerequisites: Engineering 246, Mathematics 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. Lecture three hours. 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 decisionmaking, replacement policy. Lecture three hours. Prerequisite: Mathematics 126 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. Lecture three hours. 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. Laboratory work included. Lecture four hours.

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. Lecture three hours. 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 control systems. Product specifications, process control, acceptance inspection, other means of assurance. Laboratory work included. Lecture three hours. Prerequisite: Engineering 322 or Business Administration 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. Lecture three hours. Primarily elective for B.S. in engineering management.

470 Logic Design (3)
Design of combinational and sequential electric circuits. Circuit minimization, cubic representation. Karnaugh maps, Quine/McClusky algorithm, circuit equivalence, synchronous circuits, flip-flops, shift registers, counters, memory circuits, lecture two hours, laboratory two hours. Prerequisites: 372, 380.

471, 472 Electrical Energy Systems (4, 4)
A two course sequence in the concepts of electrical energy systems engineering. Rotating A.C. and D.C. machinery; power transformers; high energy transmission lines. Static load flow analysis; optimum dispatch; system control. Symmetrical faults; unbalanced system analysis; symmetrical components analysis; transient stability. Lecture three hours. Laboratory three hours. Prerequisite to 471: 373; corequisite to 471: 475.

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 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’ Law; Ampere’s Law; line integrals; vector calculus methods; Biot-Savart Law; time varying electric and magnetic fields; Maxwell’s equations. Lecture three hours. Prerequisites: Physics 232, Mathematics 260, Engineering 372.

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. Prerequisite: 380 (except for engineering management majors), completion of all lower division engineering courses and senior standing; corequisite in first semester: 400; corequisite in second semester: 430, 436, 440, 450, 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 33.
## Engineering (B.S.E.)

### Group A Cooperative Program

### First Year

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### Engineering (B.S.E.)
**Group B Cooperative Program**

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Computer Science

Assistant Professor M. Rex Jones, Head Assistant Professor Bailey

The Computer Science Department offers a B.S. degree in computer science. Majors are requested to take the 30-hour sequence of computer science core courses, and to decide upon and pursue a computer science concentration. Like a minor, this concentration is an area of study which augments the core courses and represents a general field in which the student can apply his or her computer knowledge. The four concentrations are business, scientific programming, system architecture and a topical concentration.


General Education (See pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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
2 approved mathematics, natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western 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, 350, 450, 460
Six hours of upper division (300or400 level) computer science electives, which may include Engineering 477, 478
Mathematics 125; Computer Science 470 Practicum

One of the following concentrations:

Business concentration
Mathematics 125,126, 225; Business Administration 201, 202, 211, 212, 305, 311, 356; Computer Science 303

Scientific Programming concentration
Mathematics 150,160,250,260; Physics 230,231,232; Computer Science 231; either Engineering 332, Mathematics 407 or Mathematics 408

System Architecture concentration
Mathematics 150,160,250, 260; Physics 230, 231; Engineering 272,470; either Engineering 322, Mathematics 407 or Mathematics 408

Topical concentration
9 hours of mathematics beginning with either Mathematics 125 or Mathematics 150; 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. Programs developed under this option should 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

Electives to complete 128 hours

See typical courses of study in computer science (B.S.) below.

Computer Science (B.S.): Business Concentration

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Sophomore

| Computer Science 201 | 3 Computer Science 251 | 3 |
| Mathematics 225 | 3 Computer Science 252 | 3 |
| Business Administration 201 | 3 Business Administration 202 | 3 |
| Business Administration 211 | 3 Business Administration 212 | 3 |
| English 200 | 3 General Education | 3 |
| 15 | 15 |

Junior

| Computer Science 303 | 3 Computer Science 350 | 3 |
| Computer Science 301 | 3 Computer Science—300-400 level elective | 3 |
| Computer Science 312 | 3 Business Administration 311 | 3 |
| Business Administration 305 | 3 General Education | 3 |
| General Education | 3 Elective | 3 |
| Elective | 3 | 3 |
| 18 | 18 |

Senior

| Computer Science 450 | 3 Computer Science 460 | 3 |
| Computer Science—300-400 level elective | 3 Computer Science 470 | 6 |
| Business Administration 3 | 3 General Education | 3 |
| General Education | 3 Elective | 3 |
| Elective | 3 | 3 |
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Computer Science (B.S.): Scientific Programming Concentration

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Sophomore

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| Mathematics 250 | 4 Computer Science 252 | 3 |
| Engineering 200 | 3 Mathematics 260 | 4 |
| Physics 231 | 4 Physics 232 | 4 |
| General Education | 3 General Education | 3 |
| 17 | 17 |

Junior

| Computer Science 231 | 3 Computer Science 350 | 3 |
| Computer Science 301 | 3 Computer Science—300-400 level elective | 3 |
| Computer Science 312 | 3 General Education | 3 |
| Engineering 322 | 3 Elective | 3 |
| General Education | 3 | 3 |
| 15 | 15 |
Computer Science (B.S.): System Architecture Concentration

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<tr>
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<td>Computer Science 312</td>
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<td>Computer Science 470</td>
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**Elective**

**General Education**

110 Introduction to Computerized Information Systems (3)
Introduction to problem solving and computer programming concepts using the conversational timesharing language BASIC. Data organization, flowcharting, and the design of algorithms from several disciplines with computer solutions of selected assignments.

121 Computer Programming I (3)
An introduction to digital computing techniques using FORTRAN IV. Flowcharting, programming and documentation of numerical and non-numerical algorithms. Introduction to concepts such as computer hardware and computer application areas. Prerequisite: two years high school algebra or Mathematics 107.

122 Computer Programming II (3)
Computing systems; procedures, storage allocation, parameter access, debugging techniques, introduction to algorithmic analysis, string processing, data structures and internal search/sort methods, using PL/1. Prerequisite: 121.

123 Introduction to Data Processing (3)
General overview of the data processing field using basic principles, unit record and electronic data processing. Topics include methodology, terminology, systems and procedures, file organization, peripheral equipment and central processing unit components.

190r Special Projects (1-4)
Individual or group projects. Maximum credit four hours.

201 Assembly Language Programming (3)
Computer structures; symbolic coding, and assembly systems; macros; program segmentation and linkage; disk and tape application; file organization; operating systems introduction. Prerequisite or corequisite 122 or equivalent.

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. Prerequisites: Mathematics 150; Computer Science 121.

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.

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.

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: 252.

303 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; credit not allowed in both 101 and 303.
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 of files. Prerequisite: 251.

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/or psychology; elective credit only for CPSC 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.

360 Theory of Computability (3)
Introduction to abstract machines and languages: Turing machines and computability theory; relevance of the theory to practical problems. Prerequisites: Computer Science 252, 312, or Mathematics 303.

380 Computer Graphics (3)
Computer Graphics systems; systems software and data structures for graphics devices and display processors. Prerequisite: Computer Science 231 or Engineering 225.

430 Topics in Simulations (3)
Digital Simulation. A study of simulation languages and simulation techniques for solving many types of research problems from management, engineering and science; simulation of large systems, design of simulation experiments for optimizations; applications using simulation languages such as GPSS and GASP; comparison of simulation languages. Prerequisite: Permission of instructor.

435 Data Base Information Systems (3)
Concepts and methods in the definition and management of large integrated data bases for organizational information systems; functions and objectives of existing file and data management systems; analysis of proposals for new data management software; data base design; data base administration and security. Prerequisite: 303, or 251 and 101.

450 Operating Systems (3)
Familiarization with the major concepts of operating system principles. Prerequisite: 301.

460 Computer Architecture (3)
Computer organizations and structures; data processing systems; basic digital circuits; data representation, digital storage and accessing; control functions; input/output facilities; systems organizations. Multiprogramming, multiprocessing, time sharing and real time systems. Prerequisite: 450.

470 Computer Laboratory - Practicum (6)
Supervised internship in a computer science setting related to a student’s academic and/or career goals; concurrent two-hour integrative seminar emphasizing issues common to field experience settings. Prerequisites: 301, 312, and either 231 or 303.

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

Division of Human Services

Associate Professor Butterfield, Director

The Division of Human Services offers four distinct programs leading to baccalaureate degrees. These programs are criminal justice, home economics, social work, and human services: management. In addition to the undergraduate degrees, a Master of Science in criminal justice 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 these various fields of knowledge and practice.

Human Services Program

Interdisciplinary and Management Faculty

Associate Professor Butterfield, Director
University Professor Sumberg
Associate Professors Richards (English), Printz (Psychology), Brodsky (Political Science)
Assistant Professor Bender

The human services program offers a Human Services: Management degree and interdisciplinary service courses.

The Human Services: Management degree program is intended to prepare entry level supervisors and managers for public and private organizations which provide a wide spectrum of human and community services.

Human Services: Management (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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)

Category D
2 approved mathematics or natural or applied science courses (6 hours)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity
Major and related courses:
12 hours from one of the following: economics, political science, psychology, sociology/anthropology. (Behavioral science courses used for general education purposes may not satisfy this requirement, but behavioral science courses listed below may count)
9 hours from Business Administration 201, 202, 306, 325, 407; Economics 306, 425, 455; Political Science 233, 331; Sociology 318 or equivalent approved courses
3 hours from Business Administration 325, 351: Psychology 316, Psychology/Sociology 331, Sociology 220, 317 or equivalent approved course
3 hours of research or statistics from Business Administration 211, Mathematics 210, Psychology 201, 202, 203, Sociology 250 or 314 or equivalent approved course
18 hours human services including 101, 102, 201, 350, 405, 450
9 hours practicum from Human Services 470, 471, Political Science 471r
Electives to complete 128 hours
Those who wish a business administration emphasis with possible continuation into the M.B.A. (Master of Business Administration degree) need to include the following courses: Mathematics 125, 126, Economics 101, 102; Business Administration 201, 202, 211, 302, 311, 355 or 366

See typical course of study in Human Services: Management (B.S.) below.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
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<tr>
<td>Research or Statistics</td>
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<td>or Economics 460</td>
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1Mathematics sequence may begin with 150 rather than 140 depending on preparation.
101 Human Perspectives (3)
An introduction to the various scientific, behavioral and humanistic perspectives and ways of securing knowledge and understanding of humans and their problems.

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.

19r Special Projects (1-4)
Individual or group projects. Prerequisite: approval of the director of human services. Maximum credit four hours.

201 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 affecting social reform in the United States.

300 Environment of the Professions (3)
Interdisciplinary analysis of the professional and paraprofessional in modern and contemporary societies. Emphasizes on the work environment and work as process.

350 Human Services Supervision (3)
Concepts and techniques appropriate to supervision in human services and governmental agencies and organizations.

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.

450 Administrative Processes (3)
Administrative procedure, processes, planning and decision-making in human services and governmental settings. Prerequisite: 350 or approval of instructor.

470, 471 Community Laboratory (6) (3)
Supervised internship in a human services setting related to a student’s academic and/or career goals; concurrent two-hour, integrative seminar emphasizing issues common to field experience settings. Admission must be obtained from the director of field placement at least ninety days prior to enrollment in the course. An application form should be obtained from the division office and be completed and filed in advance of the ninety day requirement. In addition, Human Services: Management majors must present evidence of a minimum 2.00 overall grade point average and completion of Human Services 350 before enrolling in Human Services 470. Prerequisites: 350, approval of the director of human services, and junior standing. Courses may be taken concurrently or consecutively.

