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<td>Music 220</td>
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<td>Music Theory 310</td>
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<td>Music 440</td>
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<td>Music 450</td>
<td>Electives</td>
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**B.M. Curriculum in Sacred Music (Organ or Voice)**

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**B.M. Curriculum in Studio Music and Jazz**

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**B.M. Curriculum in Voice**

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**B.M. Curriculum in Theory/Composition**

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**B.M. Curriculum in Music Education**

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### ORGANIZATIONAL PSYCHOLOGY PROGRAM

**See Graduation School**

#### PHILOSOPHY

**Professors:**

**Associate Professors:**
- K.A. Bilsedel, Ph.D. Ohio State; J.O. Beirenth, Ph.D. Tulane; J.E. Nott, Ph.D. Ohio State; M.L. Osborne, Ph.D. Tennessee.

**Assistant Professors:**
- H.P. Hanlin, Ph.D. Georgia; J.M. Kaplan, Ph.D., St. Mary's; L. Menz; Ph.D. Pennsylvania.

**Major Prerequisite:**
Three hours of logic, normally 130 or 135. Requirement: 24 hours of courses numbered 200 or above, including three hours of ethics, normally 240 or 440, and six hours in the history of philosophy, three in ancient, normally 330, and three in modern, normally 332. Majors are required to discuss their program with a member of the Philosophy faculty.

**Minors:**
- 15 hours in courses numbered 200 or above. Minors should discuss their program with a member of the Philosophy faculty.

#### PHYSICS AND ASTRONOMY

**Professors:**
- L.L. Ridgway, Ph.D. Harvard; F.E. D'Amato (Collaborating Professor), Ph.D. California; W.J. Bird, Ph.D. Brown; S.W. Guggenheim, Ph.D. Washington; W.R. Bugg, Ph.D. Tennessee; J. Burchard (Collaborating Professor), Ph.D. New York.

**Associate Professors:**

**Assistant Professors:**
- L.L. Ridgway, Ph.D. Harvard; F.E. D'Amato (Collaborating Professor), Ph.D. California; W.J. Bird, Ph.D. Brown; S.W. Guggenheim, Ph.D. Washington; W.R. Bugg, Ph.D. Tennessee; J. Burchard (Collaborating Professor), Ph.D. New York.

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**Minors:**
- 15 hours in courses numbered 200 or above. Minors should discuss their program with a member of the Philosophy faculty.

#### PHYSICS

**B.S. Major:** The undergraduate physics major provides a thorough introduction to all of the core areas of physics so that students are prepared to pursue related specialties later in their careers. Students with special interests are encouraged to pursue those interests through additional courses, research projects and/or independent study under the direction of members of the Physics faculty.

**Pre-Requisites:**

- **PHYSICS**

**Summary:**
The major consists of: Mathematics 241; Physics 240, 311-312, 321, 361, 411-412, 421, 431-432, and 454 and 456. Total Major hours: 40

**Note:**
- The Department offers two concentrations: B.S. Major: The undergraduate physics major provides a thorough introduction to all of the core areas of physics so that students are prepared to pursue related specialties later in their careers. Students with special interests are encouraged to pursue those interests through additional courses, research projects and/or independent study under the direction of members of the Physics faculty.

**Detailed Course Descriptions:**

- **PHYSICS 231:** Introduction to Physics 135-136, Mathematics 141-143 and Computer Science 102.

**Summary:**
The major consists of: Mathematics 241; Physics 240, 311-312, 321, 361, 411-412, 421, 431-432, and 454 and 456. Total Major hours: 40

**Note:**
- The Department offers two concentrations: B.S. Major: The undergraduate physics major provides a thorough introduction to all of the core areas of physics so that students are prepared to pursue related specialties later in their careers. Students with special interests are encouraged to pursue those interests through additional courses, research projects and/or independent study under the direction of members of the Physics faculty.

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**Detailed Course Descriptions:**

- **PHYSICS 231:** Introduction to Physics 135-136, Mathematics 141-143 and Computer Science 102.
B.A. Major: Political Science 101 or 107, and 102 are prerequisites to the major. The major consists of 24 hours of courses numbered 300 or above. These 24 hours must include at least one course in each of the four areas of the discipline: United States Government and Political Public Administration; 311, 312, 320, 321, 330, 331, 340, 341, 410, 411, 412, 420, 421, 430, 431, 440, 441, 442.

Comparative Government and Political Science: 350, 351, 360, 361, 370, 371.


Political Theory: 300, 374, 475 and 476.

Minor: Prerequisites to the minor are Political Science 101 and 102. The minor consists of 15 hours of courses numbered 300 (or Child and Family Studies 312), 310, 320, 330, 360 and 370; (3) One course from Psychology 385, Math 115, or Statistics 202 and (4) Two courses from Psychology 202, 300, 301, 305, 313, 320, 342, 371.

Major: The Department offers two concentrations, General and Academic. The General Concentration in Political Science offers flexibility for those who wish to tailor their major. The Academic Concentration in Political Science is structured to ensure a broad foundation in both substantive and research traditions of the discipline. Early advising on the selection of a concentration is important.

All students wishing to complete the Academic Concentration must satisfy prerequisites of one year of a biological science (e.g., Biology 101-102), Psychology 110 with a grade of C or better, and a GPA of at least 2.00. Completion of the Concentration requires: (1) One of the following: Psychology 385, Math 115, or Statistics 241; (2) Three courses from Political Science 300 (or Child and Family Studies 312); (3) 310, 330, 350 (or Econometrics or Computers and Political Science 431); 360 (or Sociology 370); (3) Two elective Political Science courses at the 300 level or higher; (4) Two elective Psychology courses at the 400 level or higher. NOTE: Any combination of 6 hours of 399, 489, 491, 492, 493 may be used in this major. An additional 6 hours may be used as electives. The completion of the Academic Concentration requires a maintenance of a GPA of 2.00. At any time a student drops below the GPA of 2.00, he or she will be transferred to the General Concentration, and must apply for readmission upon achieving a 2.00 or better GPA. Re-admission is not automatic, and a review of the student’s total program will be undertaken, before a decision is made about re-admission to the Academic Concentration.

Minor: Consists of 15 hours or equivalent, and 15 additional hours at the 300 level and above. NOTE: 399, 489, 491, 492, 493 cannot be used in this minor.

REGENCY STUDIES

Professors: C.H. Reynolds (Head), Ph.D. Harvard; F.S. Luby, Ph.D. Washington; A.C. M'Iver, Ph.D. Wisconsin; R.E. Hopson, Ph.D. Michigan State; D.J. Handel, Ph.D. Harvard; W.L. Humphreys, Ph.D. Vanderbilt; R.V. Norman, Jr., Ph.D. Yale.

Associate Professor: Mark Halstran, Ph.D. Minnesota.

T.J.A. Hoffman; Ph.D. Cambridge; R.E. Hopson, Ph.D. Michigan State; L.M. Toner, Ph.D. Vanderbilt.

Major: The basic concentration consists of at least 27 hours, all of which must be at the 300 level or above, including one course from each of the first six categories and two courses from category seven, one of which must be RS 499. Majors are strongly urged to take RS 499, and to do so as soon as possible after declaring their major. The remaining 6 hours, which complete this major, shall not include related language courses.


2. Religions and Cultures of Asia: 379, 383.


As an alternative to the basic concentration, a student/individual concentration is available for students with special educational needs, such as those who intend to enter a graduate or professional school (e.g., law, med-
The UTK College of Business Administration is widely recognized for its leadership role in implementing some of the most innovative and exciting curriculum changes occurring during the last forty years of management education. Recently, the College has been recognized for its rising stock among the nation's business schools, as Business Week's Guide to Business Schools named UTK as a "Best Buy" among all business schools, and cited the College for carving out a niche in Total Quality Management. As of Fall 1996, the College's Undergraduate Business Program was ranked 32nd nationally in Total Quality Management and 13th overall for its executive programs. At the graduate level, the College's MBA program is consistently praised for its "high value-to-cost ratio." Business Week's Guide to the Best Executive Programs has rated the College's Management Development Center as the best in the country in Total Quality Management and logistics and transportation programs. The College's logistics and transportation program was ranked the number one program in the nation in Fall 1996.

The College has also been a national leader in bringing the concepts of industrial statistics and total quality management methods into the classroom. Many major American firms, including General Motors, Ford, Campbell's Soup, Proctor and Gamble, and the Harris Corporation, rely on the College and the Management Development Center for specialized training in these areas. Eighty-five percent of the top Fortune 500 firms have sent new hires to the UTK College of Business Administration for advanced management training.

Within the College is an integral part of the national scene in education for businesses. It is deeply interested in Tennessee and its students. Through its Center for Business and Economic Research, the College provides the data and analysis which support sound fiscal policies and management decisions by private businesses and public agencies in Tennessee. Business students are the ultimate beneficiaries of the College's aggressive involvement with the private sector and its deep commitment to the public sector.

Business students are the ultimate beneficiaries of the College's tradition of excellence, our professors challenge the student's pioneering spirit and encourage their professional growth. In keeping with the College's tradition of excellence, our professors challenge the student's pioneering spirit and encourage their professional growth.

THE CURRICULUM

The College of Business Administration undergraduate curriculum consists of general education courses, a business "core," and area specialization. Building on a firm foundation in writing and oral communications, mathematical and statistical methods, an appreciation of the humanities and the arts, and an understanding of the methodology and accomplishments of the social, behavioral, and natural sciences, the business core seeks to expose students to the realities of financial and managerial accounting, micro and macro economics, and the functional fields of business. In addition, an international dimension is included in the curriculum to prepare students for the world of international business.

In the first two years, students take the courses to meet the general education requirements of the curriculum. In their junior and senior years, students complete courses from the business core and electives. A Bachelor of Science degree is offered in the following nine majors: accounting, economics, finance, general business, logistics and transportation, management, marketing, public administration, and statistics. These majors and related career opportunities are discussed later in this section of the catalog.

UNDERGRADUATE ADVISING CENTER

The College maintains a Student Advising Center staffed with full-time academic advisors to assist students with their programs. The Undergraduate Advising Center is located in Cockrill 52. Advisors serve students by answering questions concerning majors, curriculum, and elective options. The objective of the Advising Center is to provide students with needed academic information. After being admitted to a major (junior and senior years), students will confer with a faculty advisor regarding career goals and opportunities.
PROGRESSION STANDARDS
Admission to the College of Business Administration does not guarantee acceptance in the chosen major. Students who enter the College of Business Administration as freshmen or sophomores must apply for a major in the semester after attempting 40 hours. The application process will be assisted by the Undergraduate Business Program staff.

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

1. The student must have followed a business curriculum.
2. The student must have earned a minimum 2.75 cumulative average (3.0 for accounting) in the courses specifically required in the lower-division of their curriculum, excluding electives.

Transfer Students From Other UTK Programs
Students in other colleges at UT Knoxville should apply for progression to the College of Business Administration at the earliest possible date—not later than the completion of 75 hours. Only in exceptional cases will application be considered after 75 hours of coursework at UT or elsewhere have been attempted. The following minimum requirements must have been met in order to be considered for admission to the major:

1. The student must have earned a minimum 2.75 average, cumulative, over the courses specifically required in the lower-division of their curriculum (3.0 for accounting), excluding electives.
2. The overall record will be evaluated for quality and substance of purpose. An excessive number of withdrawals, incompletes, repeated courses, or failures may result in denial of progression.

SATISFACTORY/NO CREDIT
A maximum of 20 credit hours of satisfactory/no credit (S/NC) may be used toward degree requirements for a Bachelor of Science in Business Administration. Such credit hours may be used to meet only the requirements identified in the curriculum as "electives," plus any business courses specifically designated as being available for S/NC grading.

BUSINESS MINOR FOR NON-BUSINESS STUDENTS
Students pursuing majors in colleges other than the College of Business Administration and who wish to obtain a minor in Business Administration must successfully complete the following requirements:

Accounting 201-202, Economics 201, Statistics 201, Management 301, Marketing 301, and six additional 400 level or above business electives.

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

SCHOLARSHIPS
A limited number of scholarships are available for highly qualified students. Students are invited to apply for a College of Business Administration scholarship. Selection criteria may be based on academic achievement, financial need, and leadership. Students must complete the College of Business Administration scholarship application form by the application deadline in mid-February of each year.

In order to be considered for a scholarship, students must meet the following criteria:
1. Unweighted grade point average of 3.0
2. ACT composite score of 23 or SAT combined score of 1050
3. To apply, students must submit the following:
   1. A current high school transcript and a current college transcript, if the student is a transfer student.
   2. ACT or SAT scores;
   3. Class rank;
4. A completed Undergraduate Academic College Scholarship Application Form.

TO APPLY, students are invited to apply for a...
students in the College of Business Administration with a minimum cumulative GPA of 2.75. Beta Alpha Phi — Accounting students, graduate or undergraduate, registered in advanced accounting and having a minimum B-minus average in 9 hours of accounting, as well as in the cumulative GPA. Delta Sigma Pi — Professional business fraternity for freshmen to senior students, in the College of Business Administration. A minimum of 30 semester hours of University credit with a scholastic average of at least 2.5 is required for initiation. Logistics and Transportation Association — Open to all Logistics and Transportation majors and any student with an interest in logistics and transportation careers. Omega Delta Delta — Honor society in economics for students and faculty. Student members must have a minimum 3.0 overall average.

ADULT STUDENTS
For more information on options and resources available to adult students, contact the Adult Student Services Center, 414 Student Services, at 374-4040.

OTHER AVAILABLE RESOURCES:
Career Services—Located in 100 Danforth Hall, Career Services helps students choose a major, assess career alternatives, find employment, and complete a successful transition from the University to the world of work. For more information on the services provided, please see the front section of the catalog under Undergraduate Advising Center.

Undergraduate Advising Center—Complete college planning and syllabi for undergraduate business courses can be found in the Undergraduate Advising Center, Blocker 52.

College of Business Administration Undergraduate Student Guide—A complete guide to everything an undergraduate business student needs to know is available in the Undergraduate Advising Center, Blocker 52.

Business Majors and Minors—The College of Business Administration provides students with an opportunity to work with some of the nation’s best business educators within a demanding yet dynamic field of study. Majors in most areas support the breadth of the core business curriculum with the flexibility of specialized areas of study. Business students are exposed to the latest developments in business theory and technology, including the use of computers as problem-solving tools. Each degree program emphasizes the oral and written communication skills necessary for success in any field. For up to date information on degree requirements, please see the Undergraduate Advising Center, Blocker 52.

GENERAL EDUCATION—FRESHMAN AND SOPHOMORE YEARS
The following courses are prerequisite to all majors in the College of Business Administration except for the Statistics major which is presented in the department listing.

CURRICULA
Freshman and Sophomore Curricula (except Statistics)

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

Students who complete English 118, Honors English Composition, with a grade of A or B will complete their English Composition requirement by choosing English 139 or a literature sequence course in the English Department. If the student completes a literature course requirement, the course may also be counted toward that Humanities requirement.

ACCOUNTING AND BUSINESS LAW

Professors:
K.G. Stang (Head and Arthur Anderson Professor of Accounting, Ph.D., University of Colorado); P. Stangeland (Emeritus, Washington State University); K.E. Ellsworth (Emeritus); S. P. Poulsen, Ph.D., CPA; C. E. Kerstetter (Emeritus), CPA; N. F. Nelson (Emeritus), CPA; M. W. McNeil, Ph.D., CPA; A. M. Revo (Debtor & Trustee Professor), Ph.D.; D. Oklahoma State, CPA, H.P. Fied, Ph.D., Virginia Polytechnic Institute, CMA; M. B. Williams (Emmett & Young Professor), Ph.D.; D. Oklahoma, CPA.

Associate Professors:
S. Ayers, Ph.D., Arizona State, CPA; B.C. Behn, Ph.D., Arizona State, CPA; K. A. Borri, Ph.D., Oklahoma State (Emeritus); D. C. L. Smith (Emeritus), M.S., M.S. Tennessee. CPA.

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

Lecturers:

The Accounting Program at UT has established itself as one of the nation’s top accounting programs. It is designed to provide students with a solid foundation that will allow them to be successful from professional accounting. They are responsible for preparing and analyzing financial data and for consulting in many specialized areas such as tax planning and compliance, auditing (examining and verifying financial records), information systems, and management advisory services.

Four completing the core requirements for a business education (including courses in statistics, economics, marketing, finance, business law, and management), the accounting major begins extensive work in financial and managerial accounting. The student then completes advanced work in specialized areas such as tax, auditing, and systems. The use of computers in accounting is also emphasized.

The accounting program is accredited by the American Assembly of Collegiate Schools of Business and is among the programs eligible for the National Literature course requirement. Since 1993, the state of Tennessee has
The economics major thoroughly examines the economic processes of society, focusing on the production, distribution, and consumption of goods and services. Students in economics may select courses from the fields of development, industrial organization, labor, property management, real estate development, and finance. Courses in Investments lead to career opportunities in investment analysis, commercial and investment banking, and insurance companies. Courses in Real Estate are designed for students who wish to enter real estate brokerage, appraisal, taxation, law, property management, sales, and related careers, including mortgage lending and building construction, government, and non-profit service organizations.

Students majoring in International Business have a broad education that allows them to gain in-depth knowledge of a particular area of business while retaining an overall perspective. After completing the core requirements for a business administration degree, General Business majors complete twenty-four additional hours in upper-division business courses.

FINANCE

Economics, international economics, economic history, regional economics, public finance, and quantitative methods. All students majoring in economics take courses in art and sciences and in the functional areas of business. Graduates in economics go into many sectors including industry, commerce, finance, trade associations, and government offices at all levels.

International Business: The international course requirement may be satisfied by taking either Business Administration 311 or 491 or an international course in a concentration area such as Management 471, Logistics and Transportation 440, Economics 321, Economics 302 or 440. The wide range of business and art and science courses required by this curriculum provides a solid base knowledge well suited for entry-level positions in many management offices. Graduates of the General Business program begin their careers as management trainees in sales, banking, insurance, and marketing. The curriculum is also ideal for students interested in pre-law, particularly specialization in corporate law.

