The College of Arts and Sciences is home to a wide array of academic disciplines and inter-disciplinary programs. Such diverse areas of study as Computer Science and Classics, Anthropology, Women's Studies and Latin American Studies are represented among the twenty-six departments and twelve special programs that comprise the College.

The faculty of the College is committed to providing both comprehensive general education and concentrated study in a particular field to all students enrolled at the University of Tennessee. General education offers opportunities to master the basic learning skills necessary to understand a specialized area of study and is essential for the continuation of learning throughout life.

Arts and Sciences faculty are also committed to educating students in a discipline. Education with a disciplinary focus prepares students for further study at the graduate level and for careers in business, public service, or any other endeavor. As our world becomes both more specialized and more changeable, the need to find the right balance between general and specialized knowledge becomes essential.

The central purposes of a liberal education include the encouragement of intellectual tolerance, a dedication to the quest for knowledge as a worthwhile goal in and of itself, and the cultivation of a responsible, creative, individual mind. These qualities enable one to develop an ability to reason and to express oneself clearly, an incentive to absorb emerging knowledge, and a competences to confront the uncertainties of human experience. For the student whose interests and talents lead into research, scholarship, and teaching, a liberal education provides an invaluable foundation. For the individual who enters business, industry, the professions, or government service, it furnishes a broadly useful and well-rounded educational background. For all, it offers the opportunity to share in a rich intellectual heritage, in the adventures of the mind, and in the life of the educated imagination. A liberally educated person is identified not only by specific knowledge as by quality of mind and by creative response to the challenges of the times.

The great universities of the world are so labeled because their faculties have earned the reputation of being renowned scholars. The University of Tennessee has earned such a reputation because of the quality of the research and creative activity of its faculty. The student who studies in the College of Arts and Sciences has joined a community of scholars. To study with such a talented faculty is to experience the best education possible.

The faculty of the College of Arts and Sciences provide to all students a general education and to thousands of students a year a more specialized education in any one of twenty-six disciplines and a dozen or more inter-disciplinary programs. The College's faculty help their students prepare for any and all careers. Faculty research and creative activity are the foundations on which education in this College is built. As a result of that faculty endeavor the lives of students are enriched, and the world's body of knowledge grows. That is the basic mission of the College of Arts and Sciences faculty in a research University.

PROGRAMS OF STUDY

Seeking the broad, general goals of a liberal education, students come into the college also with a wide variety of specific educational and vocational objectives. Recognizing this diversity, the college offers a number of different programs of study leading to the bachelor's degree and also several pre-professional programs which prepare the student for advanced study that do not lead to a degree from this college.

COURSE LOAD

The average course load in the college for any semester is 15-16 credit hours. The University defines full-time undergraduate students as those who register for a minimum of 12 hours. The maximum number of hours which may be taken by Arts and Sciences students is 18, exclusive of elective work in unseemly music and physical education. Exceptions to this rule will require approval by the Director of Student Academic Affairs (220 Ayres).

LOWER DIVISION—UPPER DIVISION

Courses numbered at the 100 and 200 levels are considered lower division and are normally taken by students in the freshman and sophomore years. Courses numbered 300 and above are upper division and are designed for students at the junior and senior levels.

SATISFACTORY/NO CREDIT

A few courses in the college are offered only on a Satisfactory/No Credit (S/NC) basis and students may elect to take others on this basis, except in areas where the option is specifically prohibited. Such courses, if successfully completed, will count as hours for graduation although neither S nor NC grades will be calculated in the student's grade point average. Satisfactory is defined as C or better work on the traditional grading scale and No Credit is defined as less than C. The following regulations apply:

1. S/NC courses, except those offered only on this basis, may not count for Basic Skills or Distribution requirements or major and minor requirements unless specifically permitted by petition. This restriction applies also to major or minor prerequisites or corequisites.
2. The maximum number of S/NC elective hours which may be counted toward graduation is 20, exclusive of courses offered only S/NC, physical education courses, and/or satisfactory hour exemptions, military service, etc.
3. A student who desires to take a course S/NC should indicate that intention at the time of registration. A change from S/NC grading to regular grading or from regular grading to S/NC will not be permitted beyond the add deadline. In each semester. Exception: Students who register for a course S/NC in a restricted area will be required to change to regular grading when the error is discovered.
4. A transfer student who has more than 20
In the University’s Center for International Education. A third insuch programs may be obtained through abroad by other academic institutions in which UT students with approval may enroll for credit. Assistance in identification of and registration and supervised by departmentsof the college on a full-semester or summer term basis. A second is through group programs conducted abroad by other academic institutions in which UT students with approval may enroll for credit. Assistance in identification of and registration in such programs may be obtained from the Programs Abroad Office located in the University’s Center for International Education. A third option is independent study, although individual departments may limit the number of hours which may be applied toward a specific major. OFF-CAMPUS STUDY Recognizing that learning is not restricted to formal classroom situations, the college provides for students to earn credit toward graduation for approved off-campus study. Such work should obtain the approval of the faculty member and the department concerned. It may include certain kinds of work experiences, community involvements, working in political campaigns, etc. Credit for independent study will vary from 1.5 hours to 21 hours of credit earned in this way may be applied toward a degree in no case, although individual departments may limit the number of hours which may be applied toward a specific major. FOREIGN STUDY COURSES STUDY ABROAD AND CERTAIN educational goals may best be met through independent study done by an individual under the direction of a faculty member. Students who wish to do such independent work should obtain independent approval of the faculty member and the departments concerned prior to embarking upon the study. Typical work in independent study includes: Each year of study abroad represents a special training in the chosen area after the student has completed three years of study in the arts and sciences. A third avenue is through organized group programs arranged by the college. Several opportunities for study abroad are available to students in the college. One avenue is through group programs conducted and supervised by departments of the college on a full-semester or summer term basis. A second is through group programs conducted abroad by other academic institutions in which UT students with approval may enroll for credit. Assistance in identification of and registration in such programs may be obtained from the Programs Abroad Office located in the University’s Center for International Education. A third option is independent study, although individual departments may limit the number of hours which may be applied toward a specific major.

STUDY ABROAD AND FOREIGN STUDY COURSES

Several opportunities for study abroad are available to students in the college. One avenue is through group programs conducted and supervised by departments of the college on a full-semester or summer term basis. A second is through group programs conducted abroad by other academic institutions in which UT students with approval may enroll for credit. Assistance in identification of and registration in such programs may be obtained from the Programs Abroad Office located in the University’s Center for International Education. A third option is independent study, although individual departments may limit the number of hours which may be applied toward a specific major.

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PROGRAMS LEADING TO BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES

The Bachelor of Arts and the Bachelor of Science Degrees share the same program of distribution requirements (except where noted otherwise).

BASIC SKILLS REQUIREMENTS

All students who earn a degree in the College of Arts and Sciences must have demonstrated skill in the use of the English language, the ability to acquire another language, and the ability to write persuasive, logical and coherent essays in English, to read critically from a variety of media, to evaluate and use sources in research, and to be aware of how to write for different audiences and purposes.

Students may meet this requirement in one of two ways:

1. By completing six credits in English writing courses, either: (a) English 101 and 102 (English Composition); (b) English 118 (Honors Composition) and English 102 (English Composition); (c) English 131 and 132 (Composition for Non-Native Speakers of English). (Students who obtain a grade of A or B in these courses must also complete one English writing course at the 300 level or above.)

2. By completing six credits in English writing courses, either: (a) English 101 and 102 (English Composition); (b) English 118 (Honors Composition) and English 102 (English Composition); (c) English 131 and 132 (Composition for Non-Native Speakers of English). (Students who obtain a grade of A or B in these courses must also complete one English writing course at the 300 level or above.)
in 118 may complete their freshman requirement with 102, or with a sophomore literature course in the English Department, or English 355 Rhetoric and Writing. The sophomore literature course may (if soeded) also be used toward the Humanities distribution requirement.

b. By earning a score of 4 or 5 on the College Board Advanced Placement Test in Literature and Composition. (Credit in English 101 is earned with a score of 4 or 5 on the Advanced Placement Test in Language and Composition.)

Placement information: Eligibility for English 118 (Honors: English Composition) will be determined by ACT or SAT scores and a placement exam. Selected students will be placed in English 103 (Writing Workshop) based on ACT or SAT scores and may not drop this course without departmental approval. (Details available from the English Department.) NOTE: A student must complete the English Composition requirement prior to enrolling in English courses numbered 200 or higher.

2. Foreign Language. Skills necessary to learn the basic structures and vocabulary of a foreign language; to read, write, understand, and, for modern languages, speak a foreign language; to understand how to learn another language; to better understand one’s own native language; and to complement the study of other cultures or civilizations. Students may meet this requirement in one of three ways:

a. Completion of the intermediate level sequence of a foreign language. Any one of the following sequences will satisfy the requirement:

- Asian Languages 231-232 Intermediate Chinese I, II
- Asian Languages 251-252 Intermediate Japanese I, II
- Asian Studies 221-222 Intermediate Modern Standard Arabic I, II
- Asian Studies 241-242 Intermediate Modern Hebrew I, II
- Asian Studies 261-262 Intermediate Persian I, II
- French 211-212 Intermediate French
- 217-218 Honors: Intermediate French
- German 201-202 Intermediate German
- Greek (Classics) 261 Intermediate Greek
- Grammar Review and Readings and 264 Intermediate Readings in Greek
- Italian 211-212 Intermediate Italian
- Latin (Classics) 251 Intermediate Latin
- Grammar Review and Readings and 252 Intermediate Latin; Virgil’s Aeneid
- Portuguese 211-212 Intermediate Portuguese
- Russian 201-202 Intermediate Russian
- Spanish 211-212 Intermediate Spanish;

b. Demonstration of competence on a departmental placement or proficiency examination or by AP or CLEP credit.

c. Students whose native language is not English may satisfy the requirement with English 131 and 132 and any two courses from List A: Literature or List B: Philosophical and Religious Thought under the Humanities Distribution Requirement.

Placement information: All students who wish to enroll in a French, German, Latin or Spanish course, who have completed at least two years of this language in high school and who have not yet taken a college course in the language must take a UTK placement examination before enrolling. Placement in the appropriate course will be determined by the score on the examination. Examinations will be given during summer orientation and at designated times during the fall, spring and summer. Students who place into 200 level courses will receive six hours of elementary language credit, provided that they do not subsequently enroll and receive credit for any 100 level course in the same language. If they do, elementary placement will be reaffirmed and removed from the student’s transcript. Students who place into 300 level courses will receive six hours of intermediate language credit. Under no circumstances may any student earn more than six hours of language placement examination credit. Students who feel they have been inappropriately placed should consult the appropriate language section.