499r Departmental Honors (1-3 hours per term, 4 hours for the two terms).
See “Departmental Honors,” page 33.

497r Research (1-4)

498r Individual Studies (1-4)

499r Group Studies (1-4)

Criminal Justice

Associate Professor Venters, Head
Professor Green (Psychology)
Assistant Professors Anderson, Hall, Wright
Instructor 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, law and the court, and criminal justice research and planning are available.
### Criminal Justice (B.S.)

General Education (see pages 27-29 for list of approved courses):

**Category A**
- 2 approved courses in written communication in the English language, at least one at the freshman level (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 O**
- 2 approved mathematics or natural or applied science courses (6 hours)

**Category E**
- 1 approved interdisciplinary or non-Western course (3 hours)

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

**Major and related courses:**
- Psychology 308 or Sociology 321
- Human Services 405
- 21 hours criminal justice including 101, 112, 113 through Cleveland State Community College, plus UTC courses 301, 450, 470 (or CSCC course 251) and 471
- 2 of the following areas of concentration (12 hours from each area):
  1. Administration of criminal justice
     - 12 hours from CSCC Criminal Justice Program 105; UTC Criminal Justice 320, 403; Business Administration 325, 332, 351; Human Services 350, 450; Political/Science 324, 421 (with permission) Sociology 317; Computer Science 101 or 121 or 123.
  2. Corrections
     - 12 hours from CSCC Criminal Justice Program 120; UTC Criminal Justice 312, 314, 315, 320, 330, 410; Sociology 322, 322
  3. Juvenile justice system
     - 12 hours from CSCC Criminal Justice Program 211; UTC Criminal Justice 330, 350, 408, 410; Psychology 221, 222; Sociology 322
  4. Law and the court
     - 12 hours from CSCC Criminal Justice Program 102; UTC Criminal Justice 320, 405, 407, 408, 409, Sociology 320, Political Science 323
  5. Law enforcement
     - 12 hours from CSCC Criminal Justice Program 102, 203, 204, 211, 220; UTC Criminal Justice 300, 310, 320, 405, 409
  6. Research and planning
     - 12 hours from Computer Science 101, 121 or 123; Psychology 215 or Sociology 250; Psychology 210 or Sociology 314; Criminal Justice 322, 422

Electives to complete 128 hours

See typical course of study in criminal justice (B.S.) below.

**First Semester**

<table>
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<tr>
<th>Course Description</th>
<th>Credits</th>
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<tr>
<td><em>CJP 101</em></td>
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<tr>
<td>Sociology 151</td>
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<tr>
<td>General Education Category C</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 021</td>
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</tr>
<tr>
<td>General Education Category B</td>
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</tr>
<tr>
<td>American History</td>
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**Second Semester**

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<tr>
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<td>Psychology 101</td>
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<td>General Education Category C</td>
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<td>Physical Education Activity</td>
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<tr>
<td><em>CJP 133</em></td>
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<tr>
<td>General Education Category B (American History)</td>
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<tr>
<td>General Education Category B (Fine Arts)</td>
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<td>General Education Category D</td>
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<tr>
<td>Mathematics 210 Statistics</td>
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**Junior**

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<td>Criminal Justice Concentration (2)</td>
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<tr>
<td>General Education Category E</td>
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<tr>
<td>Sociology 314</td>
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<td><strong>Electives</strong></td>
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**Senior**

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<tr>
<td>Criminal Justice Internship</td>
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<tr>
<td>Criminal Justice Concentration (1 or 2)</td>
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<tr>
<td>Criminal Justice 450</td>
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<tr>
<td><strong>Electives</strong></td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

**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.

**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 Justice and Juvenile Justice Systems (3)**
An examination of these two systems of justice as they function in other countries.

**310 Law Enforcement in Criminal Justice and Juvenile Justice (3)**
An examination of specific law enforcement problems as they relate to criminal justice and juvenile justice.

**312 Advanced Corrections in Criminal Justice and Juvenile Justice (3)**
The development of priorities, goals and standards for the correctional field.

**313 The Volunteer in Criminal Justice 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: *CJP* 105 or consent of the instructor.
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.

An examination of the theory and practice of probation and parole with juvenile and adult offenders.

An historical perspective of the evolution of juvenile institutions and their present day applicability and use.

An examination of the leading constitutional principles pertaining to modern criminal procedure.

The impact of organized crime on the community, the government, legal systems and the individual and methods of combating organized crime.

Theories of criminal justice management, motivation, communication, planning and decision making. Prerequisites: CJP* 105 and CRMJ 320, or consent of instructor.

Common and statutory law of crimes including national developments and trends, inchoate offenses, and defenses to crime. Prerequisite: CJP 112 or consent of the instructor.

Statutory and case analysis of judicial decisions, substantive juvenile law and procedures significant to practices of various agencies in juvenile justice. Prerequisite: CJP 212 or approval of instructor.

Examination of the major legal and constitutional protections of the accused from initiation of investigation through post-conviction relief. Prerequisite: CJP 133 or consent of instructor.

An analysis of theory and research on epidemiology and etiology of crime. *CJP/Cleveland State Consortium criminal justics courses.

Examination of the contemporary philosophy and techniques of research as applied in the criminal justice field.

Application of scientific methodology and analysis to problem solving. A research project will be designed and evaluated. Prerequisite: 322 or approval of instructor.

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 the instructor.

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. Prerequisites: Completion of Category D requirements or approval of the instructor.

Discussion of selected system-wide problems and topics in criminal justice. Research and oral presentation by the student. Prerequisite: Senior standing, criminal justice major. Statistics and Methodology Course.

Study of the theoretical bases for accurately assessing crisis situations and a guided practicum in techniques of crisis intervention.

Supervised internship in a criminal justice agency. Admission to 470 or 471 requires a written application filed with the head of the criminal justice department 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 head of the criminal justice department; 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.

Home Economics

Assistant Professor Cochran, Head Assistant Professors Tanner, Temple Instructor Rhodes

Home Economics offers professional preparation for a variety of careers. Students desiring teacher certification should follow Education: Home Economics. A student preparing for a career in fashion merchandising, consumer relations, interior design or food service management should meet the requirements for the Home Economics: Business option selecting appropriate electives. The undergraduate recommendation of The American Dietetics Association may be fulfilled by meeting the requirements for a B.S. degree in Home Economics: General with appropriate electives selected in consultation with an adviser. Students interested in careers in day care, parent education and other family service positions should follow the Home Economics: General major selecting appropriate electives within the recommendations by the National Council of Family Relations; outlines are available upon request.

Home Economics: General (B.S.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 may apply)

Category D
2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

Health and Physical Education 021 plus one additional semester physical education activity
Major and related courses:
Economics 101
3 hours sociology
Psychology 101, 331 or Education 204, 207
Biology 210
8 hours from Biology 192, Chemistry 351,352 or any course that qualifies for Category D
Chemistry 121,122
36 hours home economics including 101, 104, 105, 201, 206, 301, 304, 350, plus electives
Electives to complete 128 hours

See typical course of study in home economics: general (B.S.) below.

First Semester Second Semester
Freshman
Home Economics 101 3 Home Economics 104 3
General Education Category A 3 General Education Category A 3
General Education Category B 3 General Education Category B 3
Chemistry 111 3 Chemistry 122 4
Elective 3 Elective 3
Economics 101 3 Physical Education 021 1
Economics 105 3
Business related elective 3
Chemistry 111 3

Sophomore
Home Economics 105 3 Home Economics Elective 3
Home Economics 206 3 Home Economics 201 3
General Education Category D 4 Economics 101 3
General Education Category B 3 General Education Category D 3
Elective 3 Biology 210 3
Elective 3 Physical Education Elective 1

Junior
Home Economics 304 3 Home Economics 300 1
Home Economics Elective 3 Home Economics 301 3
Home Economics Elective 3 Home Economics Elective 3
Psychology 331 3 Home Economics Elective 3
General Education Category E 3 Home Economics Elective 3
Elective 3 Elective 3

Senior
Home Economics 350 3 Home Economics Elective 3
Home Economics Elective 3 Home Economics Elective 3
Home Economics Elective 3 Home Economics Elective 3
Elective 3 Elective 3
Elective 3 Elective 3

Home Economics: Business (B.S.)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 may apply)

Category D
2 approved mathematics or natural or applied science courses (6 hours; approved related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours)

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

Major and related courses:
Economics 101
3 hours sociology
Psychology 101, 331 or Education 204, 207
Chemistry 111
Computer Science 100
Theatre and Speech 109
36 hours home economics including 101, 105, 204, 304, 350, plus electives
12 hours business administration from 103, 313, 315, 352, 332, 335, 345, 355, 362, 364, 450; Office Administration 219
Electives to complete 128 hours.

See typical course of study in home economics: business (B.S.) below.

First Semester Second Semester
Freshman
Home Economics 101 3 Home Economics Elective 3
General Education Category A 3 General Education Category A 3
General Education Category B 3 General Education Category B 3
Chemistry 111 3 Chemistry 122 4
Elective 3 Elective 3
Economics 101 3 Physical Education 021 1
Economics 105 3
Business related elective 3
Chemistry 111 3

Sophomore
Home Economics 204 3 Home Economics Elective 3
Home Economics Elective 3 Home Economics 201 3
General Education Category D 3 Economics 101 3
General Education Category B 3 General Education Category D 3
General Education Category E 3
Theatre and Speech 109 3

Junior
Home Economics 304 3 Home Economics Elective 3
Home Economics Elective 3 Home Economics Elective 3
Psychology 331 3 Home Economics Elective 3
Business related elective 3 Home Economics Elective 3
Business related elective 3 Home Economics Elective 3
Business related elective 3 Elective 3

Senior
Home Economics 350 3 Home Economics Elective 3
Home Economics Elective 3 Home Economics Elective 3
Home Economics Elective 3 Home Economics Elective 3
Elective 3 Elective 3
Elective 3 Elective 3
Elective 3 Elective 3

Education: Home Economics (B.S)
General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level, to total 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 101, 3 hours sociology plus one course to total 9 hours behavioral or social sciences
**Category D**
2 approved mathematics or natural or applied science courses plus Mathematics 115 (approved related courses below may apply)

**Category E**
1 approved interdisciplinary or non-Western course (3 hours)

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

**Major and related courses:**

<table>
<thead>
<tr>
<th>Biology 121, 122, 210</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 121, 122</td>
</tr>
<tr>
<td>36 hours home economics including 101, 104, 105, 201, 206, 207, 300, 301, 302, 303, 304</td>
</tr>
<tr>
<td>26 hours education including 102, 204, 207, 301, 430, 431, 438</td>
</tr>
<tr>
<td>2:00 average in teaching fields and in education courses</td>
</tr>
<tr>
<td>Category D</td>
</tr>
</tbody>
</table>

See typical course of study in home economics education (B.S.) below.