ECONOMICS

FINANCE

GENERAL BUSINESS

The General Business Program offers a broader education that allows students to gain in-depth knowledge of a particular area of business while retaining an overall perspective. After completing the core requirements for a business administration degree, General Business majors complete twenty-four additional hours in upper-division business courses. The wide range of business and arts and science courses required by this curriculum provides a solid base knowledge well suited for entry-level positions in many management offices. Graduates of the General Business program begin their careers as management trainees in sales, banking, insurance, and marketing. The curriculum is also ideal for students interested in pre-law, particularly specialization in corporate law.
MANAGEMENT

Professors:

Associate Professors:
D.J. Foster (Emeritus), Ph.D. Georgia; M.R. Bowser, Ph.D. Classical; C.P. Edling, Ph.D. British Columbia; G.E. Pribyl, Ph.D. Indiana; W.V. Judge, Ph.D. North Carolina; H.C. Muddox, Ph.D. D. T. Leach; C.E. Noon, Ph.D. Michigan.

Assistant Professor:
I.J. Geltend, Ph.D. Southern California.

Management majors at UTK may choose from several different areas of emphasis. Operations analysis and personnel management are the most applied, but an individualized program may be developed. The foundation is provided by studies of organizational structure and process, human behavior in organizations, and business strategy. Building on that foundation and the core courses in accounting, economics, marketing, and finance, the management major selects one of the following four areas of emphasis: General Management, Operations Management, Human Resources Management, or International Management.

CAREER OPPORTUNITIES include staff positions in production planning, inventory management, employment, training, and recruiting. In addition, the management positions in all types of industries, such as manufacturing, retailing, banking, transportation, and hospitality are all available to management majors.

MARKETING, LOGISTICS, AND TRANSPORTATION

LOGISTICS AND TRANSPORTATION

Professors:

Associate Professors:
J.H. Fogg, Ph.D. Indiana; M.C. Holcomb, Ph.D. Tennessee.

Assistant Professor:

The internationally recognized logistics and transportation program at UTK is currently regarded as one of the most comprehensive and contemporary programs in the nation. The program has attained both recognition through its integration of one of the country's most highly regarded faculties, combined with a fundamentally innovative curriculum.

Logistics refers to the movement of raw materials and component parts into and within a business firm and to the distribution of finished products and services to customers. Businesses having products or services at the right place at the right time is critical for success in any business. Logistics is an important element in any firm's comprehensive marketing strategy. A career in logistics offers students the opportunity to make a significant contribution to corporate effectiveness in this area. Transportation refers to the physical movement of goods between two geographic points. Students interested in transportation will typically accept employment with a carrier (motor, rail, water, and air) or with the logistics and transportation department of a business that purchases transportation services from carriers.

Total: 126 hours

109

College of Business Administration
Marketing is an activity that is directed toward identifying what the customer wants and may ultimately expand to positions in advertising, brand management, sales management, and marketing research. Marketing is a cornerstone of the free enterprise system. Typically, a career in marketing begins in either consumer or industrial sales or retailing, and may ultimately expand to positions in advertising, brand management, sales management, promotion, product development, and marketing research.

Marketing is therefore an important part of understanding the forces that shape consumer behavior. Businesses provide students with the background for careers in international business and economics, in the social sciences, in the educational background of dealing with numbers, and in the functional areas of government. Public administration majors find careers in government, tax administration, budget and fiscal analysis, and in the functional areas of government. Opportunities exist at the federal, state, and local levels of government. Many public administration majors pursue graduate study leading to the Masters of Public Administration.

Public administration is a joint program sponsored by the Department of Economics and the Department of Political Science. It is designed for students interested in public sector management, the formation of public policy, or the interface between the public and private sectors. This program combines general education in business principles with specific coursework in government. Students choose electives to focus their interest or expertise.

Public administration majors find careers in the management, tax administration, budget and fiscal analysis, and in the functional areas of government. Opportunities exist at the federal, state, and local levels of government. Many public administration majors pursue graduate study leading to the Masters of Public Administration.

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Public administration majors find careers in government, tax administration, budget and fiscal analysis, and in the functional areas of government. Opportunities exist at the federal, state, and local levels of government. Many public administration majors pursue graduate study leading to the Masters of Public Administration.
Written Communications - One course from the courses listed below: English 263, 295, 355, 360, 455.

Stat Electives - Qualified students (with permission from the instructor) may take an additional course in the Stat 461, 462, 463, Mathematics 423, 425 set.

Mathematics - Students who have the six credits of Math 123-125 should take Math 141-142, or others of the recommended courses are Math 241 and 261.

International Business - The international course requirement may be satisfied by taking either Business Administration 311 or 411 or an international elective (such as Management 471, Logistics and Transportation 441, Economics 361, Economics 362, or Mathematics 411).

Arts - One course from the courses listed below: Art 191; Art History 172, 173, 183; Classics 232, 233; English 263; Music History 100, 110, 120; Music General 130; Speech 280, 282, Theatre 100, 130, 221, 250; Women’s Studies 330.

Ethics - One course from Philosophy 242, 342, or 344.

Statistics 461, 462, 463; Mathematics 423, 425 - Any two courses from the set of five will satisfy this requirement.

CENTER FOR BUSINESS AND ECONOMIC RESEARCH

W.F. Fox (Director), Research Professor, Ph.D, Ohio State

K.E. Quindry (Emeritus), Professor, Ph.D, Kentucky

M.N. Murray, Research Associate Professor, Ph.D, Syracuse

M.J. Cornelius, Research Associate, M.S, Tennessee

P.A. Price, Research Associate, B.S, Tennessee

B.B. Vickers, Research Associate, B.A, Mary Washington

V.C. Cunningham, Research Assistant, B.A, Tennessee

J.M. Snoddy, Associate Editor, B.A, Tennessee

M. Boyer, Research Associate, M.B.A, UT Chattanooga
Communications is a vital force in today's complex society. As a result, programs in the College of Communications acquaint students with the communications process and prepare them for professions work in many fields. The College includes the School of Journalism and the Departments of Broadcasting and Speech Communication. Five concentrations are offered: advertising, broadcasting, journalism, public relations and speech communication. The five academic sequences have a core curriculum. This permits specialization at the junior and senior level. Programs for which accreditation is available are fully accredited. The advertising, broadcasting, journalism, public relations, and graduate programs are accredited by the Accrediting Council on Education in Journalism and Mass Communications.

An exchange program with the Dutch School of Journalism, Utrecht, offers students a European Semester called "Europe in the World." Tennessean students study European journalism in the Netherlands, but maintain their enrollment at UTK and pay only room, board and transportation costs. A similar exchange program with Escuela de Comunicación de Monica Herrerain Ecuador also exists.

The College, or one of its departments, is a member of the Association of Schools of Journalism and Mass Communication; Association for Education in Journalism and Mass Communications; American Advertising Federation; Advertising Research Foundation; American Academy of Advertising; Broadcast Education Association; Tennessee Press Association; Society of Professional Journalists; Public Relations Society of America; National Communication Association; Southern States Communication Association.

**COURSE LOAD**

The maximum number of hours an undergraduate may take without special permission is 18 hours. Permission to take 19 or more hours must be obtained from the dean or the associate dean for undergraduate studies.

**REQUIREMENTS FOR ALL CURRICULA**

**CORE AREAS**

All students in the College take the following core courses:
- Overview/Survey
- Writing
- Theory and Research
- Free Speech, Law and Ethics

Each department designates a course or courses to fulfill each of the five majors.

**SATISFACTORY/NO CREDIT OPTION**

This option applies only to general elective courses with the exception of field experience courses. No course that is part of the specific requirements of the College of Communications or a student's major department can be taken under this option. For example, social science and humanities electives required by the various departments cannot be taken S/NC. Courses evaluated as "satisfactory" will count as hours toward graduation but not for calculating the grade point average. A student who wishes to take without S/NC a course that is part of the core curriculum must notify the department or school director. Under no circumstances may a student change from S/NC to regular credit or from regular credit to S/NC after the deadline for adding courses.

**MINORS**

Minors are offered in Broadcasting, Journalism/Public Relations, and Speech Communication. An interdisciplinary Communications minor is also available.

A minor in Broadcasting consists of 18 hours as follows: Communications 100, Broadcasting 275, 375, and 380, plus 12 hours in either Communications 275 or 370. A minor in Journalism consists of 18 hours as follows: Journalism 200, Communications 400, plus 12 hours in either Communications 275 or 370. A minor in Public Relations consists of 18 hours as follows: Communications 100, plus 12 hours in either Communications 275 or 370.

**HONORS PROGRAM IN SPEECH COMMUNICATION**

The Speech Communication Department offers an honors program that provides an intense educational experience designed to assure the participating student a superior and challenging undergraduate education. Speech Communication 107, the Honors version of Introduction to Speech Communication, is open to students in the major with a 3.0 or higher cumulative GPA and an act or composite score of 27 or better. Majors who have a 3.0 or higher cumulative GPA in the major are eligible to apply for admission to the Speech Communication Honors Program. Application forms are available in the department office. To graduate with Honors, students must meet all requirements for the major in speech communication.
### REQUIREMENTS FOR GRADUATION

The Bachelor of Science degree in Communications is awarded to majors who complete a program of 124 hours prescribed under the Advertising, Broadcasting, and Journalism departments' requirements listed below. At least 90 of these hours must be taken in courses other than those major or related communications fields. At least 18 of the hours in the major must be taken at the University of Tennessee, Knoxville.

The Bachelor of Arts in Communications degree is awarded to Speech Communication majors who successfully complete the prescribed 124 hours of courses listed below.

### PROGRESSION REQUIREMENTS

Entering freshmen and transfer students are first associated with the College as pre-majors. They may progress to a major in the School of Journalism or the Departments of Advertising, Broadcasting, or Speech Communication after the completion of at least 30 hours of prescribed coursework with a 2.5 cumulative GPA.

Until they progress to a major, students may not enroll in courses in the College numbered 300 or above without approval. Students who do not progress to a major by the time they have accumulated 90 credit hours will be dismissed from the College. Students must achieve a cumulative grade point average of at least 2.0 in all College of Communications courses used to fulfill graduation requirements.

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

### TRANSFER STUDENTS

Students from other colleges within the University are eligible to progress to a major in the College of Communications after they have completed at least 30 hours of prescribed coursework with a 2.5 cumulative GPA, complete Communications or Speech Communications 100, and make application to the appropriate Department or School.

### GRADUATE

Consult the Graduate Catalog for listing of graduate level courses.

### ADVERTISING

#### Professors:
- Rupen Ghandi, Ph.D., Biola University; Ronald E. Taylor (Retired), Ph.D., Illinois.

#### Associate Professors:
- Eric Hany, Ph.D., Georgia; Martina G. Hoy, Ph.D., Oklahoma State.

#### Assistant Professors:
- Margaret Morrison, Ph.D., Georgia; Sally McMillan, Ph.D., Oregon.

#### Emeritus Professor:
- Richard Job, M.A., Wisconsin.

### Freshmen Hours Credit
- English 101, 102
- Communications 100
- Foreign Language
- Anthropology 130
- Mathematics 119, 125
- Sophomore
- Advertising or 250
- History 241, 242
- English Literature
- Economics 201
- Sociology 101 or 102
- Accounting 201
- Journalism 280
- Junior
- Psychology 110
- Advertising 340, 350
- Speech 280
- Marketing 201
- Marketing 310
- Management 301
- Social Science Elective
- General Elective
- Senior
- Psychology 360
- Advertising 380, 420
- Advertising 410, 480
- Communications Electives
- General Electives

Total: 124 hours

### BROADCASTING

#### Professors:
- Barbara A. Maguire (Hasl)
- Ph.D., Oregon
- H. Howard, Ph.D.
- N. S., Indiana
- D. L. Teeter, Jr., Ph.D.

#### Associate Professor:
- Benjamin J. Botas, Ph.D.
- Michigan
- Jeffrey S. Wilkerson, Ph.D.
- Georgia

#### Instructor:
- Cathleen L. Hunter, M.A., University of Maryland.

#### Freshmen Hours Credit
- English 101, 102
- Foreign Language
- Communications 100 or Speech 100
- Psychology 110
- Social Science
- Mathematics

### Broadcasting

#### Sophomore
- Public Relations 101
- Broadcasting 275
- Broadcasting or 340
- History 241, 242
- English Literature
- Speech 210 or 240

### Junior
- Communications 280 or Broadcasting 450
- Broadcasting Electives
- Professional Electives
- General Electives
- Communications Electives
- General Electives

### JOURNALISM

#### Professors:
- Paul G. Ashdown, Ph.D., Bowling Green
- Dorothy A. Bowles, Ph.D., Wisconsin
- Benjamin R. Caudill, Ph.D., North Carolina
- James A. Crook (Director), Ph.D.
- D. L. Teeter, Jr., Ph.D.
- M. W., Madison

#### Associate Professors:
- Susan T. Cleemaje, Ph.D., Tennessee
- David Foley, M.S.J., Northwestern
- Robert B. Miller, Ph.D.
- T. L., Texas
- S. D., Madison

#### Assistant Professors:
- Candace M. White, Ph.D., Georgia

#### Instructor:

#### Emeritus Professors:
- June G. Adamsom, M.S., Mississippi
- Chester C. Cade, B.S., Texas
- Jack B. Haskins, Ph.D.
- J. R., Minnesota
- B. H., Illinois
- K. B., Illinois
- B. B., Bloomsburg
- B. S., Missouri
- B. K., Missouri
- J. T., Texas

#### Broadcasting

#### Sophomore
- Public Relations 101
- Broadcasting 275
- Broadcasting or 340
- History 241, 242
- English Literature
- Speech 210 or 240

#### Junior
- Communications 280 or Broadcasting 450
- Broadcasting Electives
- Professional Electives
- General Electives
- Communications Electives
- General Electives

Total: 124 hours

### Six Hours of intermediate foreign language is required. Natural Science Electives are any two classes from: Astronomy 161, 162; Biology 101, 102; Botany 110, 112; Chemistry 101, 111, 112; Geology 151, 152; Geophysics 151; Biology 101, 102, 103.

### Eight Hours of intermediate foreign language is required. Natural Science Electives are any two classes from: Astronomy 161, 162; Biology 101, 102; Botany 110, 112; Chemistry 101, 111, 112; Geology 151, 152; Geophysics 151; Biology 101, 102, 103.

### English Literature Electives: 201, 202, 221, 222, 223, 295, 296. *NOTE: If courses in these areas are taken, at least six hours must be used for courses given in the College of Arts and Sciences. Between general electives and professional electives, at least one-half must be taken from the College of Arts and Sciences.

### SOCIETY AND MANAGEMENT

#### Junior
- General Electives

#### Senior
- General Electives

### Total: 124 hours
### JOURNALISM CONCENTRATION

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Freshman English 101, 102</td>
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<tr>
<td>Communications 100</td>
<td>3</td>
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<tr>
<td>Foreign Language</td>
<td>3</td>
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<tr>
<td>Psychological 110</td>
<td>3</td>
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<tr>
<td>Humanities Electives</td>
<td>3</td>
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<tr>
<td>Journalism 200</td>
<td>3</td>
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<tr>
<td>Journalism 201, 202</td>
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<td>Journalism 221, 222</td>
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<td>Journalism 231, 232</td>
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<tr>
<td>Journalism 233</td>
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<tr>
<td>Journalism 251, 252, 253</td>
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<tr>
<td>Speech 310</td>
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<td>[Total: 53 hours]</td>
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### SPEECH COMMUNICATION

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<tr>
<td>Professor: G.A. Yeomans, Ph.D.</td>
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<td>Louisiana State University</td>
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<td>[Total: 53 hours]</td>
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\[Six hours of intermediate foreign language is required.\]

### PUBLIC RELATIONS CONCENTRATION

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\[Six hours of intermediate foreign language is required.\]
The College of Education prepares teachers, school administrators, and other professional personnel for non-school settings. All the undergraduate level teacher education programs are structured to major functions: (1) to provide professional preparation for teachers, administrators, and other service personnel and non-school based professionals at the undergraduate and graduate levels; (2) to collaborate with school personnel, educational agencies, community agencies, professional groups, and others interested in the evaluation and improvement of educational opportunities, programs, and services; and (3) to promote and conduct investigations which are designed to improve professional education and enhance student/servant learning, in performing these functions, it is believed that students should attain a broad course background in the arts and sciences, demonstrate mastery of professional knowledge and skills, and have a thorough knowledge of their content field. Through a carefully planned program of combined academic and direct experiences, the prospective professional acquires a depth and breadth of knowledge and understanding which is superior to that of the typical college graduate in cultural and citizenship appreciation as well as in professional and scholarly accomplishment.

The College Education Building, Claborn Addition, and Health, Physical Education, and Recreation Building are functional facilities which are designed for the education of teachers and other professionals. These buildings include science laboratories, seminar rooms, offices, and meeting rooms. The Instructional Services Center, the Reading Center, the Curriculum Laboratory, the Computer Laboratory, the Bureau of Educational Research and Services, as well as a number of central facilities.

COLLABORATIVE PROGRAMS

Faculty members of the College of Education collaborate with faculty in the colleges cited below in preparing teachers and educational specialists. Students interested in pursuing teacher or educational specialist licensure in these fields earn their baccalaureate degrees from the colleges cited and complete licensure requirements at the conclusion of either the fourth or fifth academic year, depending upon program requirements. Students are referred to the offices indicated below and to Steps I-IV of the catalog for further information.

College of Agricultural Sciences and Natural Resources, Agricultural Education, Agriculture and Extension Education—210 Morgan Hall.


College of Arts and Sciences, Art Education—Art Department Art & Architecture Building 1715 Volunteer Boulevard, Elementary Education, Secondary Education: English, Foreign Languages, Mathematics, Sciences, Social Science—College of Education Advising Center 214 Claborn Addition; Music Education—Music Department 211A Music Building 1741 Volunteer Boulevard; Speech and Hearing Education—Audiology and Speech Pathology Department 457 South Stadium Hall.

College of Social Work, School Social Work—College of Social Work 221 Henson Hall.

PROGRESSION TOWARD DEGREE COMPLETION AND/OR LICENSURE IN TEACHING FIELDS

Progression toward completion of a degree and/or licensure in teaching field requires acceptance to the Teacher Education Program by a board of admissions. The admissions process begins at the time of registration to UT Knoxville, whether the student enters as a freshman, or transfer student.

Community college students who anticipate transfering to the College should contact the Education Advising Center, 214 Claborn Addition.
STEPPROGRESSIONTOPROGRAM PROGRESSION

Each student's progress will be reviewed at each pre-admission, boards of admission will be made at the time other
Students whose progress is judged inade-

adequate will be required to either repeat courses, participate in remedial activities, or change to a
more appropriate major.