Students may meet this requirement by completion of one of the following courses or by selecting two math courses under Natural Science List B:

- Any course in Mathematics numbered 110 or higher
- Computer Science 100: Introduction to Computers and Computer Programming
- Philosophy 130: Critical Thinking or Philosophy 135: Formal Logic.

DISTRIBUTION REQUIREMENTS

All of these requirements are designed to enhance the skills of thinking critically and analytically, and of effective communication and writing through study and use of different kinds of human knowledge. The distribution requirements are in two parts, Part A: Divisional Distribution requirements, which require students to take courses in the various divisions of the College, and Part B: the Upper-Level Distribution Requirements.

PART A: Divisional Distribution Requirements

1. NATURAL SCIENCE

A two-course laboratory sequence and an additional two-course sequence that will introduce students to the increasingly important role of science and technology in all aspects of modern life. This requirement will introduce students to the basic discoveries, knowledge and logical organization of scientific disciplines and to development and testing of hypotheses. Laboratory courses will develop skills in experimental testing of hypotheses; lectures will introduce students to the role of scientific methodology and problem-solving in society.

Students may meet this requirement by completion of a two-course sequence from list (A) and an additional two-course sequence or package from List A or List B.

List A:

- Astronomy 161-162: Introductory Astronomy with Laboratory
- Astronomy 217-218: Honors: Introductory Astronomy
- Biology 101-102: Humankind in a Biotic World
- Biology 130: Biodiversity and 140: Organization and Function of the Cell
- Botany 110-120 General Botany
- Chemistry 100: Principles of Chemistry and 110: Introduction to Organic and Biochemistry
- Chemistry 120-130: General Chemistry

Chemistry 128-138: Honors: General Chemistry

Geography 131-132: Geography of the Natural Environment

Geology 101: The Dynamic Earth and either 102: Earth, Life and Time or 103: The Earth’s Environments


- Physics 135-136: Introduction to Physics

- Psychology 137-138: Honors: Fundamentals of Psychology
- Physics Majors
- Physics 221-222: Elements of Physics

List B:

- Anthropology 110: Human Origins and 210: Principles of Biological Anthropology
- Astronomy 151-152: Introductory Astronomy

Botany 306: Genetics and Society (Same as Anthropology 306) and 309: Biology of Human Affairs or 310: Plant Morphology or 330 Field Botany

- Chemistry 150: Chemistry and Society and Chemistry 160: Chemistry and the Home

Computer Science 102: Introduction to Computer Science and either 140: Data Structures or 160: Computer Organization

- Geology 201: Biodiversity: Past, Present, and Future and 202: Earth as an Ecosystem: Modern Problems and Solutions

- Mathematics: Any two Mathematics courses numbered 110 or higher

- Microbiology 210: General Microbiology and Biochemistry, Cellular and Molecular Biology

Geology 207: Honors: Evolution of the Earth and 208: Earth as an Ecosystem: Modern Problems and Solutions

- Physics 101-102: How Things Work

- Statistics 201 Introduction to Statistics and any Mathematics course numbered 110 or higher except Mathematics 115 (If Mathematics 115 is used to satisfy Basic Skills, it is not required)

Bachelor of Science students may meet this requirement by completion of four courses selected from the list below. These courses must be from two departments. Bachelor of Science students must complete two courses from at least two departments.


- Anthropology 120: Prehistoric Archaeology 130: Cultural Anthropology; 362: Principles of Archaeology

- Audiology and Speech Pathology 320: Speech and Language Development

- Botany 305: Soil-System Impact of Plants

- Economics 201: Introductory Economics; A Survey Course; 207: Honors Introductory Economics
3. HUMANITIES

Courses that will provide skills to appreciate and interpret literary, philosophical, or religious texts, and to participate as an appreciative observer or artist in a discipline within the visual, spatial, musical, theatrical, or written arts. Bachelor of Arts students may meet this requirement by completion of three courses, of which at least one must be selected from List A and one from List B. Bachelor of Science students must complete a minimum of 6 credits from the courses listed; not more than 3 credits may be taken from List C. All courses except those involving practice of the arts are writing-emphasis courses.

List A: Literature
Asian Languages 311: Chinese Literature in English Translation; 312: Chinese Literature in English Translation; 313: Japanese Literature in English Translation; 314: Japanese Literature in English Translation

Comparative Literature 202: Crosscultural Perspectives in World Literature; 203: Crosscultural Perspectives in World Literature

Information Sciences 330: Books and Related Materials for Children
Italian 401: Dante and Medieval Culture; 402: Petrarch and Boccaccio

Medieval Studies 261: Medieval Culture: Readings from the Early Middle Ages, 500-1000; 262: Medieval Culture: Readings from the Later Middle Ages, 1000-1500

Religious Studies 312: Religious Aspects of Biblical and Classical Literature; 313: Religious Aspects of Modern Literature

Russian 221: Rebels, Dreamers, and Fools: The Outcast in 19th Century Russian Literature; 222: Heaven or Hell: Utopias and Dystopias in 20th Century Russian Literature

Spanish 291: Spanish Literature in English Translation

Women’s Studies 210: Images of Women in Literature: Biography and Autobiography; 215: Images of Women in Literature; Fiction, Poetry, Drama

List B: Philosophical and Religious Thought

Classics 201: Introduction to Classical Civilization; 221: Early Greek Mythology; 222: Classical Greek and Roman Mythology

English 110: The Human Condition: Values and Reality; 111: The Human Condition: Knowledge and Reality; 240: Ethics; 342: Business Ethics; 344: Professional Responsibility (Same as Religious Studies 344); 345: Medical Ethics (Same as Religious Studies 345); 348: War and Morality; 350: The Concept of Woman (Same as Women’s Studies 380); 382: Philosophy of Feminism (Same as Women’s Studies 382)


List C: Study or Practice of the Arts

Architecture 111: Architecture and the Built Environment
Arts 191: Introduction to Studio Art: Various Media

Classics 232: Art and Archaeology of Ancient Greece; 233: Archaeology and Art of Etruria and Rome

English 293: Introduction to Creative Writing


Speech Communication 280: Introduction to Oral Interpretation

Theatre 100: Introduction to Theatre; 220: Acting; 245: Basic Stage Costuming; 250: Introduction to Scenery Technology; 260: Fundamentals of Lighting and Sound Production

Women’s Studies 330: Women in Music (Same as Music History 330)

4. NON-U.S. HISTORY

A course sequence to enhance appreciation of the diversity of the world’s societies, their cultures, and histories. This requirement will develop understanding of how the past shapes individuals and communities in practical decisions and in understanding of self and world; will contribute to skills in explaining change and continuity of human society and the interpretation of people, events and trends in context of the ideas, values, social and political conditions that affect them.

Students may meet this requirement by completion of one of the following sequences. All courses are writing-emphasis courses.

African and African American Studies 235-238: Introduction to African Studies


Latin American Studies 251-252: Introduction to Latin American Studies, Medieval Studies 201-202: Medieval Civilization

PART B: UPPER LEVEL DISTRIBUTION REQUIREMENTS

Courses that use skills and knowledge acquired in the Basic Skills and Divisional Distribution areas to understand and analyze a highly interdependent world system and to make informed comparisons among contemporary cultures. These courses develop understanding of U.S. society, of national and international diversity, and of critical issues of the modern world.

Bachelor of Arts students may meet this requirement by completion of two courses from one of the lists below and a third course from either of the other lists. Bachelor of Science students must complete two courses from the three lists. All courses are writing-emphasis courses.

List A: United States Studies


American Studies 310: Introduction to American Studies


Economics 413: Macroeconomic Fluctuations; 435: Industrial Organization Analysis; 462: Economics of Resources and Environmental Policy; 471: Public Finance: Optimal Government Functions and Expenditure Analysis; 472: Public Finance: Taxation and Intergovernmental Relations

English 331: Race and Ethnicity in American Literature; 332: Women in American Literature (Same as Women’s Studies 332); 333: Black American Literature and Aesthetics; 334: Film and American Culture (Same as American Studies 334)

Geography 360: Regional Geography of the United States and Canada; 363: Geography of the American South; 365: Geography of Appalachia; 423: Geography of American Popular Culture (Same as American Studies 423)

History (Same as Women's Studies 453); 454: Cities and Urbanization in American History; 459: Jefferson's America
Music History 350: History of Jazz (Same as African-American Studies 350)
Philosophy 390: Philosophical Foundations of Democracy
Political Science 311: Contemporary Issues in American Politics; 312: Public Culture and American Politics (Same as American Studies 312 and Cinema Studies 312); 330: Law in American Society; 374: American Political Thought
Psychology 434: Psychology and Gender (Same as Women's Studies 434)
Religious Studies 351: Introduction to Religion in the United States; 352: African-American Religion in United States (Same as African-American Studies 352); 355: Religion and Culture in the United States
Sociology 340: Class Structure; 343: Race and Ethnicity (Same as African-American Studies 343); 455: Society and Law
Speech Communication 450: Propaganda; 466: Rhetoric of the Women's Rights Movement to 1830 (Same as Women's Studies 466); 469: Freedom of Speech; 476: Rhetoric of the Contemporary Feminist Movement. (Same as Women's Studies 476)

List B: Foreign Studies

NOTE: This list is subdivided by geographic area and topic. It is recommended that the student choose courses in the major field. It is recommended that this option be satisfied during the senior year.

Africa
Geography 379: Geography of Africa (Same as African and African-American Studies 379)
History 371: African History (Same as African and African-American Studies 371); 372: African History (Same as African and African-American Studies 372); 381: History of South Africa (Same as African and African-American Studies 381)
Political Science 452: Black African Politics (Same as African and African-American Studies 452)
Religious Studies 373: African Religions (Same as African and African-American Studies 373 and Anthropology 373)

Asia
Art History 411: Art of Indian Asia; 415: Chinese Art; 419: Japanese Art
History 362: History of East Asia; 363: History of East Asia; 364: History of China; 365: History of Japan
Political Science 454: Government and Politics of China and Japan.