**First Semester**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>First Semester</td>
</tr>
<tr>
<td>Home Economics 101</td>
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<td>General Education</td>
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<td>Category A</td>
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<td>General Education Category</td>
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<tr>
<td>B Humanities</td>
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<tr>
<td>General Education Category</td>
<td>Education 021</td>
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<td>General Education Category D</td>
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<table>
<thead>
<tr>
<th>Sophomore</th>
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</thead>
<tbody>
<tr>
<td>Home Economics 105</td>
<td>3 Home Economics 104</td>
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<tr>
<td>Home Economics 206</td>
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<tr>
<td>Biology 121</td>
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<td>General Education Category C</td>
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<td>General Education</td>
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<td>Category B</td>
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<table>
<thead>
<tr>
<th>Junior</th>
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<tbody>
<tr>
<td>Apply for Admission to TEP</td>
<td>Home Economics 201</td>
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<tr>
<td>Home Economics 304</td>
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<tr>
<td>Home Economics 303</td>
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<tr>
<td>Education 207</td>
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</tr>
<tr>
<td>Mathematics 115</td>
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<tr>
<td>Home Economics Elective</td>
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<tr>
<td>Physical Education Elective</td>
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<table>
<thead>
<tr>
<th>Senior</th>
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<tbody>
<tr>
<td>Education 430</td>
<td>3 Home Economics Elective</td>
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<td>Education 431</td>
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<td></td>
<td>Elective</td>
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</table>

101 Design Fundamentals (3)
Aesthetic qualities of the environment including elements of basic design and awareness of aesthetic expression in everyday life. Emphasis on using design to create moods and communicate ideas.

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.

199r 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.

204 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.

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)
Review and 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 record-keeping; 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 daycare centers. Lecture two hours, laboratory two hours. Prerequisites: lower level child study course from psychology or 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: Home Economics 105 or equivalent; Chemistry 121,122 or equivalent.

306 Housing and Equipment (3)

310 Tailoring (3)
Tailoring of suits, coats, 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 Innovation and 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. Prerequisites: 101, 201 or equivalent.

322 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, and 303 or equivalent.

326 Interior Design 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. Prerequisite: 322 or equivalent.

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: Home Economics 206, Chemistry 122, Microbiology 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.

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, 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.

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 (3)
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.

430 Food System Administration (3)
Management, organization, 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.

497r Research (1-4)

496r Individual Studies (1-4)

499r Group Studies (1-4)
The following list is presented as a guide for selecting electives. In all cases students should discuss their career plans with an adviser so that an individualized plan of study can be developed. Detailed outlines are available from the department.

<table>
<thead>
<tr>
<th>Home Economics Electives</th>
<th>Business Related Electives</th>
<th>General Related Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fashion Merchandising</strong></td>
<td>104 Clothing Construction</td>
<td>103 Introduction to Business</td>
</tr>
<tr>
<td>201 Textiles</td>
<td>201 Accounting</td>
<td>201 Accounting</td>
</tr>
<tr>
<td>311 Fashion Innovation and Marketing</td>
<td>313 Basic Marketing</td>
<td>315 Creative Theatre</td>
</tr>
<tr>
<td>312 Fashion Fundamentals</td>
<td>315 Behavioral Concept in Administration</td>
<td>270 Introduction to Mass Media</td>
</tr>
<tr>
<td>313 Merchandising</td>
<td>362 Advertising</td>
<td>Art</td>
</tr>
<tr>
<td>328 Consumer &amp; the Market</td>
<td>363 Sales Management</td>
<td>211 Prehistoric-Byzantine</td>
</tr>
<tr>
<td>370 Fashion Advertising and Promotion</td>
<td>364 Retailing</td>
<td>212 Romanesque-Baroque</td>
</tr>
<tr>
<td>402 Seminar: Professional Procedures</td>
<td></td>
<td>213 European</td>
</tr>
<tr>
<td>405 Field Experience</td>
<td></td>
<td>309 Commercial Design</td>
</tr>
<tr>
<td>Home economics electives to equal 36 hours</td>
<td></td>
<td>To equal 128 hours</td>
</tr>
</tbody>
</table>

| **Food Service Management** | 206 Food Science | 201 Accounting |
|                            | 207 Food Management & Marketing | 302 Business Finance |
|                            | 270 Introduction to Restaurant Management | 306 Budgeting |
|                            | 430 Food Systems Administration | 313 Basic Marketing |
|                            | 431 Quantity Food Service       | 325 Principle of Management |
|                            | 402 Seminar: Professional Procedures | 332 Personnel Management |
|                            | 405 Practicum-Restaurant Management | 355 Purchasing |
| Home economics electives to equal 36 hours |                      | |

| **Interior Design** | 201 Textiles | 103 Introduction to Business |
|                     | 220 Interior Space Design | 201 Accounting |
|                     | 222 Color System          | 313 Basic Marketing |
|                     | 304 Interior Furnishing   | 315 Behavioral Concept in Administration |
|                     | 306 Housing & Equipment  | 362 Advertising |
|                     | 315 Elements of Interior Design | 363 Sales Management |
|                     | 322 Interior Design Synthesis | 364 Retailing |
|                     | 326 Interior Design Presentation | |
|                     | 390 Images of Western Living | |
|                     | 402 Professional Procedures | |
|                     | 405 Practicum             | |
| Home economics electives to equal 36 hours |                      | |

Theatre and Speech
102 Theatre Theory and Practice
315 Creative Theatre
270 Introduction to Mass Media
Art
309 Commercial Design
To equal 128 hours
Military Science

Reserve Officers Training Corps (ROTC)
Professor Morris, Head
Assistant Professors Andrews, Boessen, Coven, Torbert, Williams, Wilson

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 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:

a. Be physically qualified.
b. Be not less than seventeen years of age.

c. Have at least one academic year of college remaining.

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:

a. Have either completed the basic course, three (3) 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 five weeks’ camp, students qualify to enter ROTC directly as a junior simultaneously earning approximately $600. 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.

b. Have at least one academic year of college remaining. (Basic camp attendees must have two academic years of college remaining, either graduate or undergraduate.)
c. Be enrolled as a full time student at The University of Tennessee at Chattanooga or other accredited institution in the Chattanooga area.
d. Be at least seventeen years of age.
e. 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 chairman and their academic adviser.

Course Content
The basic course is composed of the first four semesters of military science, one of which is an enrichment course presented in conjunction with the department of human services. 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 five-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 free. 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 upon graduation. Students receive $100.00 each month while enrolled in the advanced course, approximately $500.00 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>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Military Studies*</td>
<td></td>
</tr>
<tr>
<td>MS 101 Fundamentals of Military Organization, Leadership, and Management</td>
<td>3</td>
</tr>
<tr>
<td>Human Services 102 Human Existence and Urban Society</td>
<td>3</td>
</tr>
<tr>
<td>MS 201 American Military History</td>
<td>3</td>
</tr>
<tr>
<td>MS 202 Analytical Leadership and Directional Bearing</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Military Studies</td>
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<tr>
<td>MS 301, 302 Advanced Leadership and Management</td>
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<tr>
<td>MS 400 Army ROTC Summer Studies</td>
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</tr>
<tr>
<td>MS 401, 402 Military Management and Seminar in Leadership</td>
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</tr>
<tr>
<td>Total</td>
<td>26</td>
</tr>
</tbody>
</table>

Students in all of the above classes participate in the equivalent of one hour of leadership laboratory per week.

* On the basis of previous honorable active military service in any branch of the armed services, or attendance at the basic summer camp, participation in the junior ROTC program in secondary schools, a student may be exempt from all or portions of the basic course.

Course Descriptions

101 Fundamentals of Military Organization, Leadership and Management (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.

201 American Military History (3)
A study of the American military institutions, policies, experiences and traditions from the Colonial Indian Wars to Vietnam.

202 Analytical Leadership and Directional Bearing (3)
Analytical leadership emphasizing problem solving; directional bearing oriented toward the development of proficiency in basic map reading; map reading; fundamentals of survival.

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.
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. **Prerequisite:** 400 or permission of department head.

## Social Work

**Associate Professor T. Brown, Head**

**Assistant Professor Lamb, Director of Field Placement**

**Assistant Professors Kahan, Walker, Williams**

### Admission Policies

Enrollment in the social work program is limited to one hundred majors; application alone will not insure admission. Students wanting 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:
   
a. Biology 121  
b. Sociology 151  
c. Psychology 101  
d. Anthropology 208  
e. Social Work 150  
f. Social Work 205  
g. Human Services 201

2. Earn a minimum 2.6 grade point average in Social Work 150, 205 and Human Services 201.

3. Make candidacy known sixty 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 program.
   
b. Submit written self-assessment.
   
c. Write autobiography.
   
d. Indicate subscription to the social work Code of Ethics.

4. Complete personal interview with social work faculty member.

5. The Social Work Admissions and Continuation Committee (SWACC) reviews application and makes recommendations. Applicants accepted for admission shall be notified in writing and assigned an academic adviser.

6. Upon acceptance in the program 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 placement.

In the event that more qualified students submit applications than there are vacancies, the social work Admissions and Continuation Committee reserves the right to apply additional screening procedures.

### Continuation Standards

The committee will review cases involving the academic, emotional, ethical and professional fitness of social work students and will make recommendations regarding continuation in the program.

When majors complete the necessary requisites and present a grade point average of 2.50 in the major, they should submit 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 ninety 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 program, 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.

### Human Services: Social Work (B.A.* and B.S.)

**General Education** (see pages 27-29 for list of approved courses):

#### Category A

2 approved courses in written communication in the English language, at least one at the freshman level (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 courses below may apply)

#### Category D

2 approved mathematics or natural or applied science courses (6 hours)

#### Category E

1 approved interdisciplinary or non-Western course (3 hours)

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

*Foreign language through second college year (B.A. degree only)

**Major and related courses:**

35 hours social work core including 150, 205, 300, 301, 304, 370, 400, 404, 406, 470.

9 hours interdisciplinary core including Human Services 101, 201, 405

34 hours cognate courses including Psychology 101, Sociology 151, Anthropology 208, English 200 or 300, Home Economics 328, Biology 121, Sociology 305, Psychology 308, Theatre and Speech 309, Philosophy 221, or 322, or 425; 3 hours introductory statistics course from one of the following: Mathematics 210, Business Administration 211; Political Science 101, and Economics 101.

Electives to complete 128 hours.

**see typical course of study in social work (B.S.) below.**

### First Semester

<table>
<thead>
<tr>
<th></th>
<th>General Education Category A</th>
<th>General Education Category B Humanities</th>
<th>Social Work 150</th>
<th>Social Work 205</th>
<th>Human Services 101</th>
<th>General Education Category D Biology 121</th>
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### Second Semester

<table>
<thead>
<tr>
<th></th>
<th>Political Science 101</th>
<th>General Education</th>
<th>Social Work 205</th>
<th>General Education</th>
<th>Category C Sociology 151</th>
<th>Elective</th>
<th>Physical Education 021</th>
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Sophomore

Elective 3
General Education Category 3
General Education Category D 4
Human Services 201 3
General Education Category E 3
Anthropology 208 3
General Education Category C 3
Psychology 103 3
Physical Education Activity 1

301 Legal Issues in Social Work (3)
Identification and analysis of common legal issues and problems encountered by the professional social worker.

305 Legal Issues in Social Work (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: Human Services 201; Social Work 205, 300; corequisite: Social Work 304. Six hours required for students matriculated prior to the 1976-77 catalog.

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 concepts and content with field experience required. Prerequisites: An introductory statistics course; Human Services 201; Social Work 205, corequisites: Social Work 404 and 470.

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 the 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: An introductory statistics course; 300, 301, 304, and 370; corequisites: 400 and 470.