To facilitate communication and proper
teaching, students are encouraged to participate in field study activities and that selection is competitive, based
on a variety of factors.

The following are the general prerequisites for student teaching or internship. Prerequisites for specific program areas (e.g., Art Education, Elementary Education) are available in the Office of Field Studies or from academic advisors.

(1) Admission to the Teacher Education Program: Students are encouraged to achieve the highest GPA
possible in their major, and to participate in remedial activities, or change to a more appropriate major.

To participate in therapy, as specified by and
required to either repeat courses, participate in remedial activities, or change to a
more appropriate major.

Students seeking authorization to enroll in student teaching or internship must apply at least one calendar year prior to the term of actual internship.

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Students seeking authorization to enroll in student teaching or internship must apply at least one calendar year prior to the term of actual internship.

Making application to enroll in the internship may be granted as follows:

(1) Hearing and Speech Evaluations: The student's progress will be reviewed at each pre-admission, boards of admission will be made at the time other
Students whose progress is judged inade-
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more appropriate major.

Students seeking authorization to enroll in student teaching or internship must apply at least one calendar year prior to the term of actual internship.
Students must attain the following minimum requirements to qualify for the College's recommendation for licensure:

1. Academic and professional achievement: Only those students who perform satisfactorily in student teaching or internship will be recommended for licensure. Students who perform unsatisfactorily may be provided another opportunity to succeed. (Such students may be required to participate in remedial courses and/or activities prior to re-registering in student teaching or internship.)

Additional academic requirements, include attainment of the following minimal levels of academic achievement: (a) a minimum cumulative GPA of 2.5 and specific teaching field (major) courses, and (b) 2.8 GPA in professional education courses ("T" and "F" course grades must be repeated).

2. PRAXIS TESTS: Professional Assessments for Beginning Teachers: All candidates for licensure are required to attain minimum scores as determined by the State Board of Education. Complete details regarding specific test levels required and minimum passing scores can be obtained in the Education Advising Center, 214 Claxton Addition.

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

Applications for teacher licensure should be completed early in the final semester before graduation. Application forms may be obtained in the Education Advising Center, 214 Claxton Addition.

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

**PROGRESSION TOWARD DEGREE COMPLETION IN NON-TEACHING FIELDS**

**EXERCISE SCIENCE**

Progression to the Exercise Science Major requires a minimum undergraduate cumulative GPA of 2.5 after a minimum of 45 hours of coursework and completion of ES 100 Orientation to Exercise Science.

1. Any professional course, taken before or after progression into the Exercise Science Program, must be passed with a minimum letter grade of "C" or higher. (This includes courses taken during the summer prior to the fall semester in which progression to the major is intended.)

2. Students admitted into the Exercise Science Program are required to maintain a minimum undergraduate cumulative GPA of 2.5 after a minimum of 45 hours of coursework and completion of ES 100 Orientation to Exercise Science.

3. Students who wish to do so may ask to be interviewed while taking the introductory course, and if they meet the standards for progression, will be allowed to progress to upper-division work upon completion of that course with a "C" or higher. Students who fail to meet the standards for progression to the major will not be retained in the major. (Note that any decision affecting progression or retention may be appealed to the leader of the Rehabilitation, Disability, and Student Services Unit.)

Requests for information about the program, an appointment with the Board of Review, and an application for the field practicum sequence should be directed to the program secretary in 102 Claxton Addition.

**SPORT MANAGEMENT**

Progression

Students must complete an application upon completion of the following minimum criteria:

1. application to the Sport Management major;
2. 20 semester hours;
3. minimum 2.5 cumulative GPA.

Board of Admissions

The Board of Admissions is made up of the faculty on the Sport Management Program Area Committee and will meet periodically throughout the semester to review applications.

The Board of Admissions will base admissions decisions upon a student's academic qualifications, oral and written communication, and expressed interest in sport management.

*Admission Decisions*

The Sport Management Program is committed to recruiting and preparing the strongest possible candidates for sport management professions. The admissions criteria are the same for both the Sport Management program and that selection is competitive, based upon available faculty resources and field placements.

**HUMAN SERVICES**

The standards which must be met for progression and retention in Human Services are professional in nature, as well as academic, because the prerequisite in Human Services prepares students for entry into service professions.

Students who wish to pursue a major in Human Services must earn a grade of "C" or higher in the introductory course before progressing to upper-division work in the major.

Students whose average for courses taken in the major falls below 2.5 must regain this required minimum average by the end of the subsequent semester in order to be retained in the major. A Board of Review will meet each semester to interview students who wish to progress into the major, and to review the work of students who are not meeting the academic or professional standards of the program. Students who wish to do so may ask to be interviewed while taking the introductory course, and if they meet the standards for progression, will be allowed to progress to upper-division work upon completion of that course with a "C" or higher. Students who fail to meet the standards for progression to the major will not be retained in the major.

**MINORS**

Teaching Minors

Students who are earning a baccalaureate degree in the College of Arts and Sciences and who are also seeking teacher licensure in Elementary Education, English Education, Foreign Language Education, Mathematics Education, Music Education, Science Education, or Social Science Education are urged to earn a minor in either elementary or Secondary Education.

Students who do not earn a minor as a part of that undergraduate study are still required to complete the equivalent of a minor as a prerequisite to entering the fifth year of professional study.

Students must note that courses taken to satisfy the minor will not fulfill teacher licensure requirements. The intention to complete a minor must be declared at the time of application for a degree. If the minor is to appear on the final transcript, (Degree applications are available in the Registrar's Office.)

**APPROVED FOREIGN LANGUAGE, MULTICULTURAL, AND INTEGRATED ELECTIVES**


*DEAFNESS, AND HUMAN SERVICES UNIT.* Requests for information about the program, an appointment with the Board of Review, and an application for the field practicum sequence should be directed to the College’s recommendation for licensure in the Rehabilitation, Disability, and Student Services Unit.)

*FOREIGN LANGUAGE.* Any course offered by this department including 101, 102, 201, 202, 301, 302, 401, 402, 403, 404, 431, 450, 455, 471, 472, 473, 474, 475, 479. Music 310, 390, 390W. Women's Studies 266, 360, 402, 420, 455. INTEGRATED FOREIGN LANGUAGE fields—any University Studies course.

*HUMAN SERVICES.* Requests for information about the program, an appointment with the Board of Review, and an application for the field practicum sequence should be directed to the College’s recommendation for licensure in the Rehabilitation, Disability, and Student Services Unit.)

*SPORT MANAGEMENT.* Students interested in a minor in Sport Management are referred to the College of Education’s Curriculum section of this catalog.

*TEACHING MINORS.* Students interested in a minor in Elementary Education, English Education, Foreign Language Education, Mathematics Education, Music Education, Science Education, or Social Science Education are urged to earn a minor in either elementary or Secondary Education.

Students who do not earn a minor as a part of that undergraduate study are still required to complete the equivalent of a minor as a prerequisite to entering the fifth year of professional study.

Students must note that courses taken to satisfy the minor will not fulfill teacher licensure requirements. The intention to complete a minor must be declared at the time of application for a degree. If the minor is to appear on the final transcript, (Degree applications are available in the Registrar's Office.)

*APPROVED FOREIGN LANGUAGE, MULTICULTURAL, AND INTEGRATED ELECTIVES FOREIGN LANGUAGE.* Any course offered by this department including 101, 102, 201, 202, 301, 302, 401, 402, 403, 404, 431, 450, 455, 471, 472, 473, 474, 475, 479. Music 310, 390, 390W. Women's Studies 266, 360, 402, 420, 455. INTEGRATED FOREIGN LANGUAGE fields—any University Studies course.
CULTURAL STUDIES IN EDUCATION

Professors: J.T. DeLisser (Leader), Ed.D., North Carolina (Greensboro); Clinton B. Allison, Ph.D., Oklahoma; Anand Mehta, Ed.D., Columbus, Joan Pauli, Ed.D., Abilham; W.J. Morgan, Ph.D., Minnesota; C.A. Wilder; Ph.D., Michigan; Richard Waller; Ed.D., Wayne State.

Associate Professor: Cynthia Tiernan, Ph.D., Duke.

Assistant Professor: Handel K. Wright, Ph.D., Toronto.

EDUCATION IN THE SCIENCES, MATHEMATICS, RESEARCH, AND TECHNOLOGY

Professors: M. Everett Myer (Leader), Ph.D., Florida; Charles C. Clark, Ph.D., Louisiana (Baton); Donald J. Dessart, Ph.D., Maryland; Dale Donk, Ed.D., Colorado; Russell L. French, Ph.D., Ohio State; Theodore Hippie, Ph.D., Illinois; Lonnie D. McDaniel, Ed.D., Indiana; John R. Roy, Ed.D., Tennessee; C.E. Rosea, Ph.D., Ohio State.

Associate Professors: Mary Jane Connolly, Ed.D., YPI, A.D. Grant, Ph.D., Wisconsin; Consta Metzler, Ph.D., Ohio State.


EXERCISE SCIENCE

Professors: W.P. Lambert (Leader), Ph.D., Iowa; E.T. Hewitt, Ph.D., Wisconsin; A.J. Kolar (University Professor), Ph.D, Michigan; T.G. Naimy, M.D. Washington (St. Louis); HRH, Rockford, Ph.D., Brown, H. Welch (Emeritus), Ph.D., Florida.

Associate Professor: D.R. Bassett Jr., Ph.D., Wisconsin; D.L. Thompson, Ph.D., Virginia.

Assistant Professor: J.L. Lewis (Emeritus), Ed.D, Tennessee; Greg Mathieu, M.D. (Adjunct) Symmes University; S. Zhang, Ph.D., Oregon.

COUNSELOR EDUCATION AND COUNSELLING PSYCHOLOGY

Professors: Mark A. Hackett, Ph.D., Michigan State; Kathleen L. Drake, Ed.D., Georgia; Lawrence M. DeRidder (Emeritus), Ph.D., Michigan; Schuyler W. Husk, Ph.D., Northwestern; Maria P. Petrasca, Ph.D., Ohio State; William A. Popper, Ph.D., Ohio State; Charles L. Thompson, Ph.D., Ohio State.

Associate Professor: Teresa A. Huchton, Ph.D., Georgia.

LANGUAGE, COMMUNICATION, AND HUMANITIES EDUCATION


Adjunct Professor: Leanne Lindsey, Ed.D. Mississippi.

Associate Professors: R.L. Hodge, Ph.D. Texas; T.K. Ryan (Emeritus), Ed.D. Ball State.
LEADERSHIP STUDIES IN EDUCATION

Professors:  
Grady Rogers, Ed.D. Memphis State; W. Lee Humphreys (Adjunct), Ph.D. Union Theological Seminary; Malcolm McIntyre, Ph.D. Florida State; Norma T. Mertz, Ed.D. Columbia; Gerald C. Libby, Ph.D. Minnesota.

Adjunct Professors:  

Associate Professors:  
Jeffrey P. Aver, Ph.D. VPI.

Adjunct Associate Professors:  
Jerry Askew, Ph.D. Ohio; Florida Green; Ed.D. Tennessee; James Gribble, M.S. Indiana State; Katie High, Ed.D. Tennessee.

Visiting Associate Professor:  

PSYCHOEDUCATIONAL STUDIES

Professors:  
R. Steve McClatchy (Leader), Ph.D. Georgia; J.J. Behr (Emeritus), Ed.D. UC Berkeley; Adam G. Brockall, Ph.D. Symbolics; W. A. Clappison, Ph.D. Ohio State; Donald J. Dickson (Emeritus), Ed.D. Oklahoma State; Thomas George, Ed.D. Tennessee; Kathleen H. Greenberg, Ph.D. George Peabody; Peabody of Vanderbilt; Carol Korcevik, Ed.D. Georgia; John M. Peters, Ed.D. N.C. State; R.L. Williams, Ph.D. George Peabody.

Adjunct Professor:  
D. Turzel, Ph.D. George Peabody.

Associate Professor:  

Adjunct Associate Professor:  
L.R. Washington, Ph.D. Tennessee.

Assistant Professor:  
Dianne Whitaker, Ph.D. VPI.

Adjunct Assistant Professors:  
M.A. Blank, Ed.D. Tennessee; R.J. Adjunct Assistant Professor, Ph.D. Tennessee; L.R. Wadlington, Ph.D. Tennessee; L.M. Kindall, Ed.D. Tennessee.

Associate Professor:  

Assistants:  
M.K. Warden, Ph.D. Tennessee.

Instructors:  
D.J. Achmer, M.S. Tennessee; M. Konitz-Fallot, M.S. Illinois; M. Griffin, M.S. Tennessee; O.C. LaCane, M.S. Tennessee.

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

SPORT AND PHYSICAL ACTIVITY

Professors:  
P.A. Beter, Ed.D. North Carolina (Greenboro); N.E. Lay, Ph.D. Florida State; H.B. Walker (Emeritus), Ph.D. Michigan.

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

Assistant Professors:  

Adjunct Assistant Professor:  
J. Benik, M.S., J.D.; A. Epstein, M.S.A., J.D.; C. Tepfer, Ed.D.

Adjunct Instructor:  
D. Thomas, M.S.

CURRICULA

ART EDUCATION

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

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Education 301</td>
<td>3</td>
</tr>
<tr>
<td>Art Education 302</td>
<td>2</td>
</tr>
<tr>
<td>Art Education 303</td>
<td>2</td>
</tr>
<tr>
<td>Art Education 400</td>
<td>1</td>
</tr>
<tr>
<td>Dance 410</td>
<td>1</td>
</tr>
<tr>
<td>Education 401</td>
<td>3</td>
</tr>
<tr>
<td>Psychocinematical Studies 210</td>
<td>3</td>
</tr>
<tr>
<td>Education in the Sciences, Mathematiques, Research and Technology 400</td>
<td>3</td>
</tr>
</tbody>
</table>

Undergraduate Total: 24 hours

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

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Year</td>
<td>12</td>
</tr>
<tr>
<td>Education 574</td>
<td>2</td>
</tr>
<tr>
<td>Education 575</td>
<td>10</td>
</tr>
</tbody>
</table>

EDUCATION

Education 560 | 4 |
Art Education 530 | 4 |
Art Education 540 | 4 |

Graduate Total: 24 hours

NOTE: Teacher licensure is granted at the successful completion of the Professional Year; 12 additional hours may be taken to complete the Master's Degree. For details, see the Graduate Catalog.

DANCE MINOR

Core Courses | Hours Credit |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dance 410</td>
<td>3</td>
</tr>
<tr>
<td>Dance 411</td>
<td>3</td>
</tr>
<tr>
<td>Dance 440</td>
<td>3</td>
</tr>
<tr>
<td>Dance 444</td>
<td>2</td>
</tr>
</tbody>
</table>

AND

OPTION (I): PERFORMANCE

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dance 430</td>
<td>3</td>
</tr>
<tr>
<td>Dance 445</td>
<td>2</td>
</tr>
<tr>
<td>Dance 446</td>
<td>3</td>
</tr>
<tr>
<td>Dance 447</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 21 hours

*Course may be repeated for up to 12 credit hours.
**Course may be repeated for up to 16 credit hours.

ELEMENTARY EDUCATION

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

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education in the Sciences, Mathematiques, Research and Technology 400</td>
<td>3</td>
</tr>
<tr>
<td>Holistic Teaching/Learning 300</td>
<td>3</td>
</tr>
<tr>
<td>Holistic Teaching/Learning 305</td>
<td>3</td>
</tr>
<tr>
<td>Library and Information Science 200</td>
<td>3</td>
</tr>
<tr>
<td>Art Education: Music Education, Health Education, or Physical Education Methods</td>
<td>3</td>
</tr>
<tr>
<td>Psychocinematical Studies 210</td>
<td>3</td>
</tr>
<tr>
<td>Education 400</td>
<td>3</td>
</tr>
</tbody>
</table>

Undergraduate Total: 27-28 hours

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

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Year</td>
<td>12</td>
</tr>
<tr>
<td>Education 574</td>
<td>2</td>
</tr>
<tr>
<td>Education 575</td>
<td>10</td>
</tr>
<tr>
<td>Education 591</td>
<td>4</td>
</tr>
</tbody>
</table>

Graduate Total: 24 hours

NOTE: Teacher licensure is granted at the successful completion of the Professional Year; 12 additional hours may be taken to complete the Master's Degree. For details, see the Graduate Catalog.
**EXERCISE SCIENCE**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Science 120</td>
<td>3</td>
</tr>
<tr>
<td>English 101, 102</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics 153-153 or 141-142 or 151-152</td>
<td>5-6</td>
</tr>
<tr>
<td>Chemistry 120, 130</td>
<td>8</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language, Multicultural, or Integrative</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>121 hours</strong></td>
</tr>
</tbody>
</table>

**Sophomore**

| English 120, 121 | 6 |
| Physical Education 210 | 2 |
| Nutrition 100 or 300 | 3 |
| Speech 210, 290 or 370 | 3 |
| Humanities Elective | 3 |
| Foreign Language, Multicultural, or Integrative | 3 |
| History Elective | 3 |
| **Total:** | **121 hours** |

**Junior**

| Exercise Science 325, 335, 350 | 3 |
| Cultural Studies in Education 220 | 3 |
| **Total:** | **96 hours** |

**Senior**

| English 360 | 3 |
| Humanities Elective | 3 |
| **Total:** | **121 hours** |

**Total:** 321 hours

- "Proficiency in at least four activities. Proficiency: passing an activity course with a minimum grade of "C" in participation in an intercollegiate varsity sport."
- "Counseling students must take 2 of the 3 following Cultural Studies in Education courses: 291, 321, or 372."
- "Exercise Science students must have completed the Master's Degree. For details, see the Undergraduate Catalog."
- "Undergraduate Total: 124 hours"
### Special Education: Education of the Deaf and Hard of Hearing

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>350 Sociology Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>301 Mathematics Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>305 Natural Science Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>345 Philosophy of Religion and Philosophy</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>372 English Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>400 Computer Science Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>424 Speech-Language Pathology Electives</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>425 Speech-Language Pathology Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>426 Communication Disorders Electives</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>428 Physical Science Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>440 Holistic Teaching/Learning</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>450 Sport Management</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>480 General Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>500 Interdisciplinary Studies Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>510 Holistic Teaching/Learning</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>580 Physical Science Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>591 Sport Management</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Hours: 125-129 hours

*Graduate Total: 24 hours

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 Interdisciplinary Studies Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>510 Holistic Teaching/Learning</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>580 Physical Science Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>591 Sport Management</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Hours: 24 Hours

#### Sports Management

The Sports Management major is an interdisciplinary major sponsored by the College of Education and the Recreation, Tourism, and Physical Activity Unit of the College of Education. This program is designed for students interested in working in the sport industry. The program combines Leisure Studies and Sport Management courses, with a minor in Business Administration and includes a semester-long internship experience.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 English</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>102 English</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>201 Business Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>202 Advertising</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>203 Economics</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>204 Sports Management</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Hours: 16 hours

*Graduate Total: 24 hours

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 Interdisciplinary Studies Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>510 Holistic Teaching/Learning</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>580 Physical Science Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>591 Sport Management</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Total Hours: 24 Hours
Engineers solve problems. To do so, they apply science, mathematics, and creativity to invent, design, test, build, and operate engineering systems that will meet the needs of society. In the latter half of the 20th century, engineers developed the personal computer, the space shuttle, artificial hearts and many other "high-tech" products. The opportunities to use technology for the benefit of 21st century society will be even greater. Engineers use the same problem solving strategies whether designing a bridge, trouble shooting a computer chip problem or developing a more efficient automobile engine. This commonality of approach makes it easy for a new intern to move from one specialization to another, and it happens frequently. The engineer's can-do, problemsolving outlook is another, and it happens frequently. The engineer must also have good interpersonal skills to work effectively in the interdisciplinary groups required to tackle modern engineering projects. They must understand the ethical, environmental, political and business implications of their work. Engineers must work comfortably among the cultures, customs and languages of multi-national enterprises.