Religious Studies 374: Philosophy and Religion in India (Same as Philosophy 374); 376: Buddhist Philosophy and Religion (Same as Philosophy 376); 379: Religion and Philosophy in China (Same as Philosophy 379); 383: Religion in Japan; 474: Modern and Contemporary South Asian Religion

Europe
Anthropology 462: Early European Prehistory
Art History 425: Early Christian and Byzantine Art to 1500; 431: Medieval Art of the West, 800-1400; 441: Northern European Painting, 1350-1850; 442: Art of Northern Europe, 1600-1875; 451: Art of Italy, 1250-1570; 452: Art of Italy, 1450-1575; 453: Art of Southern Europe, 1575-1700; 475: History of 19th Century Painting and Sculpture in Europe; 476: History of 20th Century Painting and Sculpture in Europe

Classics 331: Archaeology of the Aegean Bronze Age and Early Greece; 334: Cities and Sanctuaries of the Greek and Roman World; 381: Greek Civilization; 382: Roman Civilization; 383: Women in the Greek and Roman World (Same as Women's Studies 383)
English 301: British Culture to 1660; 302: British Culture: 1660 to Present; 401: Medieval Literature
French 420: French Cinema; 431: Highlights of French Civilization; 432: Contemporary French Culture
Geography 371: Geography of Europe; 375: Geography of Russia and the Commonwealth of Independent States
German 323: German Film; 350: German-Jewish Topics in Literature and Culture; 353: Modern German Culture
History 319: Modern Europe, 1750-1914; 320: Contemporary Europe, 1900-present; 323: Deviance and Persuasion in the Christian West, 1100-1700; 429: Medieval Intellectual History; 432: Women in European History (Same as Women's Studies 432); 490: Internship in the Center for the Study of War and Society
Italian 414: Italian Cultural Studies; 421: Topics in Italian Literature and Cinema
Medieval Studies 403: Seminar in Medieval Studies
Philosophy 320: Ancient Western Philosophy; 322: Medieval Philosophy; 324: Seventeenth- and Eighteenth-Century Philosophy; 326: Nineteenth- and Twentieth-Century Philosophy
Political Science 311: Ancient Hebraic Religious Traditions (Same as Judaic Studies 311); 332: Classical Islam; 333: Islam in the Modern World; 381: Introduction to Judaism (Same as Judaic Studies 381); 385: Contemporary Jewish Thinkers (Same as Judaic Studies 385); 405: Modern Jewish Thought (Same as Judaic Studies 405)

Critical Issues in Foreign Studies
Economics 323: Economic Development (Third World)
Geography 345: Population and Environment
History 360: A History of Imperialism Since 1860; 375: Revolutions in Historical Perspective; 385: The Crusades and Medieval Christian-Muslim Relations
Political Science 350: Political Change in Developing Areas; 365: Introduction to International Relations
Religious Studies 371: Eastern Religions and Western Thought
Sociology 442: Comparative Patterns of Poverty and Development; 446: The Modern World System
Women's Studies 360: Women in Cross-Cultural Perspective

C. Capstone Courses

These courses are offered within major fields and are designed to provide an integrative experience to broaden comprehension of the major field, to enhance understanding of how the field has and continues to influence society, and to draw attention to ethical considerations applicable to the field. As writing emphasis courses the capstones promote development of written communication skills used by the major field. It is recommended that this option be satisfied during the senior year.

NOTE: If used to satisfy the upper-level distribution requirement these courses may not be used to satisfy the major requirement.

Audiology and Speech Pathology 499: Seminar in Communication Sciences and Disorders
Biochemistry and Cellular and Molecular Biology 409: Perspectives in BCMB; 420: Advanced Topics in BCMB
Botany 471: Senior Seminar
Chemistry 405: Topics in the Development of Chemistry
Computer Science 411: Senior Thesis I; 412: Senior Thesis II
Ecology and Evolutionary Biology 405: Perspectives in Ecology and Evolutionary Biology
Students in the Individualized Program will satisfy all the Basic Skills and Distribution requirements, just as do those in the Basic Program. The point at which the individualization takes place is in the area of concentration. The quantitative aspect of the area of concentration is the same as for the major in the Basic Program (i.e., a minimum of 24 hours in courses numbered above 200), and at least two-thirds of the courses must be selected from disciplines within the College of Arts and Sciences. The student may design the program in consultation with an advisor and submit it for consideration to the Committee on the Individualized Program. The proposed courses of study must have some clear central purpose, usually implemented through intensive work in two or three departments; an undirected scattering of courses will not be approved. For further information contact Arts and Sciences Advising Services.

**COLLEGE SCHOLARS PROGRAM**

A limited number of freshmen and sophomores, entering transfer students with fewer than 42 credit hours, and resident students with fewer than 62 credit hours are invited each year to enter this distinguished honors curriculum. Selection is based on previous academic record, test scores, recommendations, a written essay, and a personal interview. Admission is provisional for two semesters; continuation depends upon maintenance of a satisfactory record (normally 3.25 or above) and evidence of ongoing motivation and interest.

The College Scholars Program affords the highest degree of freedom to the student in developing a meaningful curriculum. Each program is worked out individually with a special advisor (tutor) who understands the circumstances continues to advise the student throughout the college career. Together they determine what kinds of courses work and/or learning experiences will fulfill the student's objectives, while at the same time achieving the kind of liberal education the college believes is important for every student. In the final two years of the program students will be heavily involved in independent study or research required of all College Scholars. When College Scholars fulfill departmental requirements for additional majors or minors, these will be recorded on the Scholars' transcripts. Scholars will not be required to meet Basic Skills or Distribution requirements in order to have such majors or minors officially recognized. Further information and applications may be obtained from Arts and Sciences Advising Services.

**PRE-PROFESSIONAL PROGRAMS**

**PRE-DENTAL PROGRAM**

The college offers both a three-year program leading to a Bachelor of Science degree and a four-year program leading to a Bachelor of Arts or Science degree for students preparing for the study of dentistry. Both programs are based upon the curriculum outlined below. In the three-year program the student must complete at least 53 credit hours while enrolled in the college, and the B.S. degree is granted upon satisfactory completion of the first year of...
study at UT-Memphis. In the four-year program the degree is granted upon completion of 124 or more credit hours while enrolled in the college, including a major of 24 or more hours in addition to the courses listed below. The requirement for a major is waived for those completing their fourth year at UT-Memphis. Students in either the three- or four-year program must complete the last 30 hours of credit in residence at The University of Tennessee, Knoxville, before entering UT-Memphis.

Although the B.A. or B.S degree is not required for admission to the College of Dentistry at Memphis, most of the students accepted into the study of dentistry have the baccalaureate degree before admission. Therefore, pre-dental students are encouraged to plan to complete all requirements for the B.A. or B.S degree before enrolling in the College of Dentistry.

PRE-MBA PROGRAM

The college offers a joint B.A./M.B.A. program with the College of Business Administration. Admission requirements are higher than those normally expected of M.B.A. applicants. Desired qualifications include a minimum of 3.4 GPA and a Graduate Management Admission Test Score of 600 or higher.

Students in this program take their first three years of course work in Arts and Sciences, and their last two years in the College of Business Administration. Within their first three years, students will fulfill all general education requirements for the B.A. degree, both upper and lower division, along with a minor offered by one of the Arts and Sciences departments. They may use one Economics course only to fulfill distribution requirements, and they are required to take a year of calculus as the only prerequisite to the M.B.A.

Students interested in the Dual B.A./M.B.A. program are counseled initially in the Arts and Sciences Advising Services regarding admission standards and Arts and Sciences requirements. At the end of their second year, they will have a conference with the Associate Dean for Graduate Business Programs and be advised of their prospects for formal admission. If the student is a likely candidate, he/she will be advised to take the G.M.A.T. in October of the third year and to submit an application to the M.B.A. program. The admission decision will be made by January of the third year. Upon admission, students will begin M.B.A. coursework in the fourth year and be awarded a B.A. degree at the end of that year. Upon successful completion of the fifth year, the student will receive the M.B.A. degree.

PRE-MEDICAL PROGRAM

The college offers a three-year program leading to a B.S. degree and a four-year program leading to a Bachelor of Arts degree or Science degree for students preparing for the study of medicine. Both programs are outlined below. The courses normally required for a major are waived for those taking their fourth year at UT-Memphis. In the four-year program the degree is granted upon completion of 124 or more credit hours while enrolled in the college, including a major of 24 or more hours in addition to the courses outlined below. The requirements for a major are waived for those taking their fourth year at UT-Memphis. Students in either the three- or four-year program must complete the last 30 hours of credit in residence at UT Knoxville before entering UT-Memphis.

Although the B.A./B.S degree is not required for admission to the College of Medicine, most students accepted into the study of medicine have the baccalaureate degree before admission. Therefore, pre-medical students are encouraged to plan to complete all requirements for the degree before enrolling in the College of Medicine.
NUCLEAR MEDICINE TECHNOLOGY

The Nuclear Medicine Technology Curriculum requires a minimum of 94 hours credit, including the College's basic skills and distribution requirements, prior to application for admission to a final year at the University of Tennessee Medical Center, Knoxville. Students who complete the Nuclear Medicine Technology program at UTMC are required for the B.S. degree in Preprofessional Programs, with a concentration in Nuclear Medicine Technology, from the College of Arts and Sciences. Note: Admission to the Nuclear Medical Technology Program at UTMC is at the discretion of the admissions committee of that department. Successful completion of the three-year curriculum noted below does not assure admission to the program.

Hours Credit
Freshman
English 101-102.............................. 6
Chemistry 120-130.......................... 6
Mathematics................................. 6-8
Basic Skills: Foreign Language (Intermediate Level Sequence).......................... 6
Divisional Distribution: Non-U.S. History................. 6
Sophomore
Biology 130-140............................ 6
Chemistry 350, 360, 389 ................. 8
Speech Communication 210............. 3
Divisional Distribution: Humanities......... 3
Divisional Distribution: Social Sciences...... 6
Computer Science 102..................... 4
Junior
Biochemistry and Cellular and Molecular Biology 230-240........... 8
Physics 221-222............................. 8
Divisional Distribution: Humanities......... 3
Upper Level Distribution (A) U.S. Studies, or (B) Foreign Studies, or (C) Capstone Experience 6
Electives................................. 5
Total: 94 hours
Senior
Completion of Nuclear Medicine Technology program at UTMC (12 month program) or completion of major program and BA or BS requirements.

Total: 124 minimum hours

PRE-PHARMACY PROGRAMS

The three-year program leading to a B.S. degree in Preprofessional Programs, with a concentration in Nuclear Medicine Technology, from the College of Arts and Sciences, has been designed for students who desire to enter the preprofessional degree program in Pharmacy at UT-Memphis.

The two-year program prepares students to be admitted to the College of Pharmacy upon completion of 60 hours of a prescribed course of study in the College of Arts and Sciences. Further information may be obtained from Arts and Sciences Advising Services, 220 Ayres Hall.