406 Social Values and Ethics in Social Work Practice (3)
An indepth 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 the Family in Crisis (3)
An examination of problems experienced by dysfunctional 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.

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.

430 Thanatology in Social Work (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 Programs and Services for the Aged (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.

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: An introductory statistics course; 300, 301, 304, and 370; corequisites: 400 and 404.
Nursing*

Professor Sczekan, Director
Associate Professors Charles, Headricks, M. Jackson
Assistant Professors Adams, Butterfield, Gilmore, D. Green, Howard, Troxel, Volz
Instructors Farren, Norwood

Nursing students must meet the same admission requirements as those required for all applicants to the University. Two units of high school algebra or college preparatory mathematics and one unit of high school chemistry are desirable.

Enrollment in nursing is limited. Admission to the University does not insure acceptance to the nursing courses. Students seeking a B.S. in nursing should apply for admission to the University well in advance of the expected enrollment date. Academic advising for all students declaring a pre-nursing or nursing major must be done by a member of the nursing faculty.

Students desiring admission or readmission to the nursing sequence must submit written application on forms available from the Department of Nursing. Candidates for Nursing 202 must make formal application by June 15 of the year preceding January enrollment. Applicants after this date will be considered on a 'space available' basis. Re-entering or transfer students should submit the written form three months prior to the desired enrollment date.

Requests for exceptions from 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.

**Admission to the Nursing Major**

The Admissions Committee of the Department of Nursing has the responsibility for selecting those students to be admitted or readmitted to the nursing major. This committee meets as necessary. Fifty basic students will be admitted yearly to the first nursing course. Candidates will be considered for admission conditional to meeting the following requirements:

- Completion of 45 semester hours including the following prerequisite courses with a cumulative grade point average of 2.5, and no grade lower than C:
  - Chemistry 121, 122, Biology 191, 192, 193, 210
  - Sociology 151
  - Psychology 101
  - Two or three hours of mathematics
  - Anthropology 208 or Psychology 221
  - Two or three hours of normal nutrition

- Formal acceptance to The University of Tennessee at Chattanooga

- Declaration of pre-nursing as applicant's major.

- Personal interview with a member of the nursing faculty

- References (as requested by faculty)

- Physical and emotional characteristics appropriate for nursing practice

- Science competency: The nursing major includes a strong science component; therefore, individuals who have repeated any science course will be considered on a selected basis.

- Should there be more applicants than can be accommodated, priorities will be assigned on the basis of:
  1. Date of enrollment at The University of Tennessee at Chattanooga
  2. Date of personal interview with departmental faculty
  3. Date of declaring pre-nursing as applicant's major
  4. Residency status

- Candidates will receive written notice of the committee’s decision on their application. Individuals who are not accepted for a given class may reapply for consideration for the following year.

In addition to regular education costs, nursing students must meet the following expenses:(costs are approximate)  
- Uniforms and laboratory coat ................................. $90.00  
- Standardized tests ........................................... $15.00  
- Liability insurance (yearly) .................................. $20.00  
- 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 clinical agencies and on selected field trips.

Acceptance of transfer and/or substitute credits in meeting requirements of the curriculum will be determined by departmental faculty. Transfer students must meet the same grading standards as other students in the program.

Upon successful completion of the baccalaureate program in nursing, graduates will be eligible to write the State Board Test Pool Licensing Examination. Satisfactory completion of the examination enables the graduate to practice nursing as a registered nurse (R.N.) in the state in which the examination was written.

**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 uniformly applied by the nursing faculty.

1. To progress in nursing, students are required to: a) make a minimum grade of 'C' in all nursing and required courses (exclusive of electives), b) maintain a
cumulative grade point average of 2.0, and c) maintain an active malpractice insurance policy.
A student who transfers into the nursing program at The University of Tennessee at Chattanooga 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 is lower than a 'C.'

Students will be allowed to repeat a nursing course one time. Any student who is enrolled in a course beyond the mid-term point, and who then withdraws, will be considered to have taken the course. In case of repeated failure, the student will be advised to withdraw from the nursing program.

To insure preparation of a safe practitioner, any student who fails to make satisfactory progress in either the theoretical or clinical portion of a nursing course will not be permitted to continue in the clinical area. Students are evaluated in a specific time sequence in all clinical courses. Students will participate in this procedure which includes a written self-evaluation. 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.

Students must acquaint themselves and meet fully the university standards titled "Maintenance of Ethical and Professional Standards of the Nursing Profession." These standards are published in the 1978/79 Student Handbook.

If 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/she may appeal to the department chairman, and thereafter in accordance with the University policy.

Nursing (B.S.N.)

General Education (see pages 27-29 for list of approved courses):

Category A
2 approved courses in written communication in the English language, at least one at the freshman level (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 may apply)

Category D
2 approved mathematics or natural or applied science courses (6 hours; related courses below may apply)

Category E
1 approved interdisciplinary or non-Western course (3 hours) Related courses below may 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 101, 221, Sociology 151, Anthropology 208.
21 hours mathematics, natural or applied science courses including:
Biology 191, 192, 193, 210
Chemistry 121, 122
2-3 hours mathematics
Mathematics 210
3 hours nutrition
Nursing 202, 302, 303, 304, 310, 350, 401, 402, 404, 407, 450
Electives to complete 128 hours
See typical course of study in nursing (B.S.N.) below.

First Semester

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<td>Chemistry 121</td>
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<td>Mathematics 2-3</td>
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<td>Physical Education 021</td>
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<tr>
<td>Sociology 151</td>
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Second Semester

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<tr>
<td>Biology 192, 193</td>
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<tr>
<td>Psychology 101</td>
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<td>Biology 210</td>
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<td>Nutrition 2-3</td>
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<td>(Home Economics 105 or 305)</td>
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Junior

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<td>Nursing 350</td>
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Senior

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<tr>
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<tr>
<td>Humanities</td>
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<tr>
<td>Nursing 404</td>
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<tr>
<td>Nursing 402</td>
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<tr>
<td>Nursing 407</td>
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Curriculum revision is in process: Some change in sequence and hours may occur.
128 credit hours required for graduation.
Revised and approved October 1978.

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

202 Nursing Process (7) (Replaces 101, 200, and 201)
Theory and practice of basic nursing skills and interpersonal relationships with emphasis on utilizing the nursing process to meet human needs according to Maslow's theory. The course focuses on commonalities of nursing care for individuals within the health-illness continuum. Lecture five hours, laboratory six hours. Prerequisites; approval of department admissions committee. Credit not given if Nursing 101, 200 and 201 were taken.

300 Pharmacology (3)
The mathematics of dosages and solutions relevant to administration of medications; an overview of pharmacology including drug classifications, action, use and nursing implications. Legislation pertinent to drug control is 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 the development of interpersonal skills and their application in a variety of nursing 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 department.

310 Adult and Child Care I (8)
Theory and clinical experience in care of children and adults at any stage of development. The nursing process is utilized in providing care for persons at any point on the health-illness continuum and in various settings. Lecture four hours, laboratory twelve hours. Prerequisites: 202, 302, 303.

350 Management in Nursing (3)
A review of concepts and techniques applicable in first-line nursing management. Examination of similarities, differences, and unique characteristics of various managerial roles in nursing. Focus on techniques of supervision, job assignment, communication, and control of staff members. Prerequisites: 302, 303, or permission of department head.

401 Adult and Child Care II (8)
A continuation of 310 with clinical experience in various settings including critical care areas. Emphasis on the application of basic concepts relevant to the leadership role in providing nursing care for a group of persons. Lecture four hours, laboratory twelve hours. Prerequisites: completion of junior nursing courses.

402 Family and Community Health (5)
Content and experiences focusing on health patterns, needs and problems of the individual and community; family-centered approach in delivery of nursing care. Lecture two hours, laboratory nine hours. Prerequisite: completion of junior nursing courses and nursing 401.

404 Professional Seminar (2)
An inquiry into nursing as a profession with emphasis on the significance of moral and legal factors as determiners of individual practice. Consideration of economic, demographic, political and societal influences affecting nursing and the practice of nursing in a changing society. Prerequisite: completion of junior nursing courses and/or permission of department.

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 psychiatric and community health settings. Prerequisites: completion of junior and first semester senior nursing courses.

450 Guided Study in Professional Inquiry (3)
An independent study project investigating some aspect of nursing of special interest to the student; guided experience in acquiring basic knowledge and skills in research methodology. Prerequisite: completion of junior nursing courses.

460 Pathophysiology (3)
A study of selected principles of physiology, with special attention to alterations due to the disease process. Prerequisites: completion of junior level nursing courses and/or permission of department.

480 Physical Assessment (3)
A course in physical examination and medical history of patients of any age presented in the context of nursing practice. Prerequisite: completion of junior level courses of department.

497r Research (1-4)

496r Individual Studies (1-4)

499r Group Studies (1-4)
Other Educational and Public Service Units

Cadek Conservatory of Music

Functioning as an auxiliary of the Cadek Department of Music, the Cadek Conservatory has as its goal the musical education of 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 music appreciation, theory and composition, as well as chamber music and other ensemble activity. This comprehensive curriculum includes a special college preparatory music course of study which is 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 prominent performing musicians as well.

For further information, please consult the Cadek Conservatory of Music Bulletin, or call 755-4624.

Center for Economic Education

As an educational facility for UTC, the Chair of Free Enterprise and the associated Center for Economic Education designs and implements research projects and educational programs to educate UTC students, secondary school teachers and the public about basic economic principles and the unique features of the free enterprise system.

Child Development Institute

The Child Development Institute is an instructional center designed to provide quality services to children and youth with learning problems through academic, psychometric, and perceptual motor assessment while training students in a variety of graduate programs including special education, counseling, psychology and reading.

Division of Continuing Education

The Continuing Education Division is the administrative unit which develops, coordinates and supervises continuing education and public service programs offered by The University of Tennessee at Chattanooga.

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 8:00 a.m. to 8:30 p.m. Monday through Thursday, 8:00 a.m. to 5:30 p.m. Fridays, and 8:00 a.m. to 2:00 p.m. on Saturdays. 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, Dayton, Jasper and Soddy Daisy. 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.
Non-Credit Courses
Non-credit courses dealing with a wide variety of topics and interest areas are offered through the Division of Continuing Education and are open to the general public. These non-credit courses are divided into three major categories: professional development, arts and sciences, and personal interest. Programs relating to the areas of management development, music, art, literature, foreign languages, recreation, engineering, real estate, home economics, and consumer education are offered throughout the year. Non-credit course format ranges 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 non-credit 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 non-credit 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 apply for admission at the UTC Admissions Office.

Other Services
Additional services provided by the Division of Continuing Education include (1) administering the non-engineering cooperative education program (see page 32 for further information); (2) furthering public awareness of University activities through the UTC radio program "On Campus"; (3) participating in the Appalachian Education Satellite Program whereby greater numbers of people may have access to educational programs and courses through regional satellite television broadcasts; (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

The Special Programs are designed to provide academic information and supportive service to high school and college students. The programs are funded by the Office of Education’s Division of Higher and Continuing Education, and administered by the department of Special Services.