Increasingly, engineers must also have good preparation for management, and many engineers follow this career path. Engineers use the same problem solving strategies whether designing a bridge, trouble shooting a computer chip problem or developing a more efficient automobile engine. This commonality of approach makes it easy for a new intern to move from one specialization to another, and it happens frequently. The engineer's can-do, problemsolving outlook is another, and it happens frequently. The engineer must also have good interpersonal skills to work effectively in the interdisciplinary groups required to tackle modern engineering projects. They must understand the ethical, environmental, political and business implications of their work. Engineers must work comfortably among the cultures, customs and languages of multi-national enterprises.

The College of Engineering prepares and socializes students to become the technology leaders of the 21st century. Graduates of the B.S. programs offered by the College are able to offset a substantial amount of their college expenses with Co-op savings. Engineering students are encouraged to visit the program office to understand the Co-op experience in an industrial and professional environment. This experience contributes to the student's maturity, accelerates professionalism, and provides opportunities to apply engineering course work in a real-world setting, and enables the student to define more clearly educational and career interests and objectives.

The College of Engineering supports educational, research, and service activities that are undertaken by student groups, faculty, and students to improve the quality of education and the student experience in engineering. The College provides resources and facilities to support these activities. The College's programs are designed to prepare graduates for careers in a variety of industries, including government, business, and other fields.

Introduction to the Cooperative Engineering Program (for new students, transfers, second-degree students, and re-entrants) begins in the first semester at the university. Assignments are determined by employer and student. All engineering students are encouraged to visit the program office. The five-year Cooperative Engineering Program (Co-op) is offered in order to provide an augmented engineering education that includes significant work experience in industry as well as superior academic preparation. Our Cooperative Engineering Program was established in 1926. The University of Tennessee was one of the early pioneers in this valuable type of education.

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Graduate programs leading to the degree of Master of Science are offered in all areas of study, and the degree of Doctor of Philosophy is offered in nine major subjects: aerospace engineering, chemical engineering, civil engineering, electrical engineering, engineering physics, environmental engineering, metallurgical engineering, nuclear engineering, and polymer engineering. Information concerning graduate programs is given in the Graduate Catalog.

In order to be considered for admission to the College of Engineering, undergraduate students must have a minimum grade point average of 2.5 on a 4.0 scale for all work attempted. Students admitted to the College of Engineering must have a cumulative grade point average of 2.5 or better. Students transferred to the College from other UT Knoxville departments are evaluated on a case-by-case basis. Students transferring from other universities or institutions must have a grade point average of 2.0 or better for all work attempted. Students transferring from other universities or institutions must also have completed the prerequisite courses for the major program.

Upon acceptance by the College of Engineering, students are assigned an academic advisor. The academic advisor will assist in the selection of courses and will serve as a resource for academic information and guidance. The academic advisor will also be available to provide advice on career and professional development. Students are encouraged to meet with their academic advisor regularly to discuss their academic progress and career goals.

International students must be in compliance with all federal and state regulations related to international students. They must also meet the same academic requirements as domestic students.

The mission of the College of Engineering is to provide a high-quality education that prepares students for successful careers in engineering. The College aims to achieve this goal by providing a curriculum that is relevant to the needs of industry and society, by providing opportunities for students to engage in research and other forms of scholarly activity, and by providing a supportive and welcoming environment for all students.

The College of Engineering is accredited by the Accreditation Board for Engineering and Technology (ABET). ABET accreditation ensures that graduates of UTK engineering programs are adequately prepared to enter and continue the practice of engineering. ABET accreditation also provides an international recognition for UTK engineering programs, which is essential for international students and professionals.

The College of Engineering offers a variety of undergraduate and graduate programs in a wide range of engineering disciplines. These programs are designed to provide students with the knowledge and skills necessary to succeed in their chosen fields. The College of Engineering also offers a variety of extracurricular activities, including student organizations, research opportunities, and internships.

For further information on international education, please contact the UT Knoxville Office of International Education, 1620 Melrose Avenue, UT Knoxville, TN 37996-2500. The Office of International Education can provide information on study abroad opportunities and help students plan for their study abroad experiences.

The College of Engineering is committed to providing a safe and welcoming environment for all students. The College of Engineering has a number of resources available to support students in their academic and personal development. These resources include academic advising, career counseling, and mental health services.

The College of Engineering is part of the University of Tennessee system, which is one of the largest universities in the United States. The University of Tennessee system includes campuses in Knoxville, Memphis, Chattanooga, and Martin. The system serves over 100,000 students and offers a wide range of undergraduate and graduate programs in a variety of fields.
The requirements for the general education component of all engineering curricula are:

1. The minimum number of semester credit hours prescribed by each institution.

2. One course from the Engineering Practice in a Global/Societal Context Cluster.

3. One course from the Contemporary Issues Cluster.

4. One course from the Multicultural Studies Cluster or foreign language sequence.

5. One course from the Social Sciences Cluster.

Courses may simultaneously meet more than one requirement (e.g., a multicultural course may also satisfy the Engineering Practice in a Global/Societal Context Cluster).
Contemporary Issues Cluster
African and African-American Studies 343, 364, 420, 429, 472, 480, 483; Agriculture 333; American Studies 343, 349, 380, 422, 440; Anthropology 130, 320; Architecture 403, 404, 410; Child and Family Studies 230, 243, 420; Communications 106, 150, 420; Geology 201, 202, 210; History 380, 420, 440; Philosophy 240, 290, 342, 344, 345, 349, 390, 392, 390; Political Science 311, 390, 393; Sociology 310, 319, 330, 360, 385, 415, 414, 415, 442, 446, 462, 463, 464; Speech Communication 469; University Studies 311, 321, 362; Women's Studies 220, 230, 310, 380, 420.

Multi-disciplinary Teams Cluster

Effective Communications Cluster
English 263, 283, 345, Religious Studies 344, 345, University Studies 320.

Life-Learning Cluster
Cultural Studies in Education 300, 451; Philosophy 110, 111; Psychology 310.

Aesthetics in Design Cluster

Humanities Cluster
Any William and Mary Literature course.

Arts Cluster

Multicultural Studies Cluster
Any sequence of foreign language courses.

Social Sciences Cluster

American History Requirement. Engineering students, regardless of national origin, must take six semester hours of American history in their first year. The six semester hours may be taken in any combination of History 221 and 222, or other courses deemed suitable by the Department of History. These hours may be counted as part of the required block of humanities and social science electives.

Technical Electives. Technical electives are to be selected with the advice and approval of the student's major department. In some of the curricula the selection of a choice of electives is indicated, and regulations in regard to their selection are stated.

The Voluntary ROTC Program. Engineering students may participate in the ROTC Program. Advanced ROTC courses (300 and 400 series) may be counted as technical elective credit toward an engineering degree up to a total of six (6) semester hours. Normally, Military Science courses cannot be used as humanities/social science electives. Military students must also complete required ROTC training.

Approval of Electives and Substitutions. Each student shall develop a program of study and an academic advisor shall serve as an advisor. Any student who desires to achieve the status of a program of study no later than the beginning of the second semester shall be considered for endorsement. Any necessary additions to or substitutions in this program, or requirements including special approval, must be cleared in writing at that time, and it is such student's responsibility to see that all necessary approvals are secured. Inherence to such changes will most likely delay graduation.

ENGINEERING FUNDAMENTALS DIVISION

Professors:
J.R. Parsons (Mechanical and Aerospace Engineering and Engineering Science), Director; R.M. Bennett (Civil and Environmental Engineering), Associate Professor; M.C. Z. Hsu (Adjunct), Idah; T.D. Parsons (Adjunct), Ph.D. Tennessee; J.J. Ferrada (Adjunct), Ph.D. Tennessee; P.D. Frymier, Ph.D. Tennessee.

Associate Professors:
J.J. Arnold (Adjunct), Ph.D. Tennessee; D.G. Hulse (Adjunct), Ph.D. Tennessee; D. Houston, Ph.D. Georgia (Adjunct); F.E. Weber (Adjunct), Ph.D. Tennessee; J.E. Seade (NSF Research Associate Professor), Ph.D. Tennessee; J.M. Hughes (Distinguished Scientist), Ph.D. Texas; G.C. Frazier, Jr. (Adjunct), Ph.D. Tennessee; W.O. Elmore, Ph.D. Tennessee; C.O. Thomas (Emeritus), Ph.D. Tennessee; R.M. Culbertson (Emeritus), Ph.D. Tennessee.

Assistant Professors:
P.D. Byers (Adjunct), Ph.D. Texas; D.G. Hulse (Adjunct), Ph.D. Tennessee; J.J. Ferrada (Adjunct), Ph.D. Tennessee; M.C.Z. Hsu (Adjunct), Idah; T.D. Ferrada (Adjunct), Ph.D. Tennessee; C.O. Thomas (Adjunct), Ph.D. Tennessee; P.D. Frymier, Ph.D. Tennessee.

CHEMICAL ENGINEERING

Professors:
J.H. Masters, Ph.D. Institute of Technology; P.R. Barnholden, Ph.D. Purdue; C.H. Bell (Adjunct), Ph.D. California; R.M. Gann (Adjunct), Ph.D. Tennessee; C. Cummings (Distinguished Scientist), Ph.D. University of Texas; C. Moore (Adjunct), Ph.D. Tennessee; A. Peck (Adjunct), Ph.D. Tennessee; R.T. Peterson, Ph.D. Pennsylvania; J.J. Ferrada (Adjunct), Ph.D. Tennessee; J.J. Ferrada (Adjunct), Ph.D. Tennessee; C.O. Thomas (Emeritus), Ph.D. Tennessee; R.M. Culbertson (Emeritus), Ph.D. Tennessee.

Associate Professors:
J.W. Prados (University Professor), Ph.D. Tennessee; P.D. Frymier, Ph.D. Tennessee; D.G. Hulse (Adjunct), Ph.D. Tennessee.

Assistant Professors:
J.F. B. Boyce, Ph.D. Georgia; D.G. Hulse (Adjunct), Ph.D. Tennessee; D. Houston, Ph.D. Georgia (Adjunct); F.E. Weber (Adjunct), Ph.D. Tennessee; J.E. Seade (NSF Research Associate Professor), Ph.D. Tennessee; F.E. Weber (Chemical Engineering), Ph.D. Yoder (Agricultural and Biosystems Engineering), Associate Professor; C.O. Thomas (Adjunct), Ph.D. Tennessee.
BACHELOR OF SCIENCE PROGRAM

Chemical engineering deals with the development, design, operation, and management of plants and processes for economical, safe conversion of chemical raw materials to useful products. It is a broadly based discipline with heavy emphasis on chemistry and mathematics, with supporting study in areas such as physics, materials, and humanities.

Chemical engineering graduates of The University of Tennessee, Knoxville (UTK) possess the knowledge base, intellectual skills, and professional commitment that prepare them for innovative technical leadership, graduate study, productive service to society, and continued professional growth through lifelong learning. Preparation is based in the learning objectives identified below, regular evaluation of the achievement of these objectives, and use of evaluation results to improve the educational process.

Technical Knowledge: Graduates of the UTK chemical engineering program demonstrate the ability to apply knowledge of mathem,ics, physical sciences, chemistry, engineering to identify and solve problems dealing with material and energy balances applied to chemical processes; thermodynamics of physical and chemical equilibria; heat, mass, and momentum transfer; continuous and discrete separation operations; chemical kinetics and reactors; and process dynamics and control.

Analytical Skills: Graduates of the UTK chemical engineering program demonstrate the ability to apply the following analytical skills in the solution of engineering problems: differential and integral calculus, ordinary differential equations, linear algebra, statistics methods, and numerical techniques.

Technical Writing and Solution Skills: Graduates of the UTK chemical engineering program demonstrate the ability to formulate a technical problem in terms that permit a solution, identify the appropriate tools to address a technical problem, make simplifying assumptions required to solve a solution with an appropriate level of accuracy, and collect information needed to obtain the solution, and evaluate the reasonableness of the solution, and analysis and interpret experimental data in terms of engineering assumptions.

Information Technology Skills: Graduates of the UTK chemical engineering program demonstrate the ability to plan experiments to meet specified objectives, conduct experiments, and communicate results and analyze and interpret experimental data in terms of engineering assumptions.

Interdisciplinary Skills: Graduates of the UTK chemical engineering program demonstrate the ability to plan experiments to meet specified objectives, conduct experiments, and communicate results and analyze and interpret experimental data in terms of engineering assumptions.

Process Design and Synthesis Skills: Graduates of the UTK chemical engineering program demonstrate the ability to formulate and solve open-ended problems that require evaluation of alternative approaches to satisfy criteria; size equipment to meet process objectives; apply the principles of economic engineering to estimate capital investment and operating costs for selected process equipment and systems; and develop an appropriate flowsheet to meet a process objective; calculate the material and energy balances for a given process flow sheet; employ computer-based process design tools and techniques to optimize the design of a conceptual process with respect to specific criteria that include safety, environmental impact, operability, and economics; and analyze and compare alternative designs.

Communication Skills: Graduates of the UTK chemical engineering program demonstrate the ability to communicate effectively in writing, speaking, and listening in a variety of contexts. Specific skills include the ability to write effective reports, experimental procedures, memoranda, and similar documents; make effective oral presentations and critique presentations by others; prepare and present appropriate visual representations effectively in both written and oral presentations; and critically evaluate technical material presented in technical and scientific literature.

Teamwork Skills: Graduates of the UTK chemical engineering program demonstrate the ability to function as effective team members and leaders. This includes the ability to work effectively with other team members, employ appropriate team facilitation procedures as needed; organize and lead a team effort; and contribute individual expertise in achieving team goals.

Lifelong Learning: Graduates of the UTK chemical engineering program recognize the need for and are able to engage in lifelong learning. Students will have the ability to obtain needed information from libraries and electronic data bases; the ability to use the Internet as an effective communication and research tool; the ability to use distance learning media to independently complete required assignments; and familiarly with lifelong learning resources available through professional societies.

Professional Commitment: Graduates of the UTK chemical engineering program demonstrate high standards of professionalism in all facets of their engineering and professional responsibilities. Graduates are expected to take a course preparing them for the Fundamentals of Engineering examination, recognizing a grade based on their performance on a "mock Fundamentals of Engineering examination," and are strongly encouraged to pursue registration as Professional Engineers.

Safety, Health, and Environmental Protection: Graduates of the UTK chemical engineering program demonstrate the ability to ensure chemical process safety, including occupational safety and health and minimization of adverse environmental impact.

Understanding of the Global and Social Impact of Engineering: Graduates of the UTK chemical engineering program demonstrate an awareness of the global and social impact of engineering decisions.

Appreciation of the Cultural Heritage: Graduates of the UTK chemical engineering program demonstrate an appreciation for the global and cultural impact of engineering decisions.

The honors program encourages highly motivated students to experience a more rigorous preparation in chemical engineering. Admission is selective. Application to the honors program is made when the student applies for upper division status. Honors requirements are: credit for 3 of the 4 honors seminars (CHE 307, 308, 407 and 408), CHE 447, one of CHE 467, 477, 488 or 498 as a technical elective and CHE 483 as a chemistry option. Students interested in the honors program should consult the department's honors coordinator.

PROGRESSION TO UPPER DIVISION

Progression of chemical engineering stu- dents to departmental upper division courses is competitive and is based on capacity. Factors considered include overall grade point average, performance in selected lower division courses and evidence of satisfactory and orderly progress through the prescribed curriculum.

Upper-Division Status: A lower-division student may apply for progression to Upper-Division Status after completing CHE 200, 230, and 240 with a grade of C or better in each course and an overall GPA of 2.5 or better.

Provisional Status: Students who have completed CHE 200, 230, and 240 with an overall GPA of at least 2.1 may supply for provi- sional status. The granting of Provisional Up- per-Division Status is based on the availability of space in the departmental programs after Upper-Division Status students have been ad- corrected. Provisional students are required to demonstrate the ability to perform outstandingly in upper division courses and to continue with upper division classes depends on satisfactory performance in the Upper-Division status. Any student with an overall GPA below 2.1 will be denied to upper division Chemical Engineering courses. Students who have not been admitted to Upper-Division or Provisional Status will be dropped from upper-division depart- mental class rolls.

Transfer students at the upper-level division are admitted on a Provisional Status basis only.

GRADUATE STUDY PROGRAM

Graduate study in chemical engineering at the University of Tennessee, Knoxville is designed to prepare students for careers as researchers, teachers, and consultants in industry and government. The University's Graduate School operates a Resident Graduate Program at Oak Ridge National Laboratory. See the Graduate Catalog for detailed information.