The three-year program leading to a B.S. degree and the four-year program leading to either a B.A. or B.S. degree from the University of Tennessee, Knoxville, as well as to the professional degree in pharmacy from UT-Memphis, are based upon the program outlined below. In the three-year program, the student must complete at least 93 credit hours while enrolled in the College of Arts and Sciences, and the B.S. degree is granted upon satisfactory completion of the first year of study in Memphis. In the four-year program the B.A. or B.S. degree is granted upon completion of 124 or more credit hours while enrolled in the college, including a major of 24 or more hours in addition to the courses outlined below. The requirement for a major is waived for those taking their fourth year at UT-Memphis. Students in the three- or four-year program must complete the last 30 hours of credit in residence at The University of Tennessee, Knoxville, before enrolling in the College of Pharmacy.

Hours Credit
Freshman
English 101-102; or equivalent........... 6
Chemistry 120-130.......................... 6
Mathematics................................. 6
Basic Skills Foreign Language (Intermediate Level Sequence).............. 6
Divisional Distribution: Non-U.S. History................. 6
Sophomore
Biology 130-140............................ 6
Chemistry 350, 360, 389 ................. 8
Speech Communication 210, 220, or 240..................... 3
Divisional Distribution: Humanities......... 3
Divisional Distribution: Social Sciences...... 3
Electives................................. 3
Junior
Statistics 201............................... 3

PRE-TEACHING PROGRAMS

Students planning careers in K-12 teaching must complete an Arts and Sciences major in a department, in one of the Interdisciplinary or Pre-Teaching programs, or, if eligible, in the College Scholars Program. Prospective secondary teachers must fulfill the requirements of appropriate content majors; prospective elementary teachers may choose either a departmental major or one of the four options described below. All pre-teaching students should consult appropriate materials in Arts and Sciences Advising Services before making final choices of majors.

For teaching, students must also gain formal admission to the Teacher Education Program in the College of Education. The process involves successful completion of a series of requirements including presentation of satisfactory scores on certain tests, completing professional courses in the College of Education, maintenance of a 2.7 or higher GPA, and completing a fifth year program emphasizing practical application. For details, see the College of Education section of the Undergraduate Catalog and contact the Education Advising Center, 214 Claxton Addition.
PRE-TEACHING SCIENCE AND MATHEMATICS OPTIONS: BACHELOR OF SCIENCE

(1) Environmental Science

This concentration should develop the knowledge and understanding of the environmental sciences appropriate to the needs of the teacher in grades K-8. The prerequisite courses assure that the student has an adequate background in the biological, chemical, and physical sciences to proceed to upper division courses in either of the chosen areas of concentration. The two tracks beyond the core stress the two major emphases of the ecological sciences--the biological and the physical-chemical. The student choosing to emphasize the biological track should be prepared to teach courses in biological science through the middle school years. The student choosing to emphasize the physical-chemical track should be prepared to teach general and earth science through the middle school years.

Prerequisite courses: NB: One mathematics and one science sequence or two science sequences (14-18 hours) may be used to satisfy general education requirements.

1. Mathematics 115, 123 (3,3) or Mathematics 123, 125 (3,3) or Mathematics 141-142 (4,4) or Mathematics 151-152 (3,3)
2. Chemistry 120, 130 (4,4)
3. Biology 130, 140 (4,4) or Botany 110-120 (4,4)
4. Geology 101-102 (4,4) or Geography 131-132 (4,4) or Physics 221-222 (4,4)

Core courses: (11 hours)
1. Biology 240: General Genetics (4)
2. Biology 250: General Ecology (4)
3. Geology 303: Geology of National Parks (3)

Beyond the core curriculum, the student must choose 18 hours from the two tracks listed below: 15 hours from one track and 3 hours from the other track.

A. Biological Sciences Track

Botany 305: Socio-Economic Impact of Plants (3); Botany 310: Plant Morphology (4); Botany 320: Paleobiology (3); Botany 330: Field Botany (3); Botany 340: General Botany (3); Botany 350: Genetics and Society (3); Botany 360: Botanical Development and Embryology (3, 3); Botany 370: Animal Ecology (3); Botany 380: Human Evolutionary Biology (3); Botany 390: Human Anatomy and Physiology (3); Botany 400: Comparative Animal Behavior and Lab (3,3); Botany 410: Zoology (3); Botany 420: Paleontology (3); Botany 430: Geobiology (3); Botany 440: Evolutionary Biology (3); Botany 450: Geomorphology (3); Botany 460: Principles of Geohydrology (3).

+Course has prerequisite other than courses prerequisite to this major. See catalog for details.

B. Physical-Chemical Sciences Track

Biochemistry and Cellular and Molecular Biology 310: Physiological Chemistry (4); Chemistry 350-360-369: Organic Chemistry and Lab (3,3,3); Chemistry 430: Preclinical and Evolutionary Biology 446: Introduction to Oceanography (4); Geography 334: Meteorology (3); Geography 433: The Land-Surface System (3); Geography 434: Climatology (3); Geography 436: Water Resources (3); Geography 439: Plant Geography of North America (3); Geography 445: Geographical Resources (3); *Geology 201: Biodiversity: Past, Present, and Future (3); *Geology 202: Earth as an Ecosystem: Modern Problems and Solutions (3); Geology 303: *Geology of National Parks (3); Geology 310: Mineralogy (4); Geology 330: Igneous and Metamorphic Petrology (3); Geology 340: Stratigraphy and Sedimentation (3); Geology 350: Structural Geology (4); Geology 361: Minerals and Energy Resources: Geologic Constraints and Environmental Impacts (3).

+Course has prerequisite other than courses prerequisite to this major. See catalog for details.

Total (core + track concentration) = 29 hours

(2) Science

This concentration should develop the knowledge and understanding of the sciences appropriate to the needs of the teacher in grades K-8. The curricular requirement that the student take courses in both biological science (anthropology, biochemistry and cellular and molecular biology, biology, botany, ecology and evolutionary biology, microbiology, psychology) and in physical science (chemistry, geology, physics) is designed to fulfill the state competencies for General Science and Physical Science and II Biology.

Prerequisite courses: NB: One mathematics and one science sequence or two science sequences (14-18 hours) may be used to satisfy general education requirements. This concentration should develop the knowledge and understanding of the sciences appropriate to the needs of the teacher in grades K-8. The curricular requirement that the student take courses in both biological science (anthropology, biochemistry and cellular and molecular biology, biology, botany, ecology and evolutionary biology, microbiology, psychology) and in physical science (chemistry, geology, physics) is designed to fulfill the state competencies for General Science and Physical Science and II Biology.

1. Mathematics 115, 123 (3,3) or Mathematics 123, 125 (3,3) or Mathematics 141-142 (4,4) or Mathematics 151-152 (3,3)
2. Chemistry 120, 130 (4,4)
3. Biology 130, 140 (4,4) or Botany 110-120 (4,4)
4. Geology 101-102 (4,4) or Geography 131-132 (4,4) or Physics 221-222 (4,4)

Core courses: (11 hours)
1. Biology 240: General Genetics (4)
2. Biology 250: General Ecology (4)

Beyond the core curriculum, the student must choose 18 hours from the two tracks listed below: 15 hours from one track and 3 hours from the other track.

A. Biological Sciences Track

Botany 305: Socio-Economic Impact of Plants (3); Botany 310: Plant Morphology (4); Botany 320: Paleobiology (3); Botany 330: Field Botany (3); Botany 340: General Botany (3); Botany 350: Genetics and Society (3); Botany 360: Botanical Development and Embryology (3, 3); Botany 370: Animal Ecology (3); Botany 380: Human Evolutionary Biology (3); Botany 390: Human Anatomy and Physiology (3); Botany 400: Comparative Animal Behavior and Lab (3,3); Botany 410: Zoology (3); Botany 420: Paleontology (3); Botany 430: Geobiology (3); Botany 440: Evolutionary Biology (3); Botany 450: Geomorphology (3); Botany 460: Principles of Geohydrology (3).

+Course has prerequisite other than courses prerequisite to this major. See catalog for details.

B. Physical-Chemical Sciences Track

Biochemistry and Cellular and Molecular Biology 310: Physiological Chemistry (4); Chemistry 350-360-369: Organic Chemistry and Lab (3,3,3); Chemistry 430: Preclinical and Evolutionary Biology 446: Introduction to Oceanography (4); Geography 334: Meteorology (3); Geography 433: The Land-Surface System (3); Geography 434: Climatology (3); Geography 436: Water Resources (3); Geography 439: Plant Geography of North America (3); Geography 445: Geographical Resources (3); *Geology 201: Biodiversity: Past, Present, and Future (3); *Geology 202: Earth as an Ecosystem: Modern Problems and Solutions (3); Geology 303: *Geology of National Parks (3); Geology 310: Mineralogy (4); Geology 330: Igneous and Metamorphic Petrology (3); Geology 340: Stratigraphy and Sedimentation (3); Geology 350: Structural Geology (4); Geology 361: Minerals and Energy Resources: Geologic Constraints and Environmental Impacts (3).

+Course has prerequisite other than courses prerequisite to this major. See catalog for details.

Total (core + track concentration) = 29 hours

(3) Mathematics

This concentration aims at developing a fundamental understanding of some of the primary avenues of mathematics thought appropriate to the needs of the teacher in grades K-8. Topics include algebra, calculus, computing, geometry, history of mathematics, probability, and statistics.
Mathematics 115: Statistical Reasoning (3); Mathematics 130: Pre-calculus I (4); Mathematics 141-142: Calculus I and II (4,4); Mathematics 241: Calculus III (4); Mathematics 251: Matrix Algebra (3); Mathematics 300: Introduction to Abstract Mathematics (3); Mathematics 322: Probability (3); Mathematics 400: History of Mathematics (3); Mathematics 401: Math and Microcomputing (3); Mathematics 460: Geometry (3).

Total: 36 hours

(4) Mathematics and Science

This concentration should develop the knowledge and understanding of the natural sciences and mathematics appropriate to the needs of the teacher in grades K-8 and is intended to provide the student with the minimal competence to teach in either or both disciplinary areas. Of necessity, depth in any particular discipline is secondary to obtaining breadth from an array of natural sciences and mathematics areas. Courses included in the major have been selected to maximize the number of upper division courses that can be taken without prerequisites.