Special Services is an academic enhancement program designed to provide tutorial and counseling assistance to students enrolled or accepted for enrollment at the University of Tennessee at Chattanooga. Services provided by the program are:

- Tutorial Assistance—individual or group assistance to improve the student’s understanding of specific class material and of the basic communication skills;
- Group Instructions—small, non-credit classes to improve
student's study effectiveness, i.e., note-taking, reading, test taking, and time management;
Learning Laboratory—a self-help laboratory designed to provide individualized instructions in the basic skill areas. With the help of a learning specialist, students work with programmed material to improve their understanding of reading, math, and writing skills. Special Services also offers counseling and referral services. These services are intended to help students identify and solve problems which hamper their academic progress.
Upward Bound is a college preparatory program which provides eligible high school students academic and cultural activities to improve their chances of entering and successfully completing postsecondary education.

The Learning Center

The Learning 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 Learning 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 Learning Center, interested persons should call or write The Learning Center, 211 Hunter Hall, 615 McCallie Avenue, UTC, Chattanooga, Tennessee 37402, Telephone 755-4218.

Library

The University library's holdings include approximately 600,000 pieces of material, of which more than 260,000 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 have access to the collections and services of all libraries of The University of Tennessee system through inter-library loan.
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 capability, 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.

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.
Faculty and Staff

Classes on the lawn are often seen around the campus at UTC
Instructional Staff

The date after each name indicates the year of appointment.

Faculty Emeriti


Wilbur Kingsley Butts (1931)  Cuerry Professor Emeritus of Biology  B.S., 1918, M.S., 1923, Ph.D., 1929, Cornell University.


John Casale (1935)  Associate Professor Emeritus of Violin  Studied with Maestro Giuseppe Bilancia, Barone Michele Deodata (Catania) and Edouard Dethier (Institute of Musical Art, New York).


Doris Doe (1956)  Professor Emerita of Voice  Studied with Frank La Forge, Michael Raucheisen and Johannes Heidenreich (Berlin), and Artur Bodanzky.

Lewis A. Fletcher (1960)  Professor Emeritus of Chemistry  B.S., Clemson Agricultural College, 1923; M.S., Oregon State College, 1926; Ph.D., University of Maryland, 1930.


Isobel Griscom (1922)  Associate Professor Emerita of English  A.B., Miami University; M.A., University of Wisconsin.


Myron Stanley McCoy (1948)  Cuerry Professor Emeritus of Physics  A.B., University of Georgia, 1932; M.A., University of North Carolina, 1934; Ph.D., Ohio State University, 1937.


Frederick A. Peery (1939)  Professor Emeritus of Business Administration  B.S., 1933, M.S., 1936, Kansas State University; Ph.D., University of Texas, 1971.


Frank Williams Prescott (1928)  Professor Emeritus of City Government  A.B., University of New Hampshire, 1919; M.A., 1921, Ph.D., 1925, University of Wisconsin.

Culver Haygood Smith (1932)  Cuerry Professor Emeritus of History  A.B., Trinity College, 1923; M.A., Yale University, 1925; Ph.D., Duke University, 1933.


Dorothy Hackett Ward (1938)  Cuerry Professor Emerita of Theatre and Speech  A.B., University of Chattanooga, 1928; Speech Diploma, Cadek Conservatory, 1932; M.F.A., Yale University, 1946.

Faculty, 1978-79


Mario Abri (1973)  Associate Professor of Music  A.B., University of Albuquerque, 1967; Ph.D., Florida State University, 1971.

Barbara Andrews Aley (1978)  Instructor in Music  B.M., Wichita State University, 1975; M.M., Yale University.


George Warren Averitt (1953)  Professor of Health and Physical Education  B.S., University of Alabama, 1940; M.A., University of Mississippi, 1950; Ed. D., Columbia University, 1953.

Bert C. Bach (1975)  Professor of English; Dean of Faculty  B.A., Eastern Kentucky University, 1958; M.A., George Peabody College for Teachers, 1959; Ph.D., New York University, 1966.

M. Gene Bailey  Assistant Professor of Computer Science  B.S., Rutgers University, 1967; M.S., University of Minnesota, 1970; Ph.D., University of Missouri, Rolla, 1978.


Richard E. Bergenc (1968)  Associate Professor of Geology  A.B., Lafayette College, 1948; M.S., Lehigh University, 1950; Ph. D., Pennsylvania State University, 1964.


Thomas E. Biber (1970)  Professor of Education; Coordinator of Field Services; Certification Officer  A.B., 1958, M.A., Stanford University; Ed. D., Ball State University, 1966

Michael D. Biderman (1972)  
Assistant Professor of Psychology  

Dan E. Birch (1977)  
Assistant Professor of Economics  
B.A., Brigham Young University, 1970; M.S., 1972, Ph.D., 1977, Purdue University.

William W. Black (1978)  
Assistant Professor of Geology  
Head, Geosciences Department  
B.A., Earlham College, 1964; M.S., Rutgers University, 1971; Ph.D., University of North Carolina, Chapel Hill, 1977.

Joseph F. Boessen (1976)  
Assistant Professor of Military Science  

Ronald G. Bohrer (1968)  
Associate Professor of Classics;  
Head, Foreign Languages and Literature  

Donald R. Bonney (1977)  
Assistant Professor of Economics  

Daniel Alan Bowles (1976)  
Assistant Professor of Music  

Albert Bowman (1962)  
Professor of History  

Franklin Lee Boyer (1967)  
Professor of Chemistry  
B.S., Western Kentucky State College, 1949; Ph.D., Vanderbilt University, 1960.

Walker L. Breland (1972)  
Associate Professor of Music  
B.A., Furman University, 1958; M.M., Ph. D., 1974, Indiana University.

David M. Brodsky (1971)  
Associate Professor of Political Science  
Head, Political Science Department  

Charles Alfred Brown (1961)  
Associate Professor of Mathematics  
B.A., Berea College, 1956; M.A., Florida State University, 1958; Ph.D., University of Mississippi, 1975.

Jeffrey L. Brown (1977)  
Associate Professor of Sociology and Anthropology  

Mimeal C. Brown (1969)  
Associate Professor; Head, Admissions Department, Library  

Tommie F. Brown (1971)  
UC Foundation Associate Professor of Social Work;  
Coordinator of Social Work Program  
B.A., Dillard University, 1957; M.S.W., Washington University, 1964.

Herbert W.L. Burnham, Jr. (1970)  
Associate Professor of Philosophy and Religion  
Head, Philosophy and Religion Department  

Mary A. Butler (1978)  
Lecturer of Office Administration  
B.S., Alfred University, 1947.

Martha Butterfield (1974)  
Assistant Professor of Nursing  
B.S.N., 1957, M.S.N., 1964, Ohio State University.

William L. Butterfield (1967)  
Associate Professor of Education  
Director, Division of Human Services  
B.A., Ohio Northern University, 1952; B.D., Garrett Theological Seminary, 1955; Ph.D., Ohio State University, 1967.

Edward E. Cahill (1975)  
Professor of Sociology and Anthropology;  
Head, Sociology and Anthropology Department  
B.S.Sc, St. Mary’s College, 1952; M.A., University of Notre Dame, 1957; Ph.D., Catholic University of America, 1965.

Pedro F. Campa (1970)  
Associate Professor of Spanish  

Terrance M. Carney (1970)  
Associate Professor of Engineering  

-David W. Carrithers (1970)  
UC Foundation Associate Professor of Political Science  

A. Richard Casavant, Jr. (1977)  
Associate Professor of Business Administration  
B.A., Emory University 1964; M.B.A., University of Pennsylvania, 1966; Ph.D., Georgia State University, 1976.

Gwendolyn Charles (1975)  
Associate Professor of Nursing  
B.S.N., A & T State University (North Carolina), 1960; M.S.N., Emory University, 1970.

Linh Cheng (1978)  
Assistant Professor of Engineering  
B.S., 1970, National Taiwan University; M.S., 1975, Ph.D., 1977, Rice University.

Deborah A. Claybrooks (1977)  
Instructor; Reference Librarian  

Mary Jo Cochran (1965)  
Assistant Professor of Home Economics;  
Coordinator, Home Economics Program  
B.S., 1948, M.S., 1971, Auburn University.

Jimmie Lee Collins (1966)  
Professor of Art  

George Coleman Connor (1959)  
Guerry Professor of English  

D. Peter Consacro (1970)  
Associate Professor of English;  
Head, Interdisciplinary Studies  

Arthur J.D. Cook (1968)  
Professor of Business Administration  

Robert Neal Coulter (1971)  
Instructor; Reference Librarian  

Renee S. Cox (1976)  
Assistant Professor of Music  

Ronald B. Cox (1970)  
Associate Professor of Engineering  
B.S., 1965, M.S., 1968, The University of Tennessee, Knoxville; Ph.D., Rice University, 1970; P.E.

Barbara Hanna Creider (1976)  
Assistant Professor of Music  

George Ayers Cress (1951)  
Guerry Professor of Art;  
Head, Art Department  

Orrin H. Cross (1970)  
Associate Professor of Psychology  
A.B., Clark University, 1942; M.S., University of Minnesota, 1945; Ph.D., University of Pittsburgh, 1953.

Kermit G. Cudd (1975)  
John Stagmar Professor of Economics and Business Administration;  
Dean, School of Business Administration  
B.A., 1953, M.A., 1958, University of Wisconsin; Ph.D., Ohio State University, 1969.

James R.Cunningham (1973)  
Associate Professor of Engineering  
B.S., Louisiana State University, 1963; M.E., 1970, Ph.D., 1972, University of Florida; P.E.

Joel Cunningham (1974)  
Associate Professor of Mathematics  
Dean of Continuing Education  

Dorothy Elizabeth Dalby (1956)  
Assistant Professor of Chemistry  
A.B., 1955, M.S., 1961, University of Chattanooga; R.N.

Earl E. Davis (1978)  
Professor of Education  
Head, Special Education & Counseling, Education  
B.S., University of Southern Mississippi, 1956; M.Ed., 1963, University of Texas at Austin; Ed.D., 1972, University of Alabama.

Janice R. Davis (1978)  
Assistant Professor of Education  

Lloyd D. Davis (1970)  
Associate Professor of Education;  
Director of Academic Computing Services  
A.B., Ohio Northern University, 1956; M.S., University of Miami, 1959; Ed.D., The University of Tennessee, Knoxville, 1974.

-Tyler Deierhoi (1963)  
Associate Professor of History  

Richard Detmer (1972)  
Associate Professor of Mathematics  

*On leave second semester, 1978-79.*
Charles Monroe Hyder (1968)  Professor of Education;  Executive Dean of Graduate Studies and Research  B.S., 1951, M.A., 1955 Appalachian State University; Ed.D., Duke University 1968.


Mary B. Jackson (1973)  Associate Professor of Nursing  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.


M. Rex Jones  Assistant Professor of Computer Science  Head, Computer Science Department  A.B., Phillips University, 1967; M.S., West Texas State University, 1969; M.S., 1974, Ph.D., 1977, Texas A&M University.

Thomas Kirkman Jones (1967)  Assistant Professor of Spanish  A.B., University of Chattanooga, 1965; M.A., University of Illinois, 1966.


Randall M. Kahan (1978)  Assistant Professor of Social Work  A.B., Shimer College, 1974; M.S.W., Washington University, 1976.


Clive Kileff (1970)  Associate Professor of Sociology and Anthropology  A.B., Harvard University, 1966; Ph.D., Rice University, 1970.