CIVIL AND ENVIRONMENTAL ENGINEERING

Professors: G.D. Reed (Condon Professor and Head), Ph.D., P.E. Ariasus, Ph.D. J. R. Bennett, Ph.D., P.E., E. E. Burke (Fred N. Peckles Professor), Ph.D., P.E., Illinois; A. Chattehi, Ph.D., P.E., University of Kentucky; W. T. Davis, Ph.D., Duke University; B. T. D. Vailas, Ph.D., The Pennsylvania State University; J. T. Deschante, Ph.D.,
The Department offers a Bachelor of Science degree with a major in Civil Engineering, accredited by the Accreditation Board for Engineering and Technology (ABET). Undergraduate Education Mission The Department strives: to provide cooperative education and internship opportunities in the practice of Civil Engineering; to foster strong bonds of faculty-student interaction through seminars, extracurricular activities, personal advising and consultation. Educational Objectives To ensure a high quality and stimulating learning environment, the department strives to do the following:\n\n- Foster highly qualified and motivated students, providing a highly competent faculty, dedicated to undergraduate instruction;\n- Control class size to facilitate a high-quality learning environment involving small collaborative teams, laboratory and field experiences, as well as small group seminars and independent research activities;\n- Provide opportunities for faculty-student interaction through seminars, extracurricular activities, personal advising and consultation.

To ensure that students have exposure to the practice of Civil Engineering, the department strives: to provide cooperative education and internship opportunities; to encourage professional society participation; to maintain an external advisory board of practitioners to assist with the development of the curriculum; to provide a minor design project including meaningful engineering design experiences; to maintain national engineering accreditation; and to maintain high passing rates on the first professional licensing exam.

The department strives to ensure graduates will compete favorably in the marketplace for opportunities in the practice of civil engineering and/or graduate education by: providing professional outcomes to achieve proficiency in the five areas listed in the mission statement; focusing an appreciation for professional development and life-long learning; providing an undergraduate education recognized for its excellence both academically and non-academically; and developing professional development opportunities for continuing education practice.

The curriculum in Civil Engineering provides training in fundamental engineering sciences and in basic fields of application. Technical electives are available in construction, environmental engineering, geotechnical, material, structural, transportation, and water resources. Majors are required to maintain a cumulative grade point of at least 2.00 in all Civil Engineering and Environmental Engineering courses taken at the University of Tennessee, Knoxville, and, in order to satisfy the graduation requirements, no more than six hours of Civil and Environmental Engineering courses in which a D is the highest grade earned may be counted toward graduation.

Electives Electives are chosen to meet student career objective and program accreditation requirements. Majors should consult with their advisor and have their selections pre-approved. A student must have a GPA of 2.0 or higher for the 600 level courses for undergraduate credit.

Environmental Engineering Minor The College of Engineering offers a minor in Environmental Engineering to those undergraduate students whose academic history provides the prerequisites for the courses required by the minor. The minor requires the completion of a minimum of 21 credits in course work that build on the foundation of an environmental engineering perspective. Some of the users included in this minor may also satisfy a requirement for a major. Students are advised to take the first professional design course in Environmental Engineering at The University of Tennessee, Knoxville as the M.S. in Environmental Engineering which builds on the minor.


Choose One: GEO 486 or CHEE 486 Hydrology GEO 486 or CHEE 486 Hydrology or Soil Hydrology Environmental Ethics

Choose One: CE 485 Environmental Ethics Required: CE 485 or CE 485 Air & Waste Management

Advising Students are asked to file their intent to minor with the Office of the Department of Civil and Environmental Engineering, 223 Perkins Hall. The student's home department advisor will then be supplied with the information about the Minor requirements to assist with prerequisite sequencing. A copy will be kept with undergraduate records so the Minor, once completed, will be shown on the student's transcript.

Masters of Science Program The Graduate program in Civil Engineering and Environmental Engineering leading to the degrees of Master of Science is offered to graduates of recognized undergraduate education.

The general requirements for the masters' degrees are stated in the Graduate Catalog.

Doctoral Program Graduate work leading to the degree of Doctor of Philosophy with a major in Civil Engineering is offered. Major fields of study include environmental engineering, geotechnical materials, structural engineering, transportation, and water resources.

The general requirements for the doctoral degree are stated in the Graduate Catalog.

Electrical and Computer Engineering

Programs: Professors: M.A. Karim, Ph.D., Alabama; M. Abd, Ph.D., Tennessee; L.D. Bredt, Ph.D., Massachusetts Institute of Technology; J.R. Roth, Ph.D., Cornell. Assistant Professors: T.S. J. Bishop, Ph.D., Case Institute of Technology; D.R. Rosenburg, Ph.D., New York. Emeritus Professors: J. M. Roberts, Ph.D., Tennessee; J. R. Roth, Ph.D., Cornell.

Computer Engineering

Programs: Professors: T.P. J. Bishop, Ph.D., Georgia Institute of Technology; L. D. Bredt, Ph.D., Massachusetts Institute of Technology; J.R. Roth, Ph.D., Cornell. Assistant Professors: T.S. J. Bishop, Ph.D., Case Institute of Technology; D.R. Rosenburg, Ph.D., New York. Emeritus Professors: J. M. Roberts, Ph.D., Tennessee; J. R. Roth, Ph.D., Cornell.

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Computers and Information Science

Programs: Professors: T.P. J. Bishop, Ph.D., Georgia Institute of Technology; L. D. Bredt, Ph.D., Massachusetts Institute of Technology; J.R. Roth, Ph.D., Cornell. Assistant Professors: T.S. J. Bishop, Ph.D., Case Institute of Technology; D.R. Rosenburg, Ph.D., New York. Emeritus Professors: J. M. Roberts, Ph.D., Tennessee; J. R. Roth, Ph.D., Cornell.

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Masters of Science Program The Graduate program in Civil Engineering and Environmental Engineering leading to the degrees of Master of Science is offered to graduates of recognized undergraduate education.

The general requirements for the masters' degrees are stated in the Graduate Catalog.

Doctoral Program Graduate work leading to the degree of Doctor of Philosophy with a major in Civil Engineering is offered. Major fields of study include environmental engineering, geotechnical materials, structural engineering, transportation, and water resources.

The general requirements for the doctoral degree are stated in the Graduate Catalog.
The Electrical Engineering program is comprehensive and research oriented. Comprehensive courses are designed to provide students with a broad background in electrical engineering and related fields. The program is structured to provide a strong foundation in both the theory and practice of electrical engineering. Students have the opportunity to specialize in areas such as power systems, signal processing, control systems, and communications. The Electrical Engineering program is designed to be flexible, allowing students to tailor their studies to their specific interests. The program requires students to complete a series of core courses and electives that cover a range of topics in electrical engineering. The program also includes a capstone design project, which allows students to apply their knowledge and skills to a real-world problem. Overall, the Electrical Engineering program prepares students for a variety of careers in the field.
The objectives of the Industrial Engineering Program include enabling the students to obtain:

(1) An understanding of and ability to apply the following concepts to the multi-disciplinary problems associated with the production, maintenance, and delivery of goods and services; fundamental human factors which influence engineering design, the economic analysis of alternative design choices, introductory statistics.

(2) An understanding of the principles, methods, science, and technologies, and an ability to analyze and control complex systems, and the design and installation of information acquisition and control systems.

(3) An ability to communicate effectively, both orally and in writing, to function on multi-disciplinary teams, to have a knowledge of pertinent contemporary issues, and to recognize the need for a commitment to life-long learning.

This curriculum emphasizes the knowledge and skills necessary to design integrated systems of people, materials, equipment, and energy; such that the overall systems functions at an optimal level and such that the needs of human components of the system are met. The goals, broad base in engineering, combined with education in applying engineering methodology to traditionally non-engineering problem areas as provided through the Industrial Engineering curriculum, lead to participation by Industrial Engineers in an unlimited range of fields; including, among others, retail distribution, banking, health-care delivery, corporate management, municipal management, food industry, as well as traditional areas of manufacturing.

OUTCOMES
The eleven program outcomes listed in the College of Engineering section on National Accreditation are the accepted outcomes of the Industrial Engineering Department.

UNIVERSITY OF TENNESSEE GENERAL EDUCATION REQUIREMENTS
Industrial Engineering students are required to take Economics 201 and two English electives. They must select the remainder of their humanities/social science elective courses to satisfy the University of Tennessee General Education Requirements in accordance with the established College of Engineering Policy. An Industrial Engineering advisor will assist the student in selecting courses to meet these requirements.

GRADUATE STUDY PROGRAMS
The Department of Industrial Engineering offers a graduate program leading to the Master of Science degree in Industrial Engineering, concentrations in traditional industrial engineering, engineering management, and manufacturing systems engineering. The Ph.D. with a major in Engineering Science is available through the Department of Engineering Science and Mechanics with a specialization in industrial engineering. Students who enroll in the Master of Science degree may select a concentration in either Industrial Engineering, Engineering Management, or Manufacturing Systems Engineering. Admission is open to graduates of ABET-approved undergraduate programs in industrial engineering, or to graduates of other technical curricula who satisfy prerequisites depending on their academic background and industrial experience. Policies concerning prerequisites and requirements will be determined by the Industrial Engineering faculty.

NOTE: Any 400-level course required in the Bachelor of Science in Industrial Engineering program at UT Knoxville may not be used for graduate credit in the M.S. degree program.

INDUSTRIAL ENGINEERING AND MANUFACTURING SYSTEMS ENGINEERING
Under the Industrial Engineering and Manufacturing Systems Engineering Concentration, students may select either the thesis or non-thesis option. The thesis option requires 24 hours of coursework and 6 hours thesis. The non-thesis option requires 30 hours of coursework plus a 3-hour industrial design project.

Depending upon a student’s career goals and professional background, courses in engineering, mathematics, and science will be required. In addition to the concentration in manufacturing systems engineering, a dual degree program, requiring a total of 67 semester hours of coursework, is available in manufacturing, and leads to an MBA and an MS degree. It is also possible in either concentration for a student to select minors in engineering, mathematics, psychology, business, computer science, statistics, or economics.

ENGINEERING MANAGEMENT
The Engineering Management Concentration has an additional admission requirement of two years’ industrial experience as a practicing engineer or scientist, or current full-time employment in an appropriate engineering or applied science position. The program is non-thesis and requires 33 hours of coursework plus a 3-hour capstone project.

MATERIALS SCIENCE AND ENGINEERING

Assistant Professor: K.M. Kim, Ph.D. Delaware.

BACHELOR OF SCIENCE PROGRAM
Materials Science and Engineering is concerned with the science and technology needed to develop and apply materials for the benefit of society. The undergraduate program is designed to prepare students to undertake materials science and engineering careers or to enter graduate programs in the science and engineering disciplines. In order to accomplish this overall goal, the program has a core curriculum of course work for the degree of B.S. in Materials Science and Engineering.
1. To provide students with a knowledge of the fundamentals of appropriate physical and chemical reactions, mathematics, and experimental science, and to demonstrate the application of these principles to solving engineering problems with an emphasis on the materials processing, structure, properties, and performance. This knowledge base includes the development of analytical and experimental skills.

2. To provide students with experiences in design and materials selection such that they can design components, systems, or processes with consideration of economic, safety, environmental, and social issues.

3. To develop professional skills in such areas as written and oral communication, problem-solving, and working in diverse teams that prepare graduates to practice materials engineering in contemporary and global environments.

To perform satisfactorily in upper-division courses, students are required to demonstrate their ability to have been accommodated. Provisional status is granted for provisional status. The granting of provisional upper-division status is based on the availability of space in the departmental program after upper-division status students have been accommodated. Provisional upper-division status students may also satisfy requirements for the student's major.

Students may enroll in the minor program by completing a form at the office of the Department of Materials Science and Engineering, 434 Dougherty Engineering Building. A copy of the completed enrollment form and information on the minor requirements will be forwarded to the student's home department advisor. A copy of the form will also be filed with the Office of Records and Registration so that upon completion, the minor will be shown on the student's transcript.

Course requirements:

Required courses:

Materials Science and Engineering 201 and 380.

Choose at least one:

- Materials Science and Engineering 322, 340, and 472.
- Materials Science and Engineering 322, 340, and 472.

Choose at least three, at least one of which must be at the 400 level:

Any of the Materials Science and Engineering 300-400 courses.

GRADUATE STUDY

Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy are offered. Detailed information on graduate programs is available by contacting the Department of Materials Science and Engineering.

GRADUATE STUDY PROGRAMS

Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy with a major in Metallurgical Engineering or Polymer Science are offered. Information on graduate programs in Materials Science and Engineering and the requirements for the M.S. and Ph.D. degrees are given in the Graduate Catalog.

MECHANICAL AND AEROSPACE ENGINEERING AND ENGGINEERING SCIENCE

Professors:


Assistants:


Graduate faculty includes:

Junior Professors:


Assistant Professors:

Aerospace Engineering for students in other programs culminates in a major in aerospace education. These include guidance, control, environmental, ramjet, rocket, turbojet, testing, and applied research associated with space engineering. The Aerospace Engineering degree program is a flexible course of study with elective options available to satisfy individual interests and career objectives. The program provides students an opportunity for an education with breadth in engineering science, mathematics, and physical or biological science. The curriculum is rigorous, non-traditional, and designed to nourish creative talents. Selected groups of technical electives provide an opportunity to develop special interests that cannot be accommodated in other traditional engineering disciplines. Examples of special interest elective groups available are biomedical engineering, engineering mechanics, computational mechanics, and the mechanics of engineering materials. The program can include courses required for entrance into most medical schools. The undergraduate program in Engineering Materials gives the student a mechanics oriented program in the use of materials for the design of engineering structures. The student can learn to analyze structures for such phenomena as fracture, fatigue, and seismic. By choosing the technical electives to place an emphasis on areas of special emphasis, the student can emphasize metals, polymers, or composites and materials.

The educational objectives of the Engineering Science program are:
- To prepare students with a solid foundation in mathematics, science, and engineering sciences, and engineering design suitable for a variety of interdisciplinary fields;
- To provide students with education and problem-solving experience in computational mechanics;
- To prepare students for professional careers in interdisciplinary fields by developing teaming abilities and communication skills;
- To provide multifaceted opportunities for the development and cultivation of lifelong learning skills, professionalism, ethics, and the nourishment of creative talents.

ACADEMIC COMMON MARKET
An agreement among states for allowing academic programs allows legal residents of states to enroll to certain programs at UT, Knoxvile on an in-state tuition basis. The undergraduate program in Aerospace Engineering is available on an in-state tuition basis to students from Alabama, Arkansas, Kentucky, Louisiana, and West Virginia.

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PROGRESSION TOWARD GRADUATION
The freshman year curriculum is common to all engineering majors. The sophomore curriculum is common to Aerospace Engineering students in the department. The first two years are considered to be Lower Division. Students are in the remaining years upper division. Upon completion of the lower division coursework the student must apply for progression to the upper division in order to continue in the department. Students allowed to progress may in the second year be in departmental division and must complete the lower curriculum.

Full Status: A Lower Division student may apply for progression to Upper Division after completing 47 semester hours of Upper Division coursework. The upper curriculum course work with an overall GPA of at least 2.4.

Provisional Status: Students who have completed 47 semester hours of Upper Division engineering curriculum course work with an overall GPA between 2.0 and 2.4 may apply for Provisional Status. The granting of Provisional Status is based on the availability of space in departmental programs after full status students have been accommodated. Provisional Status students are required to demonstrate their ability to perform satisfactorily in Upper Division by maintaining a minimum GPA of 2.0 in the first 12 semester hours of 300 level required engineering courses. Award of Upper Division Full Status is dependent upon this performance.

Students with an overall GPA less than 2.0 in Upper Division coursework will not be admitted to Upper Division, and their status will be changed to Provisional Status.

Transfer Students: Students transferring more than 26 hours from another institution are considered Transfer Students. Students transferring more than 26 hours will be admitted to Upper Division if eligible, with Provisional Status.

Loses of Full Status: Full Status students are expected to maintain a overall GPA of 2.0 and a GPA of 2.0 in departmental courses. Loss of Full Status will result in a review of the student's program and possible loss of Full Status.

Graduation Requirements: A minimum cumulative GPA of 2.0 in all departmental courses is required for graduation. This is in addition to the University's graduation requirements.

GRADUATE STUDY
Graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in Aerospace Engineering are available to students majoring in Aerospace Engineering. Graduate programs are also available in several interdisciplinary areas. These include graduate courses in areas such as atmospheric science, engineering mechanics, environmental engineering, and flight mechanics. Selected courses are also available in the Master of Science in Engineering program.

Aerospace Engineering for students in other engineering programs is also offered. The educational objectives of the Aerospace Engineering program are:
- To provide students with a comprehensive education that includes in-depth instruction in the design, development, and analysis of aerospace systems;
- To prepare students for professional careers in Aerospace Engineering by developing the skills pertinent to problem-solving, analyzing, design, and those personal skills required for teamwork and effective communication;
- To provide adequate opportunities to develop and synthesize lifelong learning skills, individual professionalism and ethics, and to nourish creative talents.

The Engineering Science degree program is a flexible course of study with elective options available to satisfy individual interests and career objectives. The program provides students an opportunity for an education with breadth in engineering science, mathematics, and physical or biological science. The curriculum is rigorous, non-traditional, and designed to nourish creative talents. Selected groups of technical electives provide an opportunity to develop special interests that cannot be accommodated in other traditional engineering disciplines. Examples of special interest elective groups available are biomedical engineering, engineering mechanics, computational mechanics, and the mechanics of engineering materials. The program can include courses required for entrance into most medical schools. The undergraduate program in Engineering Materials gives the student a mechanics oriented program in the use of materials for the design of engineering structures. The student can learn to analyze structures for such phenomena as fracture, fatigue, and seismic. By choosing the technical electives to place an emphasis on areas of special emphasis, the student can emphasize metals, polymers, or composites and materials.

The educational objectives of the Engineering Science program are:
- To prepare students with a solid foundation in mathematics, science, and engineering sciences, and engineering design suitable for a variety of interdisciplinary fields;
- To provide students with education and problem-solving experience in computational mechanics;
- To prepare students for professional careers in interdisciplinary fields by developing teaming abilities and communication skills;
- To provide multifaceted opportunities for the development and cultivation of lifelong learning skills, professionalism, ethics, and the nourishment of creative talents.