Prerequisite courses: (32 hours)

1. Mathematics 141-142 (4,4)
2. Chemistry 120, 130 (4,4)
3. Biology 130, 140 (4,4) or Botany 110-120 (4,4)
4. One sequence from among the following: Astronomy 161-162 (4,4) or Geography 131-132 (4,4) or Geology 101-102 (4,4) or Physics 221-222 (4,4)

NB: One mathematics and one science sequence or two science sequences (14-18 hours) may be used to satisfy general education requirements.

Core courses: (17 hours)

1. Biology 240: General Genetics (3); Biology 250: General Ecology (4) or Biochemistry and Cellular Molecular Biology 230: Human Physiology (5); and Ecology and Evolutionary Biology 240: Human Anatomy (3)
2. Choose two of the following three courses: Geology 201: Biodiversity: Past, Present, and Future (3); Geology 202: Earth as an Ecosystem: Modern Problems and Solutions (3); Geology 303: Geology of National Parks (3)
3. Mathematics 300: Introduction to Abstract Mathematics (3) Beyond the core curriculum, the student must take two courses from each of these three areas:

A. *Biological Sciences (6-8 hours)

1. Anthropology 496: Biology of Human Variability (3); Biochemistry and Cellular Biology 310: Physiological Chemistry (4); Biochemistry and Cellular Molecular Biology 330: Animal Development and Embryology (3); Of the following three Botany courses you may choose only one: Botany 305: Socio-Economic Impact of Plants (3); Botany 350: Biometrics and Society (3); Botany 309: Biology of Human Affairs (3); Botany 310: Plant Morphology (4); Botany 321: Introductory Plant Physiology (4); Botany 330: Field Botany (3); Ecology and Evolutionary Biology 350: Comparative Vertebrate Biology (4); Ecology and Evolutionary Biology 360: Comparative Invertebrate Biology (4); Ecology and Evolutionary Biology 380: General Entomology (3); Ecology and Evolutionary Biology 450-459: Comparative Animal Behavior and Lab (3,3); Ecology and Evolutionary Biology 470: Aquatic Ecology (3); Ecology and Evolutionary Biology 474: Ichthyology (3); Ecology and Evolutionary Biology 484: Conservation Biology (3); Geography 350: Biogeography (3); Microbiology 310: Introduction to Microbiology (3); Microbiology 470: Microbial Ecology (3); Microbiology 470: Sensory Processes and Perception (3); Psychology 461: Physiological Psychology (3)

B. Physical Sciences (6-8 hours)

Chemistry 350-360-369: Organic Chemistry and Lab (3,3,3); Chemistry 445: Geochemistry (3); Chemistry 453: The Land-Surface System (3); Geography 434: Climatology (3); Geography 436: Water Resources (3); Geography 445: Geography of Resources (3); Geology 310: Mineralogy (3); Geology 320: Paleobiology (3); Geology 323: Igneous and Metamorphic Petrology (3); Geology 340: Stratigraphy and Sedimentation (3); Geology 370: Structural Geology (4); Geology 381: Minerals and Energy Resources: Geologic Constraints and Environmental Impacts (3); Geology 420: Paleoclimatology (4)

*Course has prerequisite other than prerequisite to this major. See catalog for details.

C. Mathematics (6 hours)

Mathematics 400: History of Mathematics (3); Mathematics 401: Microcomputing (3); Mathematics 405: Models in Biology (3); Mathematics 406: Geometry (3)

Total (core + areas A, B, and C) = 35 hours

PRE- VETERINARY MEDICINE PROGRAM

The following program is designed for students who wish to pursue an Arts and Sciences degree while preparing for the study of Veterinary Medicine. Students in this program must complete at least 36 credit hours while enrolled in this program. Students must satisfy the Basic Skills and Distribution requirements, and must complete the last 30 hours in residence at UT Knoxville before enrolling in the College of Veterinary Medicine. A departmental major is not required. Upon successful completion of the first year (two semesters) of the professional veterinary medicine curriculum, the Bachelor of Science degree will be conferred by the College of Arts and Sciences.

Note: Admission to the College of Veterinary Medicine is at the discretion of the Admissions Committee of that College; admission to and successful completion of this program does not assure admission to the College of Veterinary Medicine.

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101-102</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 120-130</td>
<td>8</td>
</tr>
<tr>
<td>Biology 130-140</td>
<td>8</td>
</tr>
</tbody>
</table>

Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101-102</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 120-130</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics</td>
<td>6</td>
</tr>
</tbody>
</table>

Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101-102</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 120-130</td>
<td>8</td>
</tr>
<tr>
<td>Basic Skills: Foreign Language (Intermediate Level Sequence)</td>
<td>6</td>
</tr>
</tbody>
</table>

Senior

Completion of major program and B.A./B.S. requires or completion of one year at UT College of Veterinary Medicine.

Total: 96 hours
ANIMAL

African-American Studies

See Interdisciplinary Programs.

American Studies

See Interdisciplinary Programs.

ANCIENT

MEDITERRANEAN

CIVILIZATIONS

See Interdisciplinary Programs.

ANTHROPOLOGY

See Interdisciplinary Programs.

Associate Professors:
I. Harrison (Emeritus), Ph.D. Syracuses; B.J. Howell, Ph.D. Kentucky; L. Konigsberg, Ph.D. Northwestern; A. Kramer, Ph.D. Michigan; M. Marks, Ph.D. Tennessee.

Assistant Professor:
M. Ferreira, Ph.D. California (Berkeley).

Research Associate Professor:
J. Chapman (Director, F.H. McClung Museum), Ph.D. North Carolina.

Research Assistant Professor and Curator:
S. Frankenfield, Ph.D. Northwestern.

Research Assistant Professor:
M. Elam, Ph.D. Missouri.

Adjunct Professor:
R. Dunnell, Ph.D. Yale; F.V. Harrison, Ph.D. Stanford.

PROGRESSION STANDARDS:
Progression into the Anthropology major is based on performance in the three prerequisite courses. Students must maintain a grade point average of at least 3.0 for the three introductory courses, with none of the three grades below a C. Upon satisfactory completion of the prerequisites, the student may apply for progression into the Anthropology major by: (1) completing a formal application for progression in the Anthropology Department; and (2) including with that application an academic history demonstrating satisfactory completion of the progression requirements.

The Undergraduate Committee of the Anthropology Department will meet regularly to determine the status of these applications. Upon progression to the major, a department advisor will be assigned in consultation with the student. The anthropology major consists of 450 and 357 and 27 additional hours of upper division course work in Anthropology. This course work shall be distributed as follows:

1. one course from categories (a), (b), (c), (d), and (e); and two courses from category (e).
   a. archaeological methodology and theory: 361, 362, 440, 464
   b. archaeological area: 360, 462, 463
   c. cultural area: 310, 311, 312, 315, 319
   d. cultural method and theory: 410, 411, 412, 413, 414, 413
   e. biological anthropology: 480, 490, 494, 495, 496

2. Remaining hours may be selected from any upper division Anthropology courses.

To enroll and receive honors credit for Anthropology 457, the student must complete 357 with a grade of B or better, maintain a 3.5 GPA in all Anthropology courses, and maintain a 3.2 GPA overall.

Continuation in the anthropology major requires maintenance of a 2.5 GPA or better in all anthropology courses. Students failing to meet this standard will be notified in writing, they are on probation and their records will be reviewed. Those who continue in probationary status for two consecutive semesters will be dropped from the major.

Antropology 110, 120, 130 are prerequisite to a minor in anthropology, consisting of 15 hours of upper division Anthropology courses, chosen in consultation with an Anthropology advisor.

ART

Professors:

Associate Professors:

Assistant Professors:
Sally Brogden, M.F.A., New York State College of Ceramics at Alfred; Areta Jung, M.F.A. Wisconsin; Kevin Everson, M.F.A. Ohio; P. Smith, M.F.A. Rhode Island School of Design; Suzanne Wight, Ph.D. Stanford.

B.F.A. in Studio Art

The B.F.A. in Studio Art is a professionally oriented degree especially intended for those students planning careers or graduate study in the visual arts. All students seeking studio degrees (B.A. Studio, B.F.A. Studio and Art Education) must present and pass the appropriate Portfolio Review for their area of study in order to be admitted into advanced courses. Contact specific program area faculty for review schedules and details.

Continued in the Sophomore year and is intended to provide students with an overview assessment of their potential for success in the intended area of study early enough to allow a student to make a program change should that be advisable. Students who do not pass Portfolio Review are provided with options including a portfolo for resubmission during the next review cycle. All studio courses require 3 hours per week attendance for each credit hour earned.
departmental advisement each semester to ensure proper scheduling. Students seeking the B.F.A. degree in Studio Art should also consider pursuing a minor in Art History. Transfer students are advised that a minimum of 21 hours in studio courses, and 6 upper division hours in art history, must be earned at UT Knoxville. Transfer students who wish to enroll in 300 (junior level) or 400 (senior level) courses must present a portfolio of 10-15 works, the majority of which must be in their major area of concentration.

No grade below "C" in art courses may be applied to the B.F.A. major. A minimum of 40 credit hours, 300 level or above, must be earned prior to graduation.

Students may be accepted into advanced media concentrations in Ceramics, Drawing, Painting, Media Arts, Printmaking, Sculpture, Watercolor, and approved Inter-Area combinations, after passing the appropriate portfolio course.

### Basic Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 101, 103</td>
<td>4</td>
</tr>
<tr>
<td>Art 295</td>
<td>3</td>
</tr>
<tr>
<td>Art History 122, 123, 183</td>
<td>9</td>
</tr>
<tr>
<td>Art History Electives</td>
<td></td>
</tr>
<tr>
<td>One course from each of the following 5 areas: Art Drawing, Art Painting/Water-color, Art Ceramics, Art Sculpture, Art Printmaking, Art Media Arts</td>
<td>18</td>
</tr>
</tbody>
</table>

Sub-Total: 43

### Concentration—Ceramics; Drawing; Painting; Printmaking; Sculpture; Watercolor; or Inter-Area (Approved combinations of studio media).