Norbert Koch (1947)  Professor of Engineering  B.Ed., Wisconsin State University, 1937; M.S., The University of Tennessee, Knoxville, 1940; Ed.D., University of Missouri, 1951.

Stephen W. Kuhn (1978)  Associate Professor of Mathematics  B.S., Louisiana State University, 1970; M.S., University of Southwestern Louisiana, 1974.


Jane A. Lamb (1976)  Assistant Professor Social Work;  Director of Field Placement  B.A., Southwestern at Memphis, 1964; M.S.W., University of North Carolina, 1966.


Eric Trent Lane (1967)  Associate Professor of Physics  B.S., Louisiana State University, 1960; M.A., 1963, Ph.D., 1967, Rice University.

Alan L. Larson (1973)  Assistant Professor of Economics  B.A., University of Nebraska, 1968; Ph.D., Kansas State University, 1976.


Robert Gary Litchford (1965)  Associate Professor of Biology  B.S., Georgia Southern College, 1960; Ph.D., Rice University, 1965.


Genevive S. Lubot (1977)  Associate Professor of History;  Acting Dean, College of Arts and Sciences  A.B., University of Pennsylvania, 1963; M.A., University of South Carolina, 1965; Ph.D., Ohio State University, 1970.

John August Lynch (1975)  Associate Professor of Chemistry  B.S., St. Peter's College, 1970; Ph.D., Pennsylvania State University, 1976.


Horace Greely McDowell (1960)  Associate Professor of Geography  A.B., Miami University, 1949; M.A., University of Nebraska, 1950; Ed.D., The University of Tennessee, Knoxville, 1971.


Louise Willis McIntosh (1961)  Associate Professor of Mathematics  B.S., 1940, M.Ed., 1962, University of Chattanooga; M.S., The University of Tennessee at Chattanooga, 1971.

Rayford John McLaurin (1955)  Associate Professor of Business Administration  B.S., Bowling Green Business University, 1948; M.B.A., University of Alabama, 1951.


Jean Meacham (1965)  Lecturer in English  Director, Academic Advisement and Orientation  B.A., Agnes Scott, 1938; M.A.T., University of Chattanooga, 1965.

Robert Cecil Mildram (1964)  Alumni Distinguished Service Professor of Philosophy and Religion  Ph.B., University of Vermont, 1935; B.D., Anclover-Newton Theological School, 1938; M.A., 1943, Ph.D., 1949, Yale University.


Ronald Oury Moore (1960) Associate Professor of History Acting Head, History Department A.B., College of William and Mary, 1950; M.A., Harvard University, 1951; Ph.D., University of Virginia, 1960.

Rosa Ann Moore (1963) Assistant Professor of English B.A., University of Richmond, 1953; M.A., University of Virginia, 1959.


Linda L. Myers (1975) Assistant Professor of Human Services B.S., 1969, M.A., 1972, Middle Tennessee State University.


Irene Nichols Ozbek (1977) Assistant Professor of Psychology B.A., 1969, M.S., 1972, Ph.D., 1974, University of Georgia.

Bart Carter Pate (1966) Associate Professor of Sociology and Anthropology B.A., University of Texas, 1948; M.A., Vanderbilt University, 1950; M. Div., 1958, Ph.D., 1964, Boston University.


William H. Peterson (1978) Scott L. Probasco, Jr. Professor of Free Enterprise; Professor of Economics; Director of Center for Economic Education B.S., New York University, 1943; M.S., Columbia University, 1948; Ph.D., New York University, 1952.


Phyllis Jan Printz (1966) Assistant Professor of Psychology B.A., University of Kansas City, 1950; M.A., University of Missouri, Kansas City, 1951, Ph.D., The University of Tennessee, Knoxville, 1978.


Dan Quaries (1977) Assistant Professor of Education Director of Institutional Research B.S., Maryville College, 1968; M.S., 1973; Ed.D., 1976, The University of Tennessee, Knoxville.

James J. Quinn (1975) Assistant Professor of Business Administration B.S., 1972; M.B.A., 1974, The University of Tennessee, Knoxville; C.P.A.

Alan Rabin (1977) Assistant Professor of Economics B.A., Hamilton College, 1969; Ph.D., University of Virginia, 1977.


Henry Cleveland Ransom (1961) Assistant Professor of Physics; Director of Physics-Astronomy Laboratories B.S., 1937, M.A.T., 1967, University of Chattanooga.

Charles M. Rennelsen (1970) Associate Professor of Education; Dean of Student Affairs B.S., 1954, M.S., 1959, Indiana University; Ed. D., Michigan State University, 1964.


Edward Ralph Rozema (1973) Associate Professor of Mathematics B.A., Calvin College, 1967, M.S., 1969, Ph.D., 1972, Purdue University.


Lynn D. Russell (1969) Professor of Engineering; Dean of School of Engineering B.S., 1960, M.S., 1961, Mississippi State University; Ph.D., Rice University, 1966; P.E.

Larry J. Ryan (1977) Associate Professor of Business Administration B.S., Clemson University, 1963; M.B.A., Southern Methodist University, 1968; Ph.D., North Texas State University, 1976.

Phyllis Sahadi (1975) Assistant Professor of Music B.A., University of South Carolina, 1964; M.M., Indiana University, 1966.

*On leave second semester 1978-79.
Reed Sanderlin (1969)  
Associate Professor of English  

Eugene P. Schlereth (1978)  
Assistant Professor of Mathematics  

J. Eric Schoblon (1974)  
Associate Professor of Engineering  
S.B., 1956, S.M., 1958, Massachusetts Institute of Technology; Ph.D., University of Florida, 1974; P.E.

Marjorie Sczekan (1975)  
Professor of Nursing;  
Director of Nursing Department  

Anne L. Seay (1975)  
Instructor; Catalog Librarian  

Hugh Nelson Seay, Jr. (1965)  
Professor of Spanish  

Hershel Vernon Sellers, Jr. (1961)  
Associate Professor of Mathematics  
B.S., U.S. Naval Academy, 1940; M.S., Purdue University, 1961.

Edgar McDowell Shawen (1970)  
Assistant Professor of English  
B.A., University of Virginia, 1966; M.Phil., 1969, Ph.D., 1972, Yale University.

Margaret M. Sheriff (1978)  
Coordinator, Mathematics Laboratory  
B.S., University of Georgia, 1970.

Allison Von Slagle (1960)  
Assistant Professor of Education  
Head, Audiovisual Services, Library  

Valerie M. Smith (1979)  
Instructor, Health, Physical Education and Recreation  
B.S., The University of Tennessee at Chattanooga, 1974; M.Ed., Memphis State University, 1976.

‘Clinton Wills Smullen, III (1973)  
Assistant Professor of Mathematics  

Dan C. Spalding (1976)  
Assistant Professor of Music  

George Wesley Spangler (1967)  
Professor of Physics  
B.A., University of Chattanooga, 1957; Ph.D., University of California at Los Angeles, 1965.

Karen Stevens (1975)  
Instructor of Nursing  
B.S.N., University of Wisconsin, 1964.

Jenice P. Stewart (1976)  
Assistant Professor of Business Administration  
B.S., Lindenwood College, 1974; M.C., University of Illinois, 1976.

Roy Stinnett (1967)  
Professor of Health and Physical Education;  
Dean, School of Education  

James Stroud (1976)  
Associate Professor of Music  
B.M., Louisiana State University, 1957; M.M., Hart College of Music of the University of Hartford, 1961.

Edgar Stryker (1973)  
Assistant Professor of Music  
B.M., Stetson University, 1949; M.M., Florida State University, 1951; M.A., University of North Carolina, 1963.

Felicia Sturzer (1977)  
Assistant Professor of French and German  

Lewis A. M. Sumberg (1972)  
University Professor  

Jeannette Sutay (1977)  
Instructor, Criminal Justice  

Robert H. Swansbrough (1971)  
Associate Professor of Political Science  

David W. Tandy (1977)  
Assistant Professor of Classics  

Mary H. Tanner (1971)  
Assistant Professor of Home Economics  
B.S., University of Chattanooga, 1964; M.Ed., The University of Tennessee at Chattanooga, 1970.

Caryl A. Taylor (1978)  
Instructor of Education  

Peter M. Temko (1974)  
Associate Professor of Music  

Charles M. Temple (1973)  
Executive Vice Chancellor  

Patra B. Temple (1975)  
Assistant Professor of Home Economics  

Viirl A. Thomas (1975)  
Assistant Professor of Engineering  
B.S., Case Institute of Technology, 1960; M.S., 1971, Ph.D., 1977, The University of Tennessee, Knoxville; P.E.

Roger D. Thompson (1976)  
Instructor, Criminal justice  
B.S., 1973, M.S., 1975, Youngstown State University.

Betty J. Thorne (1975)  
Assistant Professor of Business Administration  

Richard G. Thurston (1970)  
Associate Professor of Sociology and Anthropology  

John Douglas Tinker (1967)  
Professor of English  

Marilyn Snow Tinsley (1973)  
Assistant Professor of Education  
Head, Audiovisual Services, Library  

Tommy E. Torbert (1978)  
Assistant Professor of Political Science  
B.S., 1977, M.S., 1978, University of Tennessee at Chattanooga.

Charles F. Totten (1976)  
Assistant Professor of English  

Josephine A. Troxel (1974)  
Assistant Professor of Nursing  
Diploma Hinsdale Sanitarium and Hospital School of Nursing, 1968; B.S., Southern Missionary College, 1970; M.S.N., University of Alabama, Birmingham, 1972.

John True (1971)  
Assistant Professor of Education  
Head, Criminal Justice Department  

Robert J. Vallier (1970)  
Associate Professor of English  

Gene S. Van Horn (1971)  
Associate Professor of Sociology  
B.S., Humboldt State College, 1963; Ph.D., University of California, Berkeley, 1970.

Kenneth R. Ventes (1974)  
Assistant Professor of Criminal Justice  

Susan Vick (1978)  
Assistant Professor of Theatre and Speech  
B.A. Catawba College 1967; M.F.A. Southern Methodist University, 1969.

Tom Virgets (1976)  
Professor of Health and Physical Education;  
Dean, School of Education  

Dorothy D. Volz (1977)  
Assistant Professor of Nursing  
B.S.N., Vanderbilt University, 1972; M.S.N., University of Alabama, 1977.

Nicholas Gene Vredeveld (1964)  
Associate Professor of Biology  
A.B., Calvin College, 1951; M.S., 1955, Ph.D., 1965, Michigan State University.

Thomas G. Waddell (1971)  
Associate Professor of Chemistry  
B.S., University of Wisconsin, Madison, 1966; Ph.D., University of California, Los Angeles, 1969.

Lucy Waddell (1975)  
Lecturer in English  

Grayson Howard Walker (1978)  
Assistant Professor of Business Administration  
B.S., University of North Carolina, 1961; M.S., University of Illinois, 1962; Ph.D., Georgia Institute of Technology, 1969.

Adjunct Faculty

Billy Lester Abel (1977) Mathematics  
B.S. Nicholls State University, 1971; M.Ed., The University of Tennessee at Chattanooga, 1977.

Melissa Atkinson (1974) Education  

Harold H. Baker (1975) Education  

Caroline M. Best (1977) Mathematics  

Nancy Biber (1971) Education  
A.B., Indiana University, 1958; M.A., Ball State University, 1966.