ACADEMIC COMMON MARKET
An agreement among states for allowing academic programs allows legal residents of states to enroll in certain programs at UT, Knoxville on an in-state tuition basis. The undergraduate program in Aerospace Engineering is available on an in-state tuition basis to students from Alabama, Arkansas, Kentucky, Louisiana, and West Virginia.
NORTHERN ENGINEERING


Associate Professors: T.W. Kerlin, Ph.D. Tennessee; R.E. Perez, Ph.D. P.Tennessee; J.T. Mihalczo (Part-time), Ph.D. P.Tennessee; L.F. Miller, Ph.D. California, P.E.; T.E. Shannon, Ph.D. Tennessee; R.E. Utng (Distinguished Professor) Ph.D. Iowa State, P.E.; B.R. Urdupety, Ph.D. California, P.E.

Research Professor: F.R. Mynatt, Ph.D. Tennessee.

Research Associate Professor: J.W. Hines, Ph.D. Ohio State.

GENERAL

Nuclear Engineering is the engineering discipline that deals with the application of nuclear and atomic processes for the benefit of mankind. Radiological Engineering is a specialty of Nuclear Engineering that focuses on biological applications. Some examples of nuclear and Radiological Engineering are production of electric power with essentially no air pollution, production of isotopes for medical and industrial uses, and development of radiation-based methods for testing materials and other applications. The mission of the Nuclear Engineering Department is to:

1. Produce high-quality nuclear and radiological engineering graduates from undergraduate curricula in engineering, physics, chemistry, or mathematics. Each applicant will be advised as to the necessary prerequisite courses before entering the program. The general requirements of the major's degree are summarized in the Graduate Catalog.

DOCTORAL PROGRAM

A graduate program leading to a degree of Master of Science is available to graduate students who have completed the curriculum requirements. The general requirements of the major's degree are summarized in the Graduate Catalog.

ACADEMIC COMMON MARKET

A curriculum among states for sharing academic programs allows legal residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. The undergraduate program in Nuclear Engineering is available on an in-state basis to students from Alabama, Arkansas, Delaware, Kentucky, Louisiana, Mississippi, South Carolina, Virginia and West Virginia.

BACHELOR OF SCIENCE PROGRAM

The program for the B.S. degree in Nuclear Engineering is nationally accredited by the Accreditation Board for Engineering and Technology (ABET) which is described earlier in this catalog. The educational objectives of the B.S. program are to:

1. Provide students with fundamental knowledge in mathematics, computer science, the basic sciences, and the engineering science that is necessary to solve state-of-the-art problems in nuclear and radiological engineering.

2. Provide students with a real-world design and analysis experience in nuclear and radiological engineering that shall include environmental, societal, safety, and economic considerations.

3. Provide students with appropriate skills in oral and written communication, teamwork, laboratory work, problem solving and the use of modern engineering tools that will prepare them to work productively in a contemporary and global environment.

4. Provide students with a diverse general education in the humanities, ethics, and social sciences to complement their technological education in order to understand and appreciate the importance of ethics in society and in personal development.

5. Foster a genuine desire for life-long learning in students.

Students majoring in Nuclear Engineering take courses in the basic sciences, engineering fundamentals, computer science, humanities, and special areas of nuclear engineering (including fusion system design and safety), radiation transport and shielding, heat transfer and fluid power, materials science, fuels and reactor controls; fuel cycle and waste management; and nuclear physics. Nuclear and radiological engineers may concentrate in Radiological Engineering by substitution of three courses. The Radiological Engineering concentration satisfies most of the requirements of pre-med, pre-vet, and pre-dentistry programs.

CURRICULA

The following freshman year curriculum is common to all engineering programs except Aerospace Engineering (Engineering Physics students should see the curriculum that follows.)

AEROSPACE ENGINEERING

Requirements

Mathematics 141, 142 ...............................................8
Physics 231, 232 .....................................................7
Chemistry 120, 130 ..................................................8
Engineering Fundamentals 101, 102 ..........................12
Total: 34 hours

SOPHOMORE

Mathematics 301, 341 ..................................4
Physics 251, 252 ..................................................7
Engineering Science 301, 301 ..........................4
Chemistry 301, 301 ..................................................8
Electrical Engineering 301, 301 ..........................4
Electrical Engineering 302, 302 ..........................4
Mechanical Engineering 353, 383, 383 ..........................9
Aerospace Engineering 349, 351, 351 ..........................9
Aerospace Engineering 352, 382, 382 ..........................9
Electrical Engineering 349, 349 ..................................8
Mechanical Engineering 352, 352 ..........................4
Aerospace Engineering 349, 349, 349 ..........................9
Total: 24 hours

JUNIOR

Mathematics 341, 342 ..................................4
Physics 351, 351 ..................................................7
Chemistry 302, 302 ..................................................8
Aerospace Engineering 349, 349, 349 ..........................9
Electrical Engineering 301, 301 ..........................4
Electrical Engineering 302, 302 ..........................4
Mechanical Engineering 352, 352 ..........................4
Aerospace Engineering 349, 349, 349 ..........................9
Total: 24 hours

SENIOR

Mathematics 343, 343 ..................................4
Physics 351, 351 ..................................................7
Chemistry 304, 304 ..................................................8
Aerospace Engineering 349, 349, 349 ..........................9
Electrical Engineering 301, 301 ..........................4
Electrical Engineering 302, 302 ..........................4
Mechanical Engineering 352, 352 ..........................4
Aerospace Engineering 349, 349, 349 ..........................9
Total: 24 hours

Total: 72 hours

Note: Ph.D. students should see the Graduate Program Handbook for specific requirements.

General Education Electives

The following general education requirements apply to all engineering programs except Aerospace Engineering:

Mathematics 341, 342 ..................................4
Physics 351, 351 ..................................................7
Chemistry 302, 302 ..................................................8
Aerospace Engineering 349, 349, 349 ..........................9
Electrical Engineering 301, 301 ..........................4
Electrical Engineering 302, 302 ..........................4
Mechanical Engineering 352, 352 ..........................4
Aerospace Engineering 349, 349, 349 ..........................9
Total: 24 hours

General Education Electives

The following general education requirements apply to all engineering programs except Aerospace Engineering:

Mathematics 341, 342 ..................................4
Physics 351, 351 ..................................................7
Chemistry 302, 302 ..................................................8
Aerospace Engineering 349, 349, 349 ..........................9
Electrical Engineering 301, 301 ..........................4
Electrical Engineering 302, 302 ..........................4
Mechanical Engineering 352, 352 ..........................4
Aerospace Engineering 349, 349, 349 ..........................9
Total: 24 hours

Total: 72 hours

Note: Ph.D. students should see the Graduate Program Handbook for specific requirements.
CHEMICAL ENGINEERING

Sophomore
- Chemical Engineering 220, 230, 240, 250: 14
- Mathematics 210, 211, 212: 12
- Chemistry 101, 102, 103, 104: 16
- General Education Electives: 8

Junior
- Chemical Engineering 301, 310, 340, 350, 360, 380: 12
- Physics 231, 232: 6
- Chemistry 202: 4
- Chemistry 301, 302, 303, 304: 12
- General Education Electives: 6
- Senior
- Chemical Engineering 401, 410, 420, 447, 450, 460: 25
- Technical Elective: 3
- General Education Electives: 6

Total: 132 hours

CIVIL ENGINEERING

Sophomore
- Mathematics 200, 231, 241: 8
- Physics 231: 3
- Statistics 201: 3
- Senior Engineering 200: 8
- General Education Electives: 6

Junior
- Civil Engineering 201, 202, 210, 211: 15
- General Education Electives: 6
- Senior
- Civil Engineering 301, 302, 303, 304: 12
- General Education Electives: 6

Total: 132 hours

ELECTRICAL ENGINEERING

Sophomore
- Electrical Engineering 201, 209: 8
- Mathematics 211: 5
- Computer Science and Engineering 201: 3
- Physics 231: 3
- Electrical Engineering 231, 232: 5
- General Education Electives: 6
- Mathematics 241: 4
- Physics 232: 3

Junior
- Electrical Engineering 310, 311, 313, 321, 322: 15
- General Education Electives: 3
- Senior Engineering 202: 6
- Mechanical Engineering 201: 3
- Electrical Engineering 242, Engineering 301, 241: 15
- General Education Electives: 6

Total: 134 hours

Students must meet the design, depth, and breadth requirements of the major in their selection of courses to satisfy the design requirement. Design 403, 404: Senior Design.

ENGinneering PHYSICS

Freshmen
- Physics 101, 102: 6
- Mathematics 124, 125: 8
- Freshmen General Education: 1

Sophomore
- Physics 230, 231, 232: 10
- Mathematics 121, 122, 123, 124: 10

Junior
- Physics 311, 312: 6
- Physics 314, 315: 6
- Physics 351, 352: 6
- Physics 361, 362: 6
- Physics 371, 372: 6
- Physics 381, 382: 6
- Engineering/Technical Electives: 8
- General Education Electives: 6

Senior
- Physics 411, 412: 6
- Physics 413, 414: 6
- Physics 421, 422: 6
- Physics 431, 432: 6
- Physics 441, 442: 6
- Engineering/Technical Electives: 10
- General Education Electives: 6

Total: 134 hours

ENGINEERING SCIENCE

Sophomore
- Mathematics 201, 202, 203: 8
- Physics 231: 3
- Engineering Physics 131, 132: 6
- Engineering Science 231, 232: 8
- General Education Electives: 6

Junior
- Engineering Physics 331, 332: 4
- Engineering Science 331, 332: 8
- General Education Electives: 6
- Technical Electives: 8

Senior
- Engineering Physics 431, 432: 4
- Engineering Science 431, 432: 8
- General Education Electives: 6

Total: 133 hours

ENGINEERING SCIENCE: BIOMEDICAL ENGINEERING CONCENTRATION

Sophomore
- Mathematics 201, 202, 203: 8
- Physics 231: 3
- Engineering Science 231, 232, 233: 9
- General Education Electives: 6

Junior
- Electrical Engineering 301: 3
- Engineering Science 331, 332: 4
- General Education Electives: 6
- Technical Electives: 6

Senior
- Engineering Science 431, 432, 433: 9
- General Education Electives: 6
- Technical Electives: 6

Total: 135 hours

Industrial Engineering

Sophomore
- "General Education Electives: 6
- Mathematics 200, 231, 241: 8
- Physics 231: 3

Junior
- Engineering Science 201: 8
- "General Education Electives: 6

Senior
- Industrial Engineering 400, 410, 420: 6
- "General Education Electives: 6

Total: 150 hours

"The total credit hours of electrical engineering courses must be at least one-third of the total credit hours in all courses taken towards the major.

MATERIALS SCIENCE AND ENGINEERING

Sophomore
- Materials Science and Engineering 201, 202: 8
- Physics 231, 232: 7
- "General Education Electives: 6

Junior
- Chemical Engineering 200, 240: 6
- "General Education Electives: 6

Total: 132 hours

College of Engineering 132
### Junior
- **Materials Science and Engineering 290, 291, 300, 301, 302, 304, 305, 360**
- **Chemistry 473**
- **Electrical Engineering 351**
- **Engineering Science 321**
- **General Education Electives**
- **Technical Electives**
- **General Education Electives**

**Total: 133 hours**

*General Education courses must include Economics 201 and one course from the Effective Communications Cluster in addition to the requirements described under Approved General Education Electives.

**MSE electives:** 422, 429, 443, 444, 470, 472, 474, 475, 495, 496.

### Mechanical Engineering

**Sophomore**
- **Mathematics 241, 231, 200**
- **Physics 231, 232**
- **Engineering Science 231, 321**
- **Materials Science and Engineering 201**
- **Mechanical Engineering 331**
- **Economics 201**
- **General Education Electives**
- **Junior**
- **Physics 341**
- **Nuclear Engineering 301, 304, 342, 351, 470**
- **Materials Science and Engineering 201**
- **General Education Electives**
- **Senior**
- **Industrial Engineering 405**
- **Nuclear Engineering 401, 403, 404, 405, 421, 472**
- **Technical Electives**
- **General Education Electives**

**Total: 138 hours**

*General Education Electives must include one course from the Effective Communications Cluster.

**Technical Electives** are selected from upper-division mathematics and engineering courses and must be pre-approved by the department.

### Nuclear Engineering: Radiological Engineering Concentration

**Sophomore**
- **Math 200, 221, 241**
- **Physics 221, 222**
- **Nuclear Engineering 201, 203**
- **Computer Science 102**
- **General Education Electives**

**Total: 131 hours**

*General Education electives must include one course from the Effective Communications Cluster.

**Technical electives** are selected from upper-division mathematics, chemistry, and engineering courses and must be pre-approved by the department. Pre-Med, pre-vet and pre-dentistry students must take Chemistry 360 and also Chemistry 369.
UNDERGRADUATE STUDY IN HUMAN ECOLOGY

Correlates in the following majors lead to a Bachelor of Science degree in Human Ecology:

- Human Resource Development;
- Child Development;
- Community Health Education;
- Family Studies;
- Nutrition;
- Recreation and Tourism Management;
- Retailing and Consumer Sciences;
- The curriculum in:
  - Hotel and Restaurant Administration
  - leads to a Bachelor of Science in Hotel Restaurant Administration.

COLLEGE POLICIES

Students working toward degrees must complete the last 30 hours of work (two semesters) at UT Knoxville, in a degree program within the College of Human Ecology. Forty-eight hours must be earned in 300-400 level courses. Usual course loads of College majors are 15-16 hours; course loads over 18 hours must be approved by the Dean’s Office at the time of registration. Prospective transfer students are advised to plan a total college program before starting any college-level work to achieve maximum use of credit and sequence of course work.

The Satisfactory/No Credit option applies only to non-required elective hours. No course that is a part of the specific requirements of the student’s major can be taken under this option unless the course is only offered S/NC. Specified electives required by certain departmental requirements cannot be taken as S/NC. A student who wishes to take a S/NC course must indicate this at the time of registration.

Students wishing to transfer to the College must have at least a 2.0 grade point average on a 4.0 scale. Progression requirements for each program must also be met.

Students are assigned an advisor in the specific program area. New transfer students are advised initially by the College Advising Center and then are assigned departmental program advisors. Students meet with academic advisors each semester. These conferences are designed to help students define choices to achieve academic success; identify career choices inevitably; attain a balance between general education and professional studies; and, identify problems and potential solutions early in the academic program.

All students in the College take CFS 220: Marriage and Family: Roles and Relationships, and Human Ecology 410: Human Ecological Systems. These courses help students understand the nature of the professions and its role in serving individuals and families in the environment in which they live and to integrate this knowledge into their areas of specialization.

PROGRESSION REQUIREMENTS

Most programs in the College have specific requirements for progression. Child Development Major For progression into the child development major, students must meet the following criteria:

STEP 1: At least a cumulative GPA of at least 2.3/4.0 (transfer hours included) for admission to Teacher Education for students interested in Early Childhood Education licensure program.

STEP 2: 1. At least 60 semester hours (90 hours required for review in the Early Childhood Education licensure program);
2. At least a minimum grade of “C” in all required CFS courses and Education courses.
3. Earn a cumulative GPA of at least 2.3/4.0 (transfer hours included); cumulative GPA of 2.7/4.0 required for admission to Teacher Education for students interested in Early Childhood Education licensure program.
4. Successfully complete an interview, which includes evaluation of written and oral communication skills, with the Early Childhood Education Review Panel or the Board of Admissions in the College of Education during the first methods course (CFS 350) (See Admission Requirements under College of Education for progression into Student Teaching, students must meet the following criteria:...
STEP 3:
1. Progress into the major.
2. Complete CFS 110, 211, 330 and 351.
3. Complete at least 90 hours (senior standing).
4. Complete an application to student teaching (CFS 350).
5. Attach a grade of "C" or better in all required CFS courses and Education courses.
6. Earn and maintain a cumulative GPA of at least 2.5.4.0; cumulative GPA of 2.74.0 required for students in Early Childhood Education licensure.
7. Attend successful participation experiences and satisfactory evaluations in CFS 380 and 390.

COMMUNITY HEALTH EDUCATION MAJOR
For graduation in the Community Health Education major, students must earn a grade of "C" or better in the following courses: English 101, 102, Math 119, 123 and 125; Nutrition 100, 101, HRA 120, 220.

After completing 30 semester hours (UT or transfer hours), progressing into the CFS program (upper division courses) requires a minimum of UT cumulative GPA of 2.3 (and a ranking (by GPA) in the top 30 among students registering for HRA 320 in any given semester. For ranking purposes, transfer students may request calculation of GPA based on courses required in HRA curriculum.

Students must maintain all prerequisites and achieve a "C" or better in all required HRA courses.

NUTRITION MAJORS
Students should apply for progression after completing NTR 302 and CFS 350 and prior to entering NTR 313. Applications for progression are available in the departmental office. For progression into the major, students must meet the following criteria:
1. Cumulative grade point average 2.4 or greater.
2. Grade of "C" or better in each required NTO core course.

For graduation, students must earn a grade of "C" or better in all required Nutrition courses.

CONSUMER AND TOURISM MANAGEMENT MAJOR
1. Students must achieve and maintain a minimum of a 2.3 overall GPA for progression into and retention in the major.
2. Students must have a cumulative GPA of 2.3 in order to enroll in HLS 310 and 390.
3. Students must complete HLS 230 and 390 before enrolling in 390.

RETAIL AND CONSUMER SCIENCES MAJOR
1. Students must achieve and maintain a minimum of a 2.3 overall GPA for progression into and retention in the major.
2. Students must have a cumulative GPA of 2.3 in order to enroll in HLS 310 and 390.
3. Students must complete HLS 230 and 390 before enrolling in 390.

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CHILD AND FAMILY STUDIES


Associate Professors: J.E. Allen, Ph.D. Purdue; J. Mak, Ph.D. Minnesota; M. Minor, Ph.D. Minnesota; J. Smith, Ph.D. Minnesota; J. Torgerson, Ph.D. Virginia Tech.

Assistant Professors: C. Caron, E.D. Minnesota; M. Growe, Ph.D. Virginia Tech; L. Morris, Ph.D. Tennessees.

The Department of Child and Family Studies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family studies. The Department of Child and Family Studies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective family dies has a dual mission for preparing both competent professionals and effective/limitations of children facing challenges and families in today's complex society.

Within the curricula, undergraduate majors must meet the following requirements: to meet the educational needs of undergraduate students whose career plans focus on early childhood education.

Students interested in early childhood education are encouraged to review course offerings and to seek advice from the Child Development Program.

The Family Studies major is designed to meet the educational needs of undergraduates whose career plans focus on early childhood education. Related opportunities may be found in agencies delivering services to young children and their families, programs that include children with special needs, hospital programs directed to the particular needs of young children, and family-related fields that recognize distinct developmental needs of children.