- 200 level: 3
- Portfolio Review (Prerequisite to 300 and 400 courses) (S/NC): 0
- 300 and 400 level: 20
- *Approved Studio Electives for Concentration*: 9

Sub-Total: 32

### Studio Electives

Additional hours in studio courses to be completed in the Art Department or our affiliated facility, Armour Art School of Art, and the College of Architecture, Art Education, and Design. Students may also apply a maximum of 6 hours of approved studio courses from Architecture, Art Education, and Design.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Media 331 (Portfolio Review) (Prerequisite to 300 and 4000 level courses) (S/NC): 0</td>
<td></td>
</tr>
<tr>
<td>Art History 403 (History of Photography): 3</td>
<td></td>
</tr>
<tr>
<td>Art Media 331 (Photography I): 2</td>
<td></td>
</tr>
<tr>
<td>Art Media 331 (Photography II): 2</td>
<td></td>
</tr>
<tr>
<td>Art Media 331 (Photography III): 2</td>
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<tr>
<td>Art Media 331 (Digital Photography): 2</td>
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</tr>
<tr>
<td>Art Media 331 (Digital Photography II): 2</td>
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<tr>
<td>Studio Electives</td>
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<td>Core</td>
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<td>Art 101, 103</td>
<td>4</td>
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<tr>
<td>Art 295</td>
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<tr>
<td>Art History Electives</td>
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<tr>
<td>One course from each of the following 5 areas: Art Drawing, Art Painting/Water-color, Art Ceramics, Art Sculpture, Art Printmaking, Art Media Arts</td>
<td>18</td>
</tr>
</tbody>
</table>

Sub-Total: 46

### B. F. A. in Studio Art—Media Arts Concentration

#### Basic Requirements

<table>
<thead>
<tr>
<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td>Art Core</td>
</tr>
<tr>
<td>Art 101, 103</td>
</tr>
<tr>
<td>Art 295</td>
</tr>
<tr>
<td>Art History 122, 123, 183</td>
</tr>
<tr>
<td>Art History Electives</td>
</tr>
<tr>
<td>One course from each of the following 5 areas: Art Drawing, Art Painting/Water-color, Art Ceramics, Art Sculpture, Art Printmaking, Art Media Arts</td>
</tr>
</tbody>
</table>

Sub-Total: 32

### Concentration—Media Arts 330 (Portfolio Review) (Prerequisite to 300 and 400 level courses) (S/NC): 0

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Media 331 (Portfolio Review) (Prerequisite to 300 and 400 level courses) (S/NC): 0</td>
<td></td>
</tr>
<tr>
<td>Media Arts 331 (Photography I): 2</td>
<td></td>
</tr>
<tr>
<td>Media Arts 331 (Photography II): 2</td>
<td></td>
</tr>
<tr>
<td>Media Arts 331 (Photography III): 2</td>
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</tr>
<tr>
<td>Media Arts 331 (Digital Photography): 2</td>
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<td>Studio Electives</td>
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<td>Core</td>
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<td>18</td>
</tr>
</tbody>
</table>

Sub-Total: 43

### Studio Electives

Additional hours in studio courses to be completed in the Art Department or our affiliated facility, Armour School of Arts and Crafts. Students may apply a maximum of 6 hours of approved studio courses from Architecture, Art Education, and Design.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture, Computer Science, Human Resource Development, Interior Design, and Theatre. Students electing an additional major in Art Education and licensure to teach must take 13 hours in undergraduate Art Education courses.</td>
<td>15</td>
</tr>
</tbody>
</table>

Sub-Total: 15

### General Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science/Mathematics</td>
<td>12-14</td>
</tr>
<tr>
<td>Arts and Sciences Non-Art Electives</td>
<td>6-8</td>
</tr>
</tbody>
</table>

Sub-Total: 32-33

Total: 125-126 hours

### B.F.A. in Studio Art with an Additional Major in Art Education

Students who wish to obtain licensure to teach art in the schools should pursue the B.F.A. degree in studio with an additional major in Art Education. For details, see Art Education listings in the College of Education section of this catalog.

### B.F.A. in Graphic Design

The Graphic Design major is specifically designed to provide the basic visual education for students who wish to pursue careers in graphic design-related fields such as advertising, art direction, three-dimensional design, publications, or electronic media.

### B.F.A. in Graphic Design

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Art 101, 103</td>
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</tbody>
</table>

Sub-Total: 46

### B.F.A. in Studio Art with an Inter-area Concentration

Transfer students are advised that a minimum of 21 hours in studio courses, and 6 upper division hours in art history must be earned at UT Knoxville. Transfer students who wish to enroll in 300 (junior level) courses must present a portfolio of 10-15 works, the majority of which must be in graphic design.

No grade below "C" in art courses may be applied to the B.F.A. major. A minimum of 40 credit hours, 300 level or above, must be earned prior to graduation.

A minimum of 127 credit hours are required for graduation. Students are advised that courses in Graphic Design must be taken in sequence, and that successful completion of Art 350 (Portfolio Review, S/NC) is prerequisite to all upper division courses.

Students must complete 351 and 356 with a grade of C or better by the end of the second fall semester following successful completion of Portfolio Review (350). If 351 and 356 are not successfully completed in this time, the student must resubmit a portfolio to regain entrance into the junior program. Resubmission of the portfolio must occur during the scheduled spring portfolio review.

### Design and Professional Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Core</td>
<td></td>
</tr>
<tr>
<td>Art 101, 103, 295</td>
<td>7</td>
</tr>
<tr>
<td>Art History 122, 123, 183</td>
<td>9</td>
</tr>
<tr>
<td>Art History Electives</td>
<td></td>
</tr>
<tr>
<td>Art Media Arts 231 (Digital Photography I)</td>
<td>4</td>
</tr>
<tr>
<td>Art Media Arts 231 (Digital Photography II)</td>
<td>4</td>
</tr>
<tr>
<td>300 and 400 Level Electives in Media Arts</td>
<td>6</td>
</tr>
<tr>
<td>Sub-Total: 34</td>
<td></td>
</tr>
</tbody>
</table>

### Studio Electives

Students must choose a total of 9 hours from a minimum of 2 categories:

1. Art Printmaking (1)
2. Art Ceramics (1)
3. Art Sculpture (1)
4. Art Media Arts (1)

Sub-Total: 9

### General Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science/Mathematics</td>
<td>12-14</td>
</tr>
<tr>
<td>Arts and Sciences Non-Art Electives</td>
<td>6-8</td>
</tr>
</tbody>
</table>

Sub-Total: 33

Total Semester Hours: 127 hours

### B.A. Majors in Art History

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Art 122, 173, 183</td>
<td></td>
</tr>
<tr>
<td>Art History courses numbered 500 and above</td>
<td>21</td>
</tr>
</tbody>
</table>

Sub-Total: 9
in Harrow, located 40 miles from the UT Knoxville campus, is a visual arts complex which functions as a regional and national cultural center. In 1954, Pi Beta Phi established an affiliation with the University of Tennessee, and with the Department of Art in 1966. The program currently includes spring and summer one and two week media workshops, special weekend conferences, and community classes. Media offerings include: clay, fiber, fabric, metal, wood, stained glass, leather, papermaking, drawing, painting, graphics and photography. Students may receive audit, undergraduate or graduate credit for spring and summer classes through the University of Tennessee, Department of Art. Facilities include well-equipped studios, on campus book and supply store, a large auditorium, art library, and Residents' Community. The Arrows Gallery presents changing juried, invitational, theme or media-oriented exhibitions. The Gallery and Library are open to the public Monday-Saturday, 8:30 a.m. - 5:30 p.m. Arrowmont receives financial support from the Arrowmont Fraternity, alumnae clubs, and individual members.

**dragonflytongue** See Interdisciplinary Programs.

**ASTRONOMY**

See Physics and Astronomy.

**AUDIOLOGY AND SPEECH PATHOLOGY**

**Professors:** P.J. Carney (Head), Ph.D. Iowa; C.W. Asp, Ph.D. Ohio State; D.M. Lipscomb (Adjunct), Ph.D. Washington; I.V. Nabilek (Emeritus), Ph.D. Czech Technical (Prague); H.A. Peterson (Emeritus), Ph.D. Illinois; J.C. Silverstein (Emeritus), Ph.D. Purdue.

**Associate Professors:** S.B. Burfield, Ph.D. Iowa; C.J. Ferrell, M.A. Tennessee; P. Gordon, Ph.D. Tennessee; E.I. Hamby (Adjunct), Ph.D. Iowa; L. Swanson, Ph.D. Purdue, J. Thelin, Ph.D. Iowa.

**Assistant Professors:** P. Eral (Adjunct), Ph.D. Tennessee; M.L. Erickson, Ph.D. Southern California; A. Harkrider, Ph.D. Texas; M. Hedrick, Ph.D. Vanderbilt; G. McCullough, Ph.D. Vanderbilt; S. Newcomb (Adjunct), Tennessee; J. Rauh, Ph.D. University of Pittsburgh.

**Instructors:** D. King, M.A. Tennessee; T.R. Singletary, M.S. Colorado State.

**Research Professor:** A. K. Nabekel (Emeritus), Ph.D. Polish Academy of Sciences, Warsaw, Poland.

**Teaching Assistant:** The Department of Audiology and Speech Pathology offers course work in the scientific study of human communication sciences and disorders. The two undergraduate majors (audiology and speech pathology) are preparatory to graduate work and to professional certification in some aspect of speech, language, and hearing disorders. The master's degree is required for professional certificates and employment positions. Information about the audiology and speech pathology programs may be obtained from the departmental office, 457 South Building Hall, and students are strongly encouraged to consult with the undergraduate advisors in the department as early as possible in their programs. Suggested elective courses for students not majoring in Audiology and Speech Pathology include 300, 302, 305, 306, 311, 433, 461, 473, and 494; one course from the following courses: Linguistics 200, 371, 411, 411, 417, 431, or 472.

**The B.A. major in speech pathology consists of Audiology and Speech Pathology 300, 302, 305, 306, 311, 433, 461, 473, and 494; and one course from the following courses:** Linguistics 200, 371, 411, 417, 471, or 472.

**The B.A. major in audiology consists of Audiology and Speech Pathology 300, 302, 305, 306, 311, 433, 461, 473, and 494.**

Applicants for enrollment in clinical practice must submit an application to the department for the Clinical Services Committee. Requirements for enrollment in clinical practicum courses (434 in Speech Pathology or 445 in Audiology) include a minimum cumulative GPA of 2.7 (or 3.0 in the last 30 hours of enrollment), a minimum of "C" in all courses taken within the department, successful completion of 433, and a minimum GPA of 2.75 within the major.

Students who fail to satisfy the above prerequisites for clinical practicum experience may graduate with a degree from the department, but will not be recommended for graduate study at UT. Requests for exceptions to this rule may be submitted to the departmental Admissions Committee.

Additional requirements for professional certification include courses in biological/physical sciences, mathematics, and at least six semester hours in behavioral and/or social sciences which pertain to the understanding of normal/abnormal behavior. Students majoring in Audiology and Speech Pathology are strongly encouraged to consult with their advisors before selecting elective courses.

**BACTERIOLOGY**

See Microbiology.

**BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY**

**Professors:** R.M. Bagby, Ph.D. Illinois; J.M. Becker, Ph.D. Cincinnati; J.G. Carlson (Emeritus); J.S. Campbell (Emeritus); D.S. Conover (Emeritus); D.D. Danks (Emeritus); T.T. Chen, Ph.D. Pennsylvania; T.T. Chen, Ph.D. Florida; J.E. Churchich, Ph.D. Sheffield; M.A. Handel (Distinguished Prof.); Ph.D. Kansas State; B. Hochman (Emeritus), Ph.D. California; K.W. Jervis, Ph.D. London; J.G. Joshi, Ph.D. Poona; D.C. Jov (Emeritus); D.W. Koo (Distinguished Scientist), Ph.D. Oxford (UK); J.R. Kennedy, Ph.D. Iowa; J.N. Lilles (Emeritus), Ph.D. Ohio State; J.A. MacCabe, Ph.D. California (Davis); K.J. Monty, Ph.D. Rochester; L.E. Roth (Emeritus), Ph.D. Chicago; T.P. Salo (Emeritus), Ph.D. Michigan; C.A. Shivers, Ph.D. Michigan State; H.G. Welch (Emeritus), Ph.D. Florida; G.L. Whalston (Emeritus), Ph.D. Iowa; W.D. Wicks, Ph.D. Harvard.
### DIVISION OF BIOLOGY

**Director:**

W. F. Harris, Ph.D. Ecology and Evolutionary Biology

**Basic Faculty:**


### Biology Concentration

The Biological Sciences major offers four areas of concentration: Biochemistry and Cellular and Molecular Biology; Ecology and Evolutionary Biology; Microbiology; and Plant Biology. **(See section C below for information on honors options.)** The name of the major will be Biological Sciences: [Concentration Name]. The requirements are as follows:

#### A. Prerequisites to All Concentrations:

1. **Chemistry 120-130**
2. **Physics 221-222**
3. **Math 141-142 or 151-152**
4. **Biology 130 or Botany 110-120**
5. **Biology 140-240, 250**

#### B. Progression Requirement:

A cumulative GPA of at least 2.5 in prerequisite science and math courses is required both to declare and to continue as a Biological Sciences major. Students declaring a major in Biological Sciences will be assigned a faculty advisor in one of the biological sciences departments in consultation with the student. The requirement specifies the following four categories:

1. **Ecology**
2. **Organismal Biology**
3. **Organismal Evolutionary Biology**
4. **Plant Evolutionary Biology**

#### C. Honors major:

An honors option is offered to students with a cumulative GPA in Biological Sciences prerequisites of 3.5 or above and who have completed Biology 350-360-389, or Chemistry 310-319 and BCMB 310. The honors option requires a substantive research project carried out under the supervision of a BCMB faculty member and a thesis describing the results of that project. The thesis must be approved by the faculty supervisor.

#### D. Concentration Area Requirements:

**Biochemistry and Cellular and Molecular Biology (BCMB):** Additional prerequisite: Computer Science 100. The concentration consists of Chemistry 350-360-389, BCMB 401-402, and at least 16 additional credit hours selected from BCMB courses numbered 300 or above (except BCMB 310 and 410), or from the following courses in other departments: Microbiology 310-319, 410, 411, 420-429, 430, 440; Botany 321, 404; EEB 350, 360, 460. At least two of the 18 credit hours must be selected from the following laboratory courses: BCMB 403, 418, 419, 429 and 452, and Biology 401. At least three of the 18 credit hours must be selected from the following physiology courses: BCMB 440, Botany 321, and Microbiology 310. No more than 9 of the 18 credit hours may be in non-BCMB courses.

An honors option is offered to students with a cumulative GPA in Biological Sciences prerequisites of 3.5 or above and who have completed Biology 130-140-240-250. The honors option also requires a substantive research project carried out under the supervision of a BCMB faculty member and a thesis describing the results of that project. The thesis must be approved by the faculty supervisor.

#### Ecology and Evolutionary Biology:

The concentration consists of:

1. (Chemistry 350-360-389 or 350, 310-319 or Chemistry 310-319 and BCMB 310.
2. **Quantitative Requirement:** One course from (note math prerequisites):
   - Math 231 Differential Equations (3) (Prereq. 141-142)
   - Math 251 Matrix Algebra I (3) (Prereq. 141-142)
   - Math 405 Models in Biology (3) (Prereq. 141-142 or 151-152)

Stat 201 Introduction to Statistics (3)

Note that Math 141-142 is recommended for students with a strong interest in quantitative ecology and is required for several courses that satisfy the EEB Quantitative Requirement.

3. **Upper Division courses:** A total of 24 additional hours is required at the 300 level or above to include at least 15 hours from EEB, and at least one course from each of the following four categories:

   **Evolution**
   - EEB 460 Evolution
   - Bot 403 Plant Evolution

   **Ecology**
   - EEB 446 Oceanography
   - EEB 470 Aquatic Ecology
   - EEB 484 Conservation Biology
   - EEB 431 Plant Ecology
   - MICRO 470 Microbial Ecology

   **Organismal Biology**
   - EEB 350 Vertebrate Biology
   - EEB 360 Invertebrate Ecology
   - EEB 380 Entomology
   - EEB 450 Comparative Animal Behavior
   - EEB 474 Ichthyology
   - EEB 461 Special Topics in Organismal Biology
   - Bot 310 Plant Morphology
   - Bot 330 Field Botany
   - MICRO 310/319 Introduction to Microbiology/Introductory LCM

   **Physiology**
   - Bot 321 Introduction to Plant Physiology
   - BCMB 440 General Physiology
   - BCMB 415 Neurobiology
   - MICRO 310 General Microbiology

4. The remaining hours for the EEB concentration can include any of the remaining EEB courses on these lists, other
More than 8 hours may be credited from any one biological science department, and not more than 3 hours of undergraduate research may be credited.

**BOTANY**

**Professors:**
E. E. Schilling (Head), Ph.D. Indiana; J. D. Csepnetti (Undergraduate Coordinator), Ph.D. Harvard; E. E. Clobasch (Emeritus), Ph.D. Duke; H. R. DeSeim (Retired), Ph.D. Ohio State; A. M. Evans (Emeritus), Ph.D. Michigan; W. R. Herndon (Emeritus, Alumni Distinguished Service Professor), Ph.D. Vanderbilt; L. G. Hickok, Ph.D. Massachusetts; R. W. Holton (Emeritus), Ph.D. Michigan; K. W. Hughes, Ph.D. Utah; B. C. Mullin, Ph.D. North Carolina State; R. H. Petersen (Distinguished Professor), Ph.D. Columbia; O. J. Schwarz, Ph.D. North Carolina State; P. L. Walne (Benwood Distinguished Professor), Ph.D. Texas.

**Associate Professors:**
C. C. Amundsen, Ph.D. Colorado; A. S. Hallman (Emeritus), Ph.D. Ohio State; M. Pigliucci, Ph.D. Connecticut; D. K. Smith, Ph.D. Tennessee; B. E. Wofford (Curator of Herbarium), Ph.D. Tennessee.

**Assistant Professors:**
M. B. Cruzan, Ph.D. SUNY (Stony Brook); A. von Amim, Ph.D. East Anglia, United Kingdom; R. L. Small, Ph.D. Iowa State.

**Lecturer:**

Students wishing to emphasize study in this area elect to major in Biology with a concentration in Plant Biology. See the description of the Biology Major under "Division of Biology" for requirements.

**CHEMISTRY**

**Professors:**
M. J. Seppanen (Head), Ph.D. Iowa State; J. L. Adcock, Ph.D. Texas; S. D. Alexander, Ph.D. California (Berkeley); D. C. Baker, Ph.D. Ohio State; J. E. Bartmess, Ph.D. Northwestern; J. E. Bloore (Emeritus), Ph.D. Manchester (England); W. E. Bull (Emeritus), Ph.D. Illinois; J. Q. Chambers, Ph.D. Kansas; R. N. Compton, Ph.D. Tennessee; K. D. Cook, Ph.D. Wisconsin; J. A. Dean (Emeritus), Ph.D. Michigan; J. F. Eastham (Emeritus), Ph.D. California (Berkeley); C. S. Feigerle, Ph.D. Colorado; W. H. Fletcher (Emeritus), Ph.D. Minnesota; F. A. Grimm (Emeritus), Ph.D. Cornell; G. A. Guicher (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Universidad de Paris (France); G. W. Kabalka (Robert H. Cole Professor, Alumni Distinguished Service Professor), Ph.D. Purdue; D. C. Kleinfelter (Emeritus), Ph.D. Princeton; J. D. Kolar, Ph.D. Yale; M. H. Lietzke (Emeritus), Ph.D. Wisconsin; L. J. Magid, Ph.D. Tennessee; R. M. Magid, Ph.D. Yale; R. M. Pagni, Ph.D. Wisconsin; J. R. Peterson (Emeritus), Ph.D. California (Berkeley); G. K. Schuelke (Alumni Teacher/Distinguished Service Professor), Ph.D. Illinois; W. A. Van Hook, Ph.D. Purdue; E. L. Wehry (Emeritus), Ph.D. Purdue; T. F. Williams (Alumni Distinguished Service Professor), Ph.D. London (England); C. Woods, III (Visiting Professor), Ph.D. North Carolina State; B. Wunderlich (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Northwestern.

**Associate Professors:**
C. E. Barnes, Ph.D. Stanford; C. A. Lane (Emeritus), Ph.D. California (Berkeley); F. M. Schell, Ph.D. Indiana; Z. B. Xue, Ph.D. UCLA.

**Assistant Professors:**
M. D. Badmum, Ph.D. Massachusetts; S. D. Gilman, Ph.D. Penn State; R. J. Hinde, Ph.D. Chicago; J. F. C. Turner, Ph.D. D. G. Young, Ph.D. Ohio State.

**Bachelor of Science in Chemistry**

Students who desire to major in chemistry may select from either of two courses of study: Bachelor of Science or Bachelor of Science in Chemistry. The latter program is approved by the Committee on Professional Training of the American Chemical Society. It is designed to train students to go directly into positions in the chemical industry or to enter graduate study leading to a position in research and college teaching. A student in the B.S. in Chemistry program should, at the earliest opportunity, ask the Arts and Sciences Advising Center for assignment of a faculty advisor in the Department of Chemistry. For further information, contact the Head of the Department of Chemistry, 575 Stebbins Hall.