Jean B. Blackburn (1977) Nursing  

Marlene C. Bradshaw (1977) Home Economics  
B.S., Michigan State University, 1957; M.A., University of New Mexico, 1972.

Martha H. Brown (1978) English  
B.A., Lincoln Memorial University, 1960; M.A., University of Arkansas, 1962.

William M. Carter (1975) Business Administration  

Dorothy N. Casavant (1978) Education  
B.S., 1969, Mississippi State University; M.Ed., 1973, Georgia State University.

Jean T. Cates (1975) Education  

Walter Allen Chesney (1978) English  

Charles S. Coburn (1969) Chemistry  
B.S., University of Chattanooga, 1940; M.S., The University of Tennessee, Knoxville, 1942.

Farrell B. Cooper (1976) Social Work  
B.S., Memphis State, 1963; M.S.S.W., The University of Tennessee, Knoxville, 1967.

Jay Craven (1976) Music  

Trudy B. Cunningham (1978) Mathematics  

Delia C. Dennis (1976) Social Work  
B.S., Hampton Institute, 1945; M.S.W., Atlanta University, 1949.

Katherine P. Dixon (1971) Home Economics  

Barbara Gail Dooley (1978) Music  

Elizabeth Farr (1975) Music  

Cora Feintuch (1975) Education  

Martha Freels (1963) Computer Science  
B.A., Denison University, 1948.

Donna Gaines (1975) Computer Science  
B.S., The University of Tennessee at Chattanooga, 1976.

Marilyn J. Havis (1977) Human Services  


Carolyn W. Isley (1978) English  
B.A., University of Louisville, 1969.
Administrative Directory
1978-79

Office of the Chancellor
James E. Drinnon, Jr., (1973)  

Richardia P. Pierce (1966)  
A.B., University of Chattanooga, 1962; M.A., Emory University, 1964.

Cynthia De Riemer (1976)  
B.A., St. Mary's University, 1971; M.Ed., The University of Tennessee at Chattanooga, 1978.

Executive Vice Chancellor
Charles M. Temple (1973)  

Walter D. Weaver, Jr. (1977)  
Assistant to the Executive Vice Chancellor  
B.S., University of Georgia, 1950.

Computing Services
John True (1971)  
Director  

Kenneth D. Griffith (1978)  
Assistant Director  
B.S., Tennessee Technological University, 1968.

H. Forrest Cantrell (1977)  
Senior Engineering Technician  

Frances P. Cox (1971)  
Systems Analyst  
B.S., The University of Tennessee at Chattanooga, 1976.

Glenda F. Sullivan (1978)  
Senior Applied Computer Programmer/Analyst  

Information Services
William T. Walker, Jr. (1977)  
Director  

Mitzi D. Smith (1978)  
News Information Editor  

Libby L. Workman (1975)  
Publications Editor  

Institutional Research
Dan Quarles (1977)  
Director  

Linda Freeman (1975)  
Assistant Affirmative Action Officer  
B.A., Memphis State University, 1971.

Dan Myers (1978)  
Applied Programmer/Analyst  
B.S., The University of Tennessee at Chattanooga, 1977.

Management Consulting
Virgil Freeman (1974)  
Management Analyst  
B.S., Georgia Institute of Technology, 1974.

Physical Plant
Henry T. Barbatti (1971)  
Director  
B.S., University of Illinois, P.E.

Donald L. Pickard (1975)  
Assistant Director  
A.E., Chattanooga State Technical Institute, 1967; B.S., The University of Tennessee at Chattanooga, 1975.

Robert W. Mills (1978)  
Superintendent of Campus Services  
B.S., University of Georgia, 1962.

Joseph F. Milner, Jr. (1976)  
Assistant Superintendent of Building Services  

Racquet Center
William A. Tym (1970)  
Director  

Safety and Security
Roger Fowler (1973)  
Director  
B.S., The University of Tennessee at Martin, 1967.

Vice Chancellor for Academic Affairs
Jane W. Harbaugh (1957)  

Academic Computing
Lloyd D. Davis (1970)  
Director  
A.B., Ohio Northern University, 1956; M.S., University of Miami, 1959; Ed.D., The University of Tennessee, Knoxville, 1974.

Elisabeth M. Craig (1974)  
Applied Computer Analyst  
B.A., Bishop's University, Quebec, Canada, 1956; A.A., Chattanooga State Technical Community College, 1974.

Admission and Records
Ray P. Fox (1974)  
Dean  

Marilyn P. Benson (1977)  
Assistant Director of Records  

Sandra J. Cole (1978)  
Admissions Officer  
B.S., The University of Tennessee at Chattanooga, 1974.

Brenda S. Davis (1968)  
Director of Registration  
B.A., Oglesboro University, 1964; M.Ed., The University of Tennessee at Chattanooga, 1972.

Mari Bob Lloyd (1978)  
Admissions Officer  

Jean Meacham (1965)  
Director of Advisement & Orientation  

Gail S. Patterson (1975)  
Admissions Officer  

Susan Rockwell (1975)  
Financial Aid Counselor  

Natalie D. Schlack (1951)  
Director of Records  
A.B., University of Chattanooga, 1945; M.Ed., University of Wisconsin, 1946.

Ann S. Tinnon (1973)  
Director of Financial Aid  

Michael A. White (1977)  
Director of Admissions  

Libraries
Joseph A. Jackson (1973)  
Director  

Vice Chancellor for Business and Finance
David Larson (1969)  
Director  
B.S., University of Minnesota, 1967; M.B.A., The University of Tennessee, Knoxville, 1969; C.P.A.

Accounting
Joseph Curtis (1978)  
Director  
B.S., Central State University, 1964.
## Alumni Affairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years</th>
<th>Institution/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria G. Weathers</td>
<td>Stores</td>
<td>1971</td>
<td>The University of Tennessee at Chattanooga, 1976.</td>
</tr>
<tr>
<td>Robert Mayes</td>
<td>Director</td>
<td>1975</td>
<td>The University of Tennessee, Knoxville, 1960.</td>
</tr>
<tr>
<td>Jonee Daniels</td>
<td>Director</td>
<td>1978</td>
<td>The University of Tennessee, Knoxville, 1973.</td>
</tr>
<tr>
<td>Rebecca Odom</td>
<td>Staff Accountant</td>
<td>1978</td>
<td>The University of Tennessee at Chattanooga, 1976.</td>
</tr>
</tbody>
</table>

## Executive Dean of Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years</th>
<th>Institution/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian T. Sturrock</td>
<td>Vice Chancellor for Development</td>
<td>1974</td>
<td>Birmingham South College, 1965; M.A., Ph.D., University of Alabama.</td>
</tr>
</tbody>
</table>

## Alumni Affairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years</th>
<th>Institution/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joel L. Cunningham</td>
<td>Director</td>
<td>1977</td>
<td>The University of Tennessee, 1965; M.A., Ph.D., University of Oregon.</td>
</tr>
</tbody>
</table>

## College of Arts and Sciences

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years</th>
<th>Institution/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugene S. Lubot</td>
<td>Acting Dean</td>
<td>1977</td>
<td>A.B., University of Pennsylvania, 1963; M.A., University of South Carolina, 1965; Ph.D., Ohio State University, 1970.</td>
</tr>
<tr>
<td>Kermit G. Cudd</td>
<td>Dean</td>
<td>1975</td>
<td>B.A., M.A., University of Wisconsin; Ph.D., Ohio State University, 1969.</td>
</tr>
</tbody>
</table>

## School of Engineering

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years</th>
<th>Institution/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynn D. Russell</td>
<td>Dean</td>
<td>1969</td>
<td>B.S., M.S., 1965, Mississippi State University; Ph.D., Rice University, 1966; P.E.</td>
</tr>
</tbody>
</table>

## Division of Human Services

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years</th>
<th>Institution/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>William L. Butterfield</td>
<td>Director</td>
<td>1967</td>
<td>B.A., Ohio Northern University, 1952; B.D., Garrett Theological Seminary, 1955; Ph.D., Ohio State University, 1967.</td>
</tr>
</tbody>
</table>

## Department of Nursing

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Years</th>
<th>Institution/Position</th>
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## Executive Dean of Graduate Studies and Research

<table>
<thead>
<tr>
<th>Name</th>
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## Center for Economic Education

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<th>Name</th>
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<tr>
<td>William H. Peterson</td>
<td>Director</td>
<td>1978</td>
<td>B.S., New York University, 1943; M.S., Columbia University, 1948; Ph.D., New York University, 1952.</td>
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## Child Development Institute

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## Continuing Education and Public Service

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<tbody>
<tr>
<td>Gloria Alleyn</td>
<td>Non-credit Programs Coordinator</td>
<td>1976</td>
<td>B.S., East Tennessee State University, 1975.</td>
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<tr>
<td>William T. Nichols</td>
<td>Director</td>
<td>1978</td>
<td>Director of Conferences and Institutes, 1968; B.S., M.P.A., The University of Tennessee, Knoxville.</td>
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## Graduate Admissions

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## Special Projects and Grants

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## Student Affairs

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<th>Name</th>
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<tr>
<td>Richard MacDougall</td>
<td>Associate Dean</td>
<td>1970</td>
<td>A.B., Boston College, 1959; M.S., Richmond Professional Institute, 1966.</td>
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Counseling Center
Michael J. Sitzman (1975)  

Marsha Parks Provost (1977)  
B.A., Hampton Institute, 1969; M.Ed., The University of Tennessee at Chattanooga, 1976.

Health Services
Carolyn Robinson (1970)  
R.N., Fort Sanders Presbyterian Hospital, 1960.

Placement
M. Jean Gwin (1975)  

University Center
Bruce Storey (1970)  
B.A., Tulane University, 1963.
Perry Storey (1977)  
B.S., The University of Tennessee at Chattanooga, 1977.

Athletics
Harold B. Wilkes (1959)  
B.S., University of Chattanooga, 1959.
James W. Bell (1978)  
B.S., University of Arkansas, 1959.
James Robert Brotherton (1978)  
Richard D. Daly (1976)  
Joseph L. Dunn (1971)  
B.S., University of Chattanooga, 1968.

Sharon Fanning (1976)  
Women's Coach/Administrative Assistant  
B.S., The University of Tennessee at Chattanooga, 1975.
Robert Feaster (1973)  
Assistant Football Coach  
B.S., Seton Hall University, 1958.
Kevin T. Gray (1978)  
James Roy Gregory (1977)  
B.S., University of Chattanooga, 1968.

Johnnie Jackson (1968)  
Athletic Business Manager  
James W. Morgan (1969)  
Wrestling Coach/Administrative Assistant  
Joe R. Morrison (1973)  
Head Football Coach  
B.S., University of Cincinnati, 1959.
James A. Norrell, Jr. (1978)  
Assistant Football Coach  
B.S., The University of Tennessee at Chattanooga, 1971.
Frank T. Sadler (1977)  
Assistant Football Coach  
Reed Sanderlin (1977)  
Coif Coach  
Ronald Shumate (1970)  
Head Basketball Coach  

Mary Tinkler (1971)  
Academic Adviser  
William A. Tynt (1970)  
Head Tennis Coach  
Steve Underwood (1977)  
Track and Cross Country Coach  
B.A., Southwestern Louisiana University; M.E., Northeastern Louisiana University, 1976.