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All others must select one of the following sequences: 

*If 200 level history is not selected the student should take a Human Development Pod; replace with 3 hours general electives.

**Not more than 12 hours may be substituted in any one pod.

***Students select one form pod at least 3 hours in the following disciplines, or cross-listed courses: History, Political Science, Psychology, Sociology, English, Speech, and/or Theatre.**

Associate Professors: G. Bhat, Ph.D. Georgia Tech; M.D. Bharat, Ph.D. Indiana; C. Costello, Ph.D. Tennessee; N. Farah, PhD, Ph.D. North Carolina State: A. Farnhurst, Ph.D. Oklahoma State; Kan, L. Kick, Ph.D. Illinois, Ph.D. Minnesota.

Research Associate Professors: M. Dever, Ph.D. Kansas State; S. Melkon, Ph.D. Tennessee; F. Pei, Ph.D. Pennsylvania State.

Assistant Professors: N. Harkrider, Ph.D. Oregon; J. Lee, Ph.D. Ohio State; M. McCullum, Ed.D. Tennessee; C. Petflerberg, Ph.D. Tennessee; K. Young, J.D. California Western.

Research Assistant Professors: C. Hassenboehler, Ph.D. Tennessee; W. Ko, Ph.D. Tennessee; C. Lee, Ph.D. China; Z. Yan, Ph.D. D. Cheng, Ph.D. Tennessee.

The mission of the Department of Consumer and Industry Services is to provide nationally and internationally recognized inter-disciplinary programming that prepares professionals and leaders in the public and private sectors through teaching, research, and technology transfer.

**HOTEL AND RESTAURANT ADMINISTRATION**

The Hotel and Restaurant Administration major focuses on meeting the middle-and upper-management level demands of the food and lodging industry. It is a program that assists students in getting the essential knowledge, leadership, responsibility and creativity to meet the changing environment of complex management problems in industry. Students who want more emphasis in business may complete a business minor by taking courses established by the College of Business Administration.

The Hoteland Restaurant Administration Program offers extensive field experience in food lodging properties in East Tennessee and in the southeast. The curriculum provides a strong base in management, computation, social sciences, and human ecology. The general education helps students to sharpen their analytical, conceptual and communications abilities. Graduates may start as management trainees in lodging, food service, support industries, or in hospitality operations with subsequent upward mobility into management or staff positions. The first experience in the senior year combines the stated discipline exposure with workplace experience to give graduates a competitive edge in attaining career positions.

**HOTEL AND RESTAURANT ADMINISTRATION**

**CFS 410**: People, places and things; CFS 411**: Fundamentals of Human Behavior Management.

**CFS 412**: Foodservice and Lodging Operations. **CFS 470**: Human Behavior Management.

**CFS 352**: Foodservice Management. **CFS 353**: Transport Management.

**CFS 354**: Nutrition Management.


**CFS 392**: The Hotel and Restaurant Industry.

**CFS 393**: Foodservice Management.

**CFS 394**: The Hotel and Restaurant Industry.
### RECREATION AND TOURISM MANAGEMENT: COMMERCIAL RECREATION AND TOURISM MANAGEMENT CONCENTRATION (includes General Recreation by NRPA/AARL)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>History Electives</td>
<td>6</td>
</tr>
<tr>
<td>HFD 210</td>
<td>3</td>
</tr>
<tr>
<td>Human Services Electives</td>
<td>6</td>
</tr>
<tr>
<td>Math Electives</td>
<td>6</td>
</tr>
<tr>
<td>Recreation &amp; Tourism Mgt 201</td>
<td>4</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Advertising 250 or Journalism 280</td>
<td>3</td>
</tr>
<tr>
<td>Economics 201, 311 or 313</td>
<td>3</td>
</tr>
<tr>
<td>Health 310</td>
<td>3</td>
</tr>
<tr>
<td>Journalism 281</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science Electives</td>
<td>6.5</td>
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<tr>
<td>Speech 210 or 240</td>
<td>3</td>
</tr>
<tr>
<td>Recreation &amp; Tourism Mgt 290</td>
<td>2-3</td>
</tr>
<tr>
<td>Recreation &amp; Tourism Mgt 320</td>
<td>2-3</td>
</tr>
<tr>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td><em>Economics</em></td>
<td></td>
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<tr>
<td>Foreign Language, Multicultural</td>
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<tr>
<td>Integrated Electives</td>
<td>6</td>
</tr>
<tr>
<td>*FOR 421, 422, HRA 324, 423, 425</td>
<td>4</td>
</tr>
<tr>
<td>*RCS 411</td>
<td>4</td>
</tr>
<tr>
<td>Recreation and Tourism Mgt 210, 415, 470</td>
<td>3</td>
</tr>
<tr>
<td>Recreation and Tourism Mgt 490</td>
<td>2-3</td>
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<tr>
<td>Senior</td>
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<tr>
<td>2 Electives</td>
<td></td>
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<tr>
<td>Recreation and Tourism 410, 440, 440</td>
<td>9</td>
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<tr>
<td>Recreation and Tourism 490</td>
<td>2-3</td>
</tr>
<tr>
<td>Total: 128 hours</td>
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### RECREATION AND TOURISM MANAGEMENT: THERAPEUTIC RECREATION CONCENTRATION (includes General Recreation and Therapeutic Recreation by NRPA/AARL)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Freshman</td>
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<td>English</td>
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<td>6</td>
</tr>
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<td>HFD 210</td>
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<tr>
<td>Math Electives</td>
<td>6</td>
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<tr>
<td>Recreation &amp; Tourism Mgt 201</td>
<td>4</td>
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<tr>
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<td>Natural Science Electives</td>
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<td><em>Economics</em></td>
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<td>2-3</td>
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<tr>
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### RETAIL AND CONSUMER SCIENCES

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<thead>
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<tr>
<td>HFD 210</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 119, and 125</td>
<td>6</td>
</tr>
<tr>
<td>Psychology 110</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 200</td>
<td>3</td>
</tr>
<tr>
<td>Speech 210 or 240</td>
<td>3</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Accounting 201, 202</td>
<td>3</td>
</tr>
<tr>
<td>Accounting 301, 302</td>
<td>3</td>
</tr>
<tr>
<td>Economics 210</td>
<td>4</td>
</tr>
<tr>
<td>Economics 201</td>
<td>4</td>
</tr>
<tr>
<td>Enrollment Management Studies</td>
<td>3</td>
</tr>
<tr>
<td>Finance 301</td>
<td>3</td>
</tr>
<tr>
<td>General Elective</td>
<td>3</td>
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<tr>
<td><em>Economics</em></td>
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<td></td>
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</table>

### History Electives

Select six hours from American history, European history, music appreciation/history, religious studies, world history, or any course with a history prefix.

### Sociology Electives

Select six hours from cultural studies, music appreciation/history, religious studies.

### Economics Electives

Select six hours from business administration, or any course with an economics prefix.

### Mathematics

Select a minimum of 45 upper division hours is required for graduation.

### General Elective

Select an upper division course that is approved by faculty in these selection of locations for on-the-job experiences related to their career areas as part of their educational program. Professional contacts made in field study experiences often lead to opportunities for career placement upon graduation.

### Course Requirements

For specific course requirements, please refer to the NRPA/AARL website or contact the department directly.
The department fosters development of pre-professional and professional competencies by those interested in the disciplines of health education/promotion, public health, and safety. The Health and Safety Sciences academic programs emphasize health promotion (lifestyle behaviors) and health protection (regulatory, environmental, and safety) strategies for improving individual and community well-being directly relating to two University of Tennessee-Knoxville thematic areas of strength. Health and Biomedical Sciences and Children and Families. The faculty are committed to the educational values of community-based service learning, applied research, and community outreach. For more information: http://hss.he.utk.edu.

COMMUNITY HEALTH EDUCATION

The Community Health Education program prepares students to work in a variety of settings that focus on health promotion and disease prevention among individuals, families, and their communities. Toward this end, the Program includes traditional classroom experiences as well as community experiences, both of which revolve around a social-ecological perspective of health promotion. This perspective assists students in developing skills to foster voluntary change in health behaviors through a combination of educational, political, and social interventions. The Program is designed to prepare entry-level health education specialists. Typical employment settings include local health departments, voluntary health agencies and worksites. For more information: http://hss.he.utk.edu.

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NUTRITION

Professors: R.E. Beauchesne, Ph.D. (Emiratis), Kansas State; B.R. Catlin, Ph.D. (Waukesha); W. Klarens, Ph.D. (Fayetteville); W. Mahon, Ph.D. (September); J.M. Pettem, Ph.D. (Wisconsin).

Associate Professors: J.V. Bailey, Ph.D. (Iowa State); M.B. Brookes (Memphis); M.S. Barea, Ph.D. (University of Paris, France).

Lecturer: K. Balla, M.S. (Wichita).

The Department of Nutrition promotes an understanding of nutrition for the enhancement of the physiological and social well-being of individuals and groups. Students learn about the progression from the smallest unit of the cell to the individual's needs throughout the life cycle. The way that attitudes, beliefs and influences fuel food patterns; the management of resources in food service and the properties of foods. Thus, Dietary programs provide service society through graduates who are able to interpret and contribute to social needs in regard to nutrition and wellness, both as professionals and as responsible citizens.

This major is designed for students interested in biology and applied sciences. Students are expected to acquire advanced education in chemistry, biology, food science, and behavioral sciences. The B.S. in Nutrition is currently granted approval status by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 216 Jackson Boulevard, Chicago, Illinois 60606-3993. (312) 877-4967. These requirements are expected on the basis of the basic curriculum component for the preparation of persons entering the didactic profession. The program prepares students to enter the dietetic profession in general and dietetics, food science and education, environmental nutrition, and communication science including computer and statistical applications. The students are prepared to enter dietetics and health services, including both the public and private sectors.

Pre-Professional Practice Programs (APD) with the American Dietetic Association and qualifies the graduate to apply for the Registration Examination to become a Registered Dietitian (R.D.). Students may receive more information from the department about R.D. requirements. R.D.s work as members of health care teams in acute care hospitals and health care programs, college and university foodservice facilities, wellness clinics and private practice. Extension services and Food and service companies are also avenues of employment.

NUTRITION
The College of Nursing at The University of Tennessee, Knoxville, was established in July 1971 in response to a long-recognized and well-established need for nurses prepared at the college level. The undergraduate program contains the unique resources of the UT Knoxville campus with those of the university's comprehensive teaching hospital and other health care agencies in a manner that enables both faculty and students to participate fully in all aspects of the health care delivery system. The program is accredited by the National League for Nursing, Accrediting Commission that may be contacted for information about tuition, fees, and length of program at 11 Broadway, New York, New York 10006, phone 1-800-669-9656. The program is also unconditionally approved by the Tennessee Board of Nursing. The baccalaureate nursing program has as its central focus the person, health, environment, and nursing. General education courses, nursing courses, and electives are organized in a manner designed to promote and develop creative thinking and other cognitive, affective, and psychomotor processes that are essential for effective nursing practice and for full and meaningful involvement as a contributing member of society. A broad base of general education, a thorough study of health behavior, an emphasis on health promotion, and health restoration, and a strong family and community orientation are essential components of baccalaureate education in nursing. By maintaining a high-quality relevant program that is responsive to the increasing complexity of health care delivery, the ever-changing health needs of society, and the changing and expanding role of the nurse, graduates of the program are able to:

1. Assume beginning leadership positions in nursing in a variety of settings;
2. Work collaboratively with other health professionals;
3. Function as socially conscious and pro-social citizens; and
4. Pursue advanced education on either a formal or an informal basis.

GENERAL REQUIREMENTS
In order to obtain a Bachelor of Science in Nursing degree, students are required to successfully complete with a grade of "C" in each lower division course and a grade of "B" in each upper division course, with the exception of 201, 214, and 410.Degree candidates are eligible for graduation when the program also accommodates the requirements for the Associate Degree in Nursing program. All upper division courses, with the exception of 201, 214, and 410 are restricted to students who have been approved for progression. (See Progression Policies and Procedures.)

PROGRESSION POLICIES AND PROCEDURES
Current standards are available from the Director of Student Services, College of Nursing, room 203. Students, including registered nurses, who are admitted as nursing students in their freshman or sophomore years must apply for progression to the upper division prior to their junior year.

1. During the spring semester of the year the student expects to meet all lower division course requirements, she/he must complete a Petition for Progression form and submit it to the college's Student Services Office. Applicants for upper division nursing must submit their Petition for Progression with transcripts for all courses attended no later than December 20. Students will be selected on the basis of:
   a. cumulative GPA for courses completed;
   b. cumulative GPA for required science, social science, math, and English courses;
   c. number of course withdrawals and repetitions;
   d. grade improvement over time;
   e. probability of completing all lower division requirements prior to the following fall;
   f. the availability of space. Petition will be given to those students who have completed all lower division courses.

2. If a student is selected for progression but fails to successfully complete all lower division requirements (except for humanities, history, and multicultural/interpersonal studies required, and petition for the fall semester, the student will not progress and must submit another petition for progression the following year.

3. Registered nurses must be licensed to practice in the state of Tennessee.

GRADING AND CONTINUATION POLICIES
(1) The minimum acceptable grade for all courses in the curriculum is a "C." (2) Courses must be repeated more than once. If a D, F, or NC grade is earned on the second attempt the student will be required to withdraw from the program.
Pulmonary resuscitation are included in the
client in jeopardy, the student will be required
behavior that actually or potentially places the
clinical performance is characterized by
components of the course. If the unsatisfactory
regardless of any other grades earned in other
tory, the grade for that course will be an F re-
previous course for which D or F was awarded
required to withdraw from the program even if the
or NC for more than one nursing course will be

MULTICULTURAL OR INTEGRATIVE
Anthropology 100-499; Architecture 496; Ger-
Comprehensive Literature 100-499; Economics 100-499; Geog-
410; Health Promotion and Management 310; 320; 325; Human
Services 100-499; Nursing 311, 411, 441, 453 (unavailable to nurs-
students only), 470; Political Science 100-499; Psychological
Developmental Studies 480; Psychol-
200; Research Methods in Management 110, 425; (University
Studies 100-499; Sociology 410; Psychology 101, 201, 202, 210,
Japanese 251, 252; Arabic 221, 222, Hebrew 241, 242, Persian 291,
292, French 211, 212, 217, 218, German 201, 202; Haitian 211, 212,
Portuguese 211, 212; Russian 201, 202; Spanish 211, 212, 217, 218.

HISTORY REQUIREMENTS
History - any course offered by the History
Department or African-American Studies
(201-202) Introduction to African and
201-499; Asian and African-American Studies; Asian Studies 101-
the general education requirements as other students.
students must take the NLN Nursing Mobility Profile Ex-
401, 411, and 431 and are indicated with an

Students must meet specific physical
examination and immunization requirements as specified by state law and by the rules and
regulations set forth by the various clinical
agencies. All non-nursing students must
participate in the college's professional liability insurance program. All registered nurses
must provide proof that they have appropriate professional liability insurance coverage. Specific information concerning these requirements will be provided to the
students at appropriate times by the nursing faculty and/or the Director of Student Services.

Course Load
The maximum credit hours per semester for
which a nursing student may register without
special permission is 15.

The Bachelor of Science in Nursing Curriculum
FRACHEM
English 101, 102 .................. 6
Mathematics 110 or any Statistics course .... 3
Chemistry 101, 110-110i, 111-111i (for
nursing students only) 4.7
Psychology 110 2
Sociology or Anthropology 2

Sophomore
Biochemistry and Cellular and Molecular Biology 240 or Ecology and Evolutionary Biology 230 4
Biochemistry and Cellular and Molecular Biology 230 or Ecology and Evolutionary Biology 230 5
Microbiology 110 2
Nutrition 300 3
Nutrition 401 2
Child and Family Studies 210 3
Sociology or Anthropology 2

Junior
Nursing 361, 362, 390, 390a, 390b, 391, 396, 390, 392, 322
Senior
Nursing 411, 412, 415, 421, 431, 441, 451 27

Total: 123 hours

The following courses are open to all university
students (202, 391, 394, and 410).

RN Track for Bachelor of Science in Nursing
1. RNs must complete the same non-nursing
requirements as all students.
2. Students will take the NLN Nursing
Profile Examination prior to starting
upper division coursework. If a decision score
of 100 is achieved (per section), the student will receive proficiency credit for three out of
four of our major clinical courses exclusive of
Community Health. Courses for which credit can be obtained in this manner include 330, 401, 411, and 431 and are indicated with an asterisk. Proficiency credit obtained by RNs through the NLN Nursing Mobility Profile Ex-
am is recorded as S/NC.
3. The student will take any major clinical
course in the area of choice (330, 401, 411 or
431) with clinical individualized.
4. All students take the Community
exam.
5. Students can obtain proficiency credit in
several other courses (Assessment and
Wellness Promotion, Pharmacology, Health De-
Vonato Conceptus I and II, and Leadership/Men-
sagement) by passing instructor-made challenge
exams (indicated with a double asterisk). Elig-
ibility for challenge of 440 Leadership/Manage-
ment is based on documented employment in a
nursing leadership position for at least one year
within the last five years. Challenge of 304 and/or
440 will carry a grade of S/NC.
6. RNs are exempt from H441 Clinical
Nursing Practicum.
7. The entire upper division nursing curricu-
um can be completed in one calendar year.
Students not enrolled in nursing courses for two
consecutive semesters, excluding summer, will
be administratively withdrawn from the pro-
gram. Those seeking re-entry must apply to the
College of Nursing. Students already ac-
cepted into the Masters' Program may be ex-
empted from Multicultural/Integrated (3 hours)
and Nursing Electives/Independent Study
(5 hours) if they have 123 undergraduate hours.
Students accepted for the Masters' Program
begin their graduate coursework in the fall of
the first semester of the undergraduate program.
8. More information about the RN-BSN track
is available in the Catalog of Nursing Student
Services Office or from the faculty
advisers for registered nurses.

Graduate Requirements for the Master of Science in Nursing are described in the
Graduate Catalog.
Field Coordinators: Sandia Allen, MSSW University of Tennessee; Melanie Balles, MSSW University of Texas; Arlington; Phyllis Betz, MSSW University of Tennessee.