Special Services/Upward Bound
Paul L. Beasley (1978)  
Director  

Jeannette E. Apollo (1978)  
Coordinator of Counseling  
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 Marvin L. Anthony, Chicago banker, 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 long-time executive secretary of the Chattanooga Community Chest.

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.

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 Earlon Kerr Scholarship: Established in 1959 with a bequest from Mrs. Lillian Webb Kerr, long-time East Lake Grammar School teacher, in memory of her son, a student at Vanderbilt University at the time of his death in 1915.

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.

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 long-time, distinguished head football coach and athletic director A.C. ”Scrappy” Moore, Sr., who served the University from 1926-1971; scholarship preference is given to a varsity football player who exemplifies the ideals of leadership, scholarship and service.

Charles A. Noone Scholarship: Established in 1961 by Mrs. Noone in memory of her husband, prominent lawyer who practiced in Chattanooga for many years and who was the father of an alumnus.

Overmyer Athletic Scholarships: Established in 1969 by long-time trustee Donald H. Overmyer, UC 1930, and his wife, Ruth E. Overmyer, 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. C. 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, 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.

Calvin U. Smith, Jr.-G. H. Miller Smith Scholarships: Established in 1965 by Mr. and Mrs. George Blackwell Smith in memory 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 service 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 pre-medicine after ten years during which income is added to principal.

**Vanzant-B. Warrenfels Scholarship:** Established in 1976 by Mr. and Mrs. W. O. Cullen of Oxford, Ohio, in honor of Mrs. Cullen's father, Dr. Warrenfels, to be awarded to a student participating in the University Scholars program.

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**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.

**Alexander and Charlotte Patten Cuerry 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 yearly 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 Professorship in Marketing:** Established in 1978 by Alan S. Lorberbaum, a business leader and carpet executive of Dalton, Georgia to provide faculty support for 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 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, Inc., for a distinguished professorship relating to the Free Enterprise System.

**John Stagmaier Chair of Economics and Business Administration:** Established in 1956 by the Tennessee Paper Mills in memory of its founder, respected and admired citizen of Chattanooga, University trustee from 1932 until his death in 1943.

**Marvin Edward White Professorship 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.

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**Supported Professorships**

**Alumni Distinguished Service Professorships** are awarded to outstanding faculty members on each of the five 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 ensure the continuation of the ties with the University of Chattanooga 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.

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**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, UC trustee from 1920 until his death in 1942.

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**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, chairman 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. Crote Fund for the Department of Chemistry: Established in 1976 by a bequest from the estate of Dr. Irvine W. Crote, Guerry Professor of Chemistry, to be used solely for the benefit of the chemistry department of The University of Tennessee at Chattanooga 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, 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 Willis 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, long-time 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.

W. R. Long Fund: Established through a bequest from Mr. W. R. Long's estate in 1961 to be added to the unrestricted portion of the endowment of the University of Chattanooga Foundation.

Dr. Robert C. Maxwell Fund: Established in 1974 by a bequest from the estate of Dr. Robert C. Maxwell to The University of Tennessee at Chattanooga for use in building dormitories as well as facilities for the football program.

Seth C. Smith Management Award: Established in 1975 by the Society for the Advancement of Management in the 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.

Bequests

The University also wishes to acknowledge with gratitude the many unrestricted bequests it has received through the years. Because they may be applied where the need is greatest, they are of inestimable value. Among generous donors of more recent years: Earl P. Carter, Morrow Chamberlain, John S. Fletcher, W. H. Fox, Helen D. Gahagan, Herman Goodman, Penelope L. Griffiss, Grace C. Holley, W.R. Long, Dr. Robert C. Maxwell, Mrs. J. L. D. McPheeters, Mary McGregor, Frank L. Miller, Jr., Harry Miller, Walter V. Moffitt, Verna Blaine Moore, Roland Olmsted, Mrs. John A. Patten, Lupton Patten, Z.C. Patten, J. Martin Peyer 'n memory of his son Wiley C. Peyer '41, Fannie W. Pindell, William H. Pryor, Mrs. George Scholze, Mrs. Glenn Smallwood, Abe Solomon, Percy E. Waggoner, Leslie N. Webb, Z.W. Wheland.
Summary of Degrees Conferred

May 6, 1978

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<th>Degree</th>
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<td>Bachelor of Music</td>
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<tr>
<td>Bachelor of Science</td>
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<td>181</td>
<td>370</td>
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<tr>
<td>Bachelor of Science in Engineering</td>
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<td>Bachelor of Science in Nursing</td>
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August 21, 1978

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Summary of Credit Registrations

Fall Semester 1978

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<td>3888</td>
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<td>Part-time students</td>
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<td>Total undergraduates</td>
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<td>Postbaccalaureates</td>
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<tr>
<td>Full-time students</td>
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<tr>
<td>Part-time students</td>
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<tr>
<td>Total postbaccalaureates</td>
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<td>Graduates</td>
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<td>Full-time students</td>
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<td>Part-time students</td>
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<tr>
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<td>Total, fall semester 1978</td>
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Index

Academic Calendar 4
Academic Organization and Departments 42
Academic Probation 25-26
Academic Programs 41
Academic Regulations 25
Academic Residency Requirements 29
Accounting and Finance 43, 98-100
Actuarial Science, Mathematics 72
Adjunct Faculty 163
Administrative Directory 1978-79 165
Admission 15
Admission to the University 14
Adult Special Status 17
Advanced Placement 19
Advisement and Orientation 15
Al-Sing 35
Alpha 32
Alpha Lambda Delta 32
Alumni Association 39
Alumni Council 39
Alumni Trustees 10
American College Testing (ACT) Program 15, 20
American History Requirement 17, 29
American Studies 65
American Studies (B.A.) 16, 27, 42, 65-66
Anthropology 95
Anthropology Minor 27, 94
Appalachian Education Satellite Program 154
Application Fee 23
Application for a Degree 29
Art 44
Arts (B.A.) 16, 27, 42, 45
Art Education (B.F.A.) 16, 27, 42, 45, 110-111
Art Education (B.A.) 16, 27, 42, 45
Astronomy 86
Athletics 35
Auditor’s Fees 23
Audit Students 17
Bachelor Degree Programs 16
Baptist Student Union 36
Basic Educational Opportunity Grants (BEOC) 21
Bad Check Fee 23
Bequests 170
Biology 47
Biology (B.A.) 16, 27, 47
Blue Key 32
Blue Key Follies 35
B’nai Brith Hillel 36
Bookstore 36
Business Administration 98
Business Administration (B.S.) 16, 27, 99-101
Business Education 105
Cadek Conservatory of Music 43, 153
Cadek Department of Music 76
Calendar, Academic 4
Career Education Laboratory 110
Catalog Effective Dates 25
Catholic Center 36
Center for Economic Education 43, 153
Certificates 16, 30
Computer Science, business
Computer Science, technical
Office Administration
Certification 108
Certification and Field Services 43
Certification Office 110
Certification Programs 110
Challenge Examination Credit Limitations 19
Chamberlain Field 35
Chattanooga Community 13
Chattanooga Symphony Apprentice Program 22
Check Cashing Service 36
Chemical Sciences (Engineering) 130
Chemistry 50
Chemistry (B.A.) 16, 27, 42, 51
Chemistry (B.S.) 16, 27, 42, 51
Chemistry, Environmental 70
Child Development Institute 43, 153
Christian Science Organization 36
Christian Student Center (Church of Christ) 36
Classical Civilization 55
Classification 25
Clearinghouse on Metric Education for Tennessee (COMET) 110
College Entrance Examination Board (CEEB) 15
College-Level Examination Program (CLEP) 19
College-Level Examination Program (CLEP) Limitations 19
College of Arts and Sciences 42
College of Business 35
College of Education 103
College of Education: Home Economics (B.S.) 16, 27, 42, 104
College of Fine Arts 131
College of Humanities and Social Sciences 130
College of Science and Technology 130
College Work-Study 16, 27, 43
Combined Programs 30-32
Dentistry 146
Forestry 146
Medical Technology 146
Medicine 146
Communications 66
Communications (B.A.) 16, 27, 42, 66-68
Competency Based Programs Credit Limitations 19
Computer Concentration, Engineering 130
Computer Science 137
Computer Science Department 43
Computer Science (B.S.) 16, 27, 43, 137-138
Computer Science, Business Certificate 16, 27, 43
Computer Science, Mathematics 73
Computer Science, Technical Certificate 16, 27, 43
Conferences and Institutes 154
Conferences and Non-Credit Programs 43
Continuing Education Division 43, 153
Continuing Education Unit (CEU) 154
Continuation Standards 25
Cooperative Education (Co-op) Program 30
Cooperative Engineering (Co-op) Program 43, 132, 135, 136
Correspondence Credit 19
Counseling and Career Planning 36
Course Load 25
Course Numbers and Levels 25
Credit by Special Examination 19
Credit for Experience 19
Credit Registrations, Summary 171
Criminal Justice (B.S.) 16, 27, 43, 141
Criminal Justice Department 43, 140
Cultural Opportunities 35
Curriculum and Instruction 43, 108
Cybotechnology 30, 31
Danforth Chapel 36
Degree Program Limits 25
Degree Regulations 29
Degree Requirements 27
Degrees Conferred, Summary 171
Dental Hygiene Pre-Professional 30
Dentistry Pre-Professional 31
Departmental Honors 33
Departmental Honor Societies 33
DeSales Harrison Racquet Center 35
Disabled Persons Fees 23
Division of Continuing Education 43, 153
Division of Human Services 43, 139
Division of Special Services/Upward Bound 43, 154
Dual Degree Program 30, 87
Public Administration
Early Childhood Education (B.S.) 16, 27, 43, 111
Economics 43, 103
Economics (B.A.) 16, 27, 43, 103-104
Economics (B.S.) 16, 27, 43, 104
Education 108
Educational Administration and Supervision 43, 108
Education: Home Economics (B.S.) 143-144
Education, Secondary School Programs (B.S.) 16, 27, 43, 113-121
Electrical Engineering 130
Elementary Education (B.S.) 16, 27, 43, 111-112
Endowed Funds 168
Engineering 129
Chemical Sciences 130
Civil 130
Electrical 130
Environmental 130
Industrial 130
Mechanical 130
Thermal Sciences 130
Engineering (B.S.E.) 16, 27, 43, 129-130
Engineering Management 131
Computer Concentration 131
Management Concentration 131
Engineering Management (B.S.) 16, 27, 43, 131
Engineering Management Program 43
English 53
English and American Language and Literature (B.A.) 16, 27, 42, 53
English Minor 27, 53
Environmental Studies 69
Biology 69
Chemistry 69-70
Engineering Science 69-70, 150
Geosciences 69
Mathematics 69
Physics 69-70
Sociology-Anthropology 69
Environmental Studies (B.S.) 16, 27, 69-70
Evening College 153
Expenses, Student 23
Extension Credit 19
Faculty, 1978-79 157
Faculty and Staff 156
Faculty Emeriti 157
“Family Educational Rights and Privacy” Act 38
“Family Financial Statement” 20, 21
Fashion Merchandising 146
Fee Adjustments 24
Fee Refunds 24
Fees and Expenses 23
Fees, Student 23
Finance 99-100
Financial Aid 20
Financial Aid Application Procedures 22
Food Service Facilities 36
Food Service Management 146
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