Social work is a helping profession which focuses on providing skillful intervention in the prevention and amelioration of individual and social problems. It is a challenging and rewarding career involving the application of knowledge, skills, and professional values to assist individuals, families, groups, and communities in reaching their potentials. The primary mission of the undergraduate social work program is to develop generalist social workers who are articulate thinkers, lifelong learners, and opinion shapers. It is the purpose of the College to provide an education which fosters growth in both individual and career development.

The program prepares students for social work careers in such diverse areas as schools, youth programs, family service agencies, nursing homes, courts, mental health clinics, and welfare agencies. The degree provides graduates a competitive advantage in many jobs, the possibility of up to one year's standing in some master's degree programs in social work, and the potential to be licensed in a number of states throughout the nation. The social work curriculum builds on a strong liberal arts base. The humanities and the social and behavioral sciences are emphasized to help students understand human diversity and the interactions between people and their environment. The curriculum combines classroom experience and agency-based field placements. Courses provide a knowledge base in social work practice theory, human behavior, social welfare policy, and research. Educationally disabled field placements, which consist of over 600 clock hours of supervised field instruction in agency settings throughout greater Knoxville, provide extensive and challenging opportunities for students to apply the lessons of the classroom to the problems of society. The program is accredited by the Council on Social Work Education.

The undergraduate social work program (BSSW) started in 1982 in the College of Liberal Arts. It was granted initial accreditation by the Council on Social Work Education in January 1983, and reaffirmation was given in 1992. The program was transferred to the College of Social Work in September 1985. The three programs, BSSW, MSSW and Ph.D., in the College represent the full continuum of social work education.

FACILITIES
The College of Social Work is housed in Hensley Hall, located on the corner of Cumberland Avenue and Volunteer Boulevard on the UT Knoxville campus. This building houses the administrative and faculty offices, along with classrooms for the BSSW, MSSW and Ph.D. programs. Video and computer resources are available to facilitate instruction.

GRADUATE PROGRAM
The College of Social Work offers a fully accredited two-year graduate professional degree at the master's level (MSSW). The College also offers a graduate program leading to a Doctor of Philosophy in Social Work (Ph.D.). Information on our graduate programs is given in the College of Social Work Bulletin and also in the Graduate Catalog. Masters Degree Programs are offered on the campuses in Knoxville and in Nashville and Mem-phis. The Ph.D. Program is offered in Knoxville.

GRADING POLICY
The satisfactory/no credit option is not permitted in the major. The minimum acceptable grade in any course in the College is a C. Courses, other than field, in which a D or F is achieved may be repeated once. Field courses must be completed with a C or better, and may not be repeated. A student receiving an incomplete (I) in any social work course must receive the incomplete before enrollment in subsequent field practice.
**COURSE LOAD**

The maximum credit hours per semester attended for any student is 18. Special permission must be obtained for any over load.

**PROGRESSION REQUIREMENTS**

Students admitted to the University may request a faculty advisor from the College of Social Work. Students in the College must move through Initial and Full Progression. The following factors identify progression criteria for all social work students.

**INITIAL PROGRESSION**

1. Successful completion of Social Work 200 and 250 with a grade of C or better.
2. Cumulative grade point average of 2.0 or above.
3. Successful completion of a minimum of 60 semester hours. Initial progression must be completed prior to enrollment in any 300-level social work courses.
4. Favorable review of the student’s application for entry into the junior level social work courses by the faculty admissions committee. The application requires an essay discussing the student’s interest in and preliminary understanding of the profession.
5. Completion of fifty (50) clock hours in community service at one public/private social service agency. The community service is to take place after enrollment in a higher education institution and in the twenty-four month period prior to application for initial progression.

**FULL PROGRESSION**

1. Successful completion of junior level social work courses with a grade of C or better.
2. Cumulative grade point average of 2.0 or above.
3. Successful completion of a minimum of 90 semester hours. Full progression must be completed prior to enrollment in 400-level social work courses.
4. Favorable approval by the BSW faculty prior to entry into senior level courses. This process will include a review of the student’s performance in junior level practice.

Full progression is based on the recognition that social work has an intensive field component in which students demonstrate aptitude and ability to work with other people. While review is ongoing, full progression provides an additional opportunity to review the students’ potential for entry-level practice.

**CURRICULUM**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional Studies</strong></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Specialization Courses</strong></td>
<td>14</td>
<td>18</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td><strong>Computer Science</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>12</td>
<td>12</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>48</td>
<td>60</td>
<td>72</td>
<td>72</td>
</tr>
</tbody>
</table>

Full progression is also determined by the number of inflatable field practice slots in social service agencies and classroom space. If the number of students who fulfill the above criteria exceeds the number of students that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on the basis of cumulative GPA for courses that can be accommodated, students will be selected on 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School of Information Sciences

Elizabeth S. Aversa, Director

Professors:
Elizabeth S. Aversa, Ph.D., Drexel, Carol Tenopir, Ph.D., Illinois, P.C. Wilson (Emeritus), Ph.D., Michigan.

Associate Professors:

Assistant Professors:
Dania Bilal, Ph.D., Florida State, Douglas Raber, Ph.D., Indiana, Peiling Wang, Ph.D., Maryland, Jinx Watson, Ed.D., Vanderbilt, Gretchen Whitney, Ph.D., Michigan.

Established in 1971, the School of Information Sciences provides a graduate program for the preparation of librarians and other information professionals for work in all types of information environments. The program offers the Master of Science degree. In addition, the School of Information Sciences provides elective courses at the undergraduate level.

UNDERGRADUATE PROGRAM

The School of Information Sciences offers undergraduate courses that reflect the overall mission of the school: to educate people to live, work and flourish in an information society through excellence in teaching, research, and public service in library and information science. The undergraduate courses support a heightened awareness of today's information-rich environment. Increasingly, college graduates must understand the nature of information: sources, value, creation, organizing principles, transfer, and uses in society. Those who thrive in the information society must know how to identify and respond to their information needs. First as students, and then as professionals and citizens, graduates need to apply techniques and technologies in the search, retrieval, and evaluation of relevant information to meet their information needs. They must prepare to use a rapidly increasing array of information systems and technologies to seek and to manage information resources. These abilities, which add value to any field of study, constitute information survival skills in the twenty-first century. Graduates need to know when they can help themselves and when they should seek assistance from various information professionals.

The undergraduate courses are planned for the following groups of people:

1. Students who wish to develop a better understanding of the role of information in society.
2. Students whose academic major stresses understanding and use of information in society.
3. Students whose academic major and/or minor requires significant use of research libraries.
4. Students who are prospective candidates for the graduate program in Library and Information Science.

For information about undergraduate courses, contact the School of Information Sciences.

GRADUATE PROGRAM

The School of Information Sciences offers a graduate professional degree program accredited by the American Library Association. Information concerning the graduate program is given in the Graduate Catalog.

COMPUTER FACILITIES

The School of Information Sciences provides a teaching demonstration computer laboratory at Temple Court. The laboratory includes a large-screen display system and more than 20 networked computers. The laboratory is designed to reflect the current computing environment. The laboratory serves as a classroom for undergraduate and graduate courses offering hands-on instruction in information technology. Equipment is available for individual use when the laboratory is not reserved for class instruction. The computers are connected to the SSI Local Area Network (LAN). In addition, the computers are connected to the campus Ethernet network from which they access all the increasingly important communications and information resources of the Internet. Networked laser printing is included in the laboratory.

The advanced laboratory is designed to serve the research and curriculum needs of the school. Equipment includes high-end Macintosh Quadra, and IBM PC computers. The advanced laboratory provides a web server, high-level database and information retrieval software, and multimedia authoring and display tools.
University Evening School

School conducts undergraduate and graduate courses in a number of locations away from the Knoxville campus. All courses offerings and instructors are approved by the appropriate academic department, and the credit awarded is resident credit. The M.S. in Human Resource Development (College of Human Ecology) is available in Nashville.

Mini-Term. The University Evening School offers a Mini-Term during May. Students may enroll in one concentrated credit course during the Mini-Term period. Courses and instructors listed for the Mini-Term are carefully selected to reflect a broad academic base of offerings suited to an intensive program of study.

Off-Campus Programs. The Evening School conducts undergraduate and graduate courses in a number of locations away from the Knoxville campus. All course offerings and instructors are approved by the appropriate academic department, and the credit awarded is resident credit. The M.S. in Human Resource Development (College of Human Ecology) is available in Nashville.

The Evening School administers off-campus courses in Oak Ridge leading to advanced degrees in Chemical, Environmental, Industrial, and Nuclear Engineering, as well as Safety Education. The MBA is offered through a joint program with UT-Martin.

Workshops. Credit workshops are coordinated through various academic departments of the University and provide students the opportunity to participate in short periods of intensive study. Workshops offer flexibility of timing, location, and content. Summer workshops are particularly popular with teachers and school administrators. Although most workshops are held on the UT Knoxville campus, geography is not a limiting factor.

Student Services. A comprehensive program of services is provided by the University Evening School for both on- and off-campus students:

Registration. Priority registration by touchtone, regular phone, mail or FAX is offered as a convenience to current Evening School students. Final registration at both on- and off-campus locations is available by phone or in person.

Fee Payment. The Evening School functions as a Bursar's office. Fees may be paid in person, by mail or by phone (with a credit card).

Advising. Advising is available to the benefit of all evening students who need assistance with academic or related matters. The program can accommodate students during regular daytime hours and in the evenings by appointment, as well as at several centralized on- and off-campus locations. The Colleges of Arts and Sciences, Business, Communications, Education and Engineering cooperate with the Evening School to provide advising appointments after work hours.

Financial Aid. Evening School undergraduate students may be eligible for assistance through the need-based Evening School Scholarship Program. Interested students may also obtain applications for the Pell Grant in the Evening School Office.

Fee Waiver Program for Senior and/or Disabled Citizens. The Evening School administers the state legislated program for UTK. Senior or totally disabled Tennessee citizens who wish to take UT credit courses may audit these free of charge or, upon admission, may pay a reduced rate to receive regular credit. Specific information about the program may be obtained in the Evening School office.

University Evening School
401 Communications Building
(423) 974-2261 or 1-800-676-9607
http://www.aced.utk.edu/evening

[Name and contact information]
University Honors

Thomas W. Broaddus, Director
E. Michelle Blackwell, Assistant Director

University Honors programs are carefully designed to give academically outstanding students a special undergraduate honors experience comprising special courses, seminars, mentoring programs, senior research projects, and other features. Students are invited to become University Honors students prior to enrolling at the University. Already-enrolled students are ineligible. Prospective University Honors students are selected on the basis of previous academic performance, demonstration of an eagerness to be active learners and leaders, and extra-curricular activities. The University Honors Office administers three separate programs: the Tennessee Scholars Program, the Whittle Scholars Program, and the Chancellor's Scholars Program.

The Tennessee Scholars, Whittle Scholars, and Chancellor's Scholars programs are administered by the Director and Assistant Director with consultation by the University Honors Council which includes faculty and representatives of the University Administration.

TENNESSEE SCHOLARS PROGRAM

Each year, a total of twenty-five outstanding high school students or transfer students will be selected by the Tennessee Scholars Selection Committee for a four-year (two-year for transfer students) program of honors work. These students may have any major in any college offering the Bachelor's degree. In addition to required work in their respective colleges, Tennessee Scholars are required to complete one credit hour seminar each term of their first year (one on contemporary issues and one on aspects of leadership); complete a minimum of four honors courses; successfully complete one credit hour seminar each term of their second year; complete a senior honors research project of merit and originality. Failure to meet these requirements can result in removal from the program and loss of scholarship assistance.

Students are selected on the basis of ACT/SAT scores, high school GPA and the difficulty of the high school course of study, participation in extracurricular and community service activities, academic references, an essay, and a personal statement. Students who are selected as Tennessee Scholars are offered substantial four-year scholarships. Students enrolled in five-year undergraduate programs receive a fifth year of financial assistance.

WHITTLE SCHOLARS PROGRAM

The Whittle Scholars Program includes students who are recipients of Whittle Scholarships and Peyton Manning Scholarships. The Whittle Scholarships are made possible by a gift to the University by Chris Whittle, a 1966 UT, Knoxville alumnus. The Manning Scholars program honors 1998 alumnus Peyton Manning.

Each year, approximately eleven outstanding high school students will be invited to become Whittle and Manning Scholars. These students must have any major in any college offering the Bachelor's degree. In addition to regular work in their respective colleges, Whittle and Manning Scholars are required to complete a one credit hour seminar each term of their first year (one on contemporary issues and one on aspects of leadership); complete at least one University Honors course during their second year; complete a senior honors research project of merit and originality. Failure to meet these requirements can result in removal from the program.

Whittle Scholars receive substantial four-year scholarships plus a stipend for their additional semester abroad.

CHANCELLOR'S SCHOLARS PROGRAM

Each year the University awards four-year Roddy Merit, Bonham, Neyland, Holt, Bicentennial, and African American Achiever scholarships to outstanding high school students. Roddy Merit, Bonham, and Neyland Scholars are selected by the University General Scholarship Committee, composed of faculty and University personnel. Bicentennial and African American Achiever Scholars are selected by a committee of alumni. Hostam Scholars are selected by the colleges of Arts and Science and of Business Administration. Criteria for selection include academic performance and academic and professional promise. Bicentennial and African American Achiever Scholarships are awarded by the Financial Aid Office based on a student's high school grades and standardized test scores.

All recipients of the Bonham, Holt, Neyland, Hostam, Roddy Merit, Bicentennial and African American Achiever scholarships who have a minimum high school GPA of 3.75 and ACT score of 27 are invited to apply to become Chancellor's Scholars. In addition to required work in their respective colleges, Chancellor's Scholars are required to complete a minimum of four honors courses; complete a one credit hour seminar each term in residence, develop a positive relationship with a faculty mentor; have an extensive conference with a member of the University Honors staff each year; and complete a senior project seminar and a senior honors research project of merit and originality. Failure to meet these requirements can result in removal from the program.
Whittle Scholars and Chancellor's Scholars are expected to maintain a cumulative grade point average of 3.25. A student in the Tennessee Scholars Program, Chancellor's Scholars Program, or Whittle Scholars Program whose cumulative GPA falls below 3.25 will be allowed to continue in the Program and receive its benefits as long as he or she earns a 3.25 GPA or better every semester, thus eventually raising the cumulative GPA to the required 3.25. If the cumulative GPA is less than 3.25, a student fails to earn a 3.25 or better in any semester, he or she will be removed from the program and lose all of its benefits unless the student can demonstrate extenuating circumstances to the Director of University Honors and to the University Honors Council.

SENIOR PROJECT DEADLINES IN TENNESSEE SCHOLARS PROGRAM, CHANCELLOR'S SCHOLARS PROGRAM, AND WHITTLE SCHOLARS PROGRAM

The following is a list of mandatory deadlines for the senior research project in all University Honors programs:

1. No later than the end of the third year in residence, a student must have chosen a UT Knoxville faculty member to serve as mentor for the senior research project, and that faculty member must have agreed in writing to serve as the student's mentor.

2. At the beginning of the fourth or final year in residence, a student must submit a written prospectus for the senior research project to his/her faculty mentor for suggestions and approval.

3. During the final year in residence, each student must complete the senior project seminar, consisting of oral presentations and written samples of the student's senior research or creative project.

4. Prior to the end of a student's final semester, he or she will be expected to present the completed project to the student's faculty mentor or committee, the student's peers, and invited guests. Upon the conclusion of the presentation, the student's faculty mentor will submit a letter to the Director of the University Honors Program certifying that the research project has been completed and has been accepted by the committee. One copy of this research project must be filed in the University Honors Office and additional copies should be given to the student's faculty mentor and committee. Failure to meets these guidelines will result in the delay of a student's graduation.

UNIVERSITY HONORS COURSES AND SEMINARS

Courses (3 credit hours) and seminars (1 credit hour) are offered each semester that focus on various topics, issues, and problems. Class size is generally limited to 25 students. These are taught by faculty from all ten undergraduate colleges and schools and may be repeated. University Honors courses are open to undergraduate students on the basis of high school GPA, ACT/SAT scores, UT Knoxville GPA of 3.25 or better, or by professorial recommendation. University Honors seminars are required of and limited to students in the University Honors Program or by approval of the Director of University Honors.
The University of Tennessee, Knoxville Libraries' own approximately 2 million volumes and subscribe to more than 11,900 periodicals and other serial titles. The Libraries' membership in the Association of Research Libraries reflects the University's emphasis on graduate instruction and research and the support of large, comprehensive collections of library materials on a permanent basis. The UT Knoxville Libraries consists of the main library (John C. Hodges Library), four branches on the Knoxville campus (Agriculture-Veterinary Medicine Library, Map Library, Music Library, and University Archives and Special Collections), and the Social Work Library in Nashville.

Research assistance is available at the reference desk in each library. Free self-searching of selected databases is also available in the reference area and remotely through the World Wide Web.

Users can search the catalog of holdings at any library branch or via the UT Libraries Web site at www.lib.utk.edu. Materials that are not available in the UT Libraries can be requested through Interlibrary Services.

The John C. Hodges Main Library (1015 Volunteer Boulevard) is a 350,000 square-foot facility housing collections in all subject areas. The Hodges Library has over 300 graduate student carrels, and 200 faculty studies, and comfortable study space for more than 2,000 people.

The Agriculture-Veterinary Medicine Library (Room A-113, Veterinary Teaching Hospital) has a strong collection in agriculture; veterinary, comparative and human medicine; and related biological sciences. Most of the publications of the U.S. Department of Agriculture and the State Agricultural Experiment Stations and Extension Services are collected.

The Map Library (Room 15, Basement of Hoskins Library, Cumberland Avenue and 15th Street) maintains and develops a collection of sheet maps, atlases, journals, and books relating to cartography. Materials in print, film, and digital formats are acquired from commercial sources as well as the Government Depository program.

The Music Library (301 Music Building) has a comprehensive collection of music and music literature, including books, scores, audio and video recordings, current periodicals, and pamphlets. All materials in the Library of Congress "M" classification are located here.

Special Collections (2nd Floor, West Wing, of the Hodges Library) is a repository of primary source materials and costly modern library materials. The University Archives contains official records of the University: items published officially and unofficially, and other materials that document University of Tennessee life. Materials from Archives and Special Collections are kept for library users from closed stacks for use in the Reading Room.

The Law Library on the Knoxville campus and the libraries located on the campuses in Chattanooga, Martin, Memphis, and Tullahoma are individually administered. Each library at The University of Tennessee is accessible to all students and faculty in the UT system.