**CURRICULUM REQUIREMENTS:**

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Bachelor of Science or Bachelor of Science in Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td>125-131</td>
<td><strong>Total:</strong> 125-131 hours</td>
</tr>
</tbody>
</table>

**Preferably chosen from German, French, Russian or Japanese...**

**Distribution requirements of the College of Arts and Sciences are satisfied by taking:**

- Non-U.S. History (6 hours), Social Science (6 hours), Humanities (6 hours), and Upper-Level Distribution (3 hours in either U.S. Studies or Foreign Studies and 3 hours Capstone Experience).

- The number of credit hours that may be credited...
B.S. Degree and Chemistry Major

For students wishing to major in chemistry but desiring a more flexible course of study than the B.S. in Chemistry, there is the regular B.S. degree. Because these two programs are designed for students with different career goals, the folowing paragraphs should be carefully considered before selecting courses. A student who decides to major in chemistry should ask the Arts and Sciences Advising Center for assignment of a faculty advisor in the Department of Chemistry. For further information, contact the Head of the Department of Chemistry, 575 Buehler Hall.

The B.S. degree is intended primarily for students who may have career objectives in fields other than chemistry, but in fields in which chemistry has direct application such as medicine, dentistry, pharmacy, business, and ecology. The B.S. in Chemistry degree is recommended for students planning a career in chemistry. However, with the proper choice of physics, mathematics, and physical chemistry courses, the regular B.S. program is also suitable for such students.

Prerequisites to the major are Chemistry 120-130 or 128-138 and Mathematics 141-142 or 151-152. Corequisites to the major is Physics 221-222, 135-136, or 137-138.

The major requires Chemistry 240, 310, 319, 350-360, 369, 471-481 or 473-483, 479, and 10 hours of additional work in chemistry that includes at least one laboratory course or lecture/laboratory course, up to 6 hours of Biochemistry and Cellular and Molecular Biology, 410-420, or Geology 460 may be applied to the 10-hour requirement.

For students planning careers in Chemistry, the recommended courses (from the list above) are Mathematics 141-142, Physics 135-136 or 137-138, and Chemistry 473-483; although not required, certain additional courses are strongly suggested for students planning to become chemists: Mathematics 241 and Chemistry 230, 320, 329, and 406. Because professional chemists need a reading knowledge of foreign languages, intermediate level competency should be acquired in German, French, Russian or Japanese. Students who are undecided about their career goals should consult the Head of the Department at the earliest opportunity. Unlike the Bachelor of Science in Chemistry, the regular B.S. degree is not approved by the Committee on Professional Training of the American Chemical Society.

A minor in chemistry shall consist of the successful completion of 15 hours of chemistry courses numbered 200 and above including 310, 319 (4 hours) and at least one of the following sequences: 350-360, 369 (8 hours); or 471-481, 479 (8 hours); or 473-483, 479 (8 hours).

Honors B.S. Major Candidates for an Honors degree in a minor must fulfill all of the requirements for either the B.S. in Chemistry or the regular B.S. degree and must also satisfy the following stipulations: they must complete with grades of C or better Mathematics 141-142, Physics 135-136 or 137-138, and Chemistry 473-483, 400, and 408; and they must have an overall university GPA of at least 3.0 with a GPA in chemistry courses of at least 3.3.

Cooperative Program

A cooperative program is available to students who are Chemistry majors. After the freshman year, the student alternates a semester in school with a semester in a job in the chemical industry. The program normally requires five years and involves a total of four work semesters and eight school semesters. Students are required to have at least a 2.5 average to enter and remain in the program. Some opportunity exists for students to enter the program later than the end of the freshman year. Interested students should make application to the head of the department at least one semester in advance of the beginning of the first work period. Further information will be supplied on request.

Placement in General Chemistry Sequences

The sequences which meet all of the requirements of a year of General Chemistry and which serve as prerequisites for upper-division courses are 120-130 and 128-138; chemistry majors must complete these sequences. Each semester the latter sequence: Courses 100 and 110 emphasize organic and biochemical, and may not be used as prerequisite for other chemistry courses.

Chemistry 150 and 160 are designed to increase the chemistry literacy and consumer knowledge of students and may not be used as prerequisites for any other chemistry course.

It is possible to move from one sequence to another if permission for substitution is obtained in advance. For example, a student who finds a need to complete the 120-130 series after having completed 100 may substitute 100 for 120 with approval of the Department of Chemistry and may then take 130. Credit may be received for only one of the courses 100, 120, or 128.

In any chemistry course above the freshman level which has Chemistry 130 as a prerequisite, 110 may be used as a prerequisite with approval of the Department of Chemistry.

Chemistry 128-138 is an honors course designed for the student who has already made considerable progress in science. Class size is limited to promote faculty-student interaction. Selection is based on ACT scores, high school chemistry grade, and, if necessary, performance on a placement examination to be given during the first class meeting.

A student receiving a passing grade below 6 in 128 will complete the year's work by taking 130.

Beginning students who have had high school chemistry and who have had additional experience (e.g. summer institute study, special research projects, home laboratory) are invited to apply during the summer to the head of the department for permission to take a proficiency examination in one or more semesters of general chemistry. If a satisfactory grade is made on the examination, credit will be allowed for the semesters (or courses) for which the exam was taken. The Department of Chemistry gives credit in general chemistry to students who present satisfactory scores on the Chemistry Advanced Placement Examination.

CHINESE

See Interdisciplinary Programs (Modern Foreign Languages and Literatures).
COMPUTER SCIENCE

Professors:
Robert C. Ward (Head), Ph.D. Virginia; Jack Dongaraj, Ph.D. New Mexico; M.A. Langston, Ph.D. Texas A&M; J.H. Foore, Ph.D. Georgia Tech; G.R. Sherman (Emeritus), Ph.D. Purdue; Michael G. Thomason, Ph.D. Duke.

Associate Professors:
M.W. Berry, Ph.D. Illinois; T.H. Dunigan, Ph.D. North Carolina; J. Gregor, Ph.D. Aalborg (DK); B.J. MacLean, Ph.D. Purdue; J.S. Plank, Ph.D. Princeton; M.D. Vose, Ph.D. Texas; B.T. Vander Zanden, Ph.D. Cornell.

Assistant Professors:
Padma Raghavan, Ph.D. Pennsylvania State; D.W. Straight, Ph.D. Texas; R. M. Wolski, Ph.D. U.C. Davis.

Instructor:
J.Wallace Mayo, M.S. Tennessee.

Major: Prerequisites to the major include Computer Science 102, 140, 160; Math 141-142; and a two semester laboratory science sequence (Physics 135-136 or Biology or Chemistry or a sequence approved by the Computer Science Department). The major consists of 302, 311, 365, and 380; two of the three courses 340, 360, and 370; Math 241, 251, and 300; English 380; and either an additional 9 hours of upper division Computer Science or an additional 12 hours of upper division Computer Science and Math 231.

It is highly recommended that all Computer Science majors own a personal computer with communications capability.

Minor: An undergraduate minor consists of Computer Science 140 and 160, plus 15 hours of 300 and 400 level courses.

Progression Standards:
Progression into the Computer Science major is based on the availability of space in the laboratories and other resources. Progression requirements are adjusted periodically and current requirements can be determined by consulting with an advisor in the Undergraduate Programs office or by contacting the Computer Science Department directly. Students who enter the College of Arts and Sciences own a personal computer with communications capability.

Minor: An undergraduate minor consists of Computer Science 140 and 160, plus 15 hours of 300 and 400 level courses.

Progression standards are subject to change; current standards are available in the Undergraduate Programs Office and the Computer Science Department office, 107 Ayres Hall.

Transfers from Other UTK Programs:
Students in other colleges or majors at UTK must apply for progression to the major at the earliest possible date but ideally prior to 75 hours. As a minimum, all students must be admitted to the Computer Science major for at least the last 30 hours of work.

Transfers from other institutions:
Transfers from other institutions are generally handled the same as transfers from other UTK programs. However, a prospective transfer student should consult with an advisor in the Computer Science Department to determine which courses can be accepted toward the Computer Science major. It should not be assumed that courses with similar names to UTK courses can be accepted toward the major.

Appeals:
Those students denied progression may appeal to the Undergraduate Committee of the Computer Science Department. Information on the appeals process may be obtained by calling the Computer Science Department, 974-5067, the Undergraduate Programs Office, 974-5096, or by contacting an advisor in that office.

ECOLOGY AND EVOLUTIONARY BIOLOGY

Professors:
T.G. Hallam (Head), Ph.D. Missouri; C.R.B. Boake, Ph.D. Cornell; D.L. Bunting, II, Ph.D. Oklahoma State; G.M. Burghardt Ph.D. Chicago; H. Delcourt, Ph.D. Minnesota; P.A. Delcourt, Ph.D. Minnesota; A.C. Echternacht, Ph.D. Kansas; D.A. Etnier, Ph.D. Minnesota; N.S. Greenberg, Ph.D. Rutgers; L.J. Gross, Ph.D. Cornell; W.F. Harris, III, Ph.D. Tennessee; J.F. McCormick (Emeritus), Ph.D. Emory; G.F. McCracken, Ph.D. Cornell; M.L. Pan, Ph.D. Pennsylvania; S.L. Pimm, Ph.D. New Mexico State; S.E. Ricehart, Ph.D. Wisconsin; G.S. Sayler, Ph.D. Idaho; T.W. Schultz, Ph.D. Tennessee; D. Simberloff (Graduate Chair of Excellence), Ph.D. Harvard; G. Stacey, Ph.D. Texas (Austin); G.L. Vaughan (Emeritus), Ph.D. Duke

Associate Professors:
Amundsen, C.C., Ph.D. Colorado; J.A. Drake, Ph.D. Purdue; D.J. Fox, Ph.D. Johns Hopkins; S. Gavrilets, Ph.D. Moscow State; S. Gittleman (on leave), Ph.D. Sussex (Brighton, England); M. Giguerci, Ph.D. Connecticut.

Assistant Professors:
M.B.C. Cruzan, Ph.D. SUNY (Stony Brook); J. Wetzl, Ph.D. Arizona.

Students wishing to emphasize study in this area elect to major in Biology with a concentration in Ecology and Evolutionary Biology. See the description of the Biology Major under "Division of Biology" for requirements.

ECONOMICS

See faculty listing the College of Business Administration.

The program in economics combines a broad liberal education with the rigorous study of current issues of the day such as employment, inflation, poverty, wealth, and the benefits and costs of economic growth.

Courses offered in the Department of Economics of the College of Business Administration provide opportunity for a major or minor in economics in the College of Arts and Sciences.

Requirements for a B.A. major in economics consist of: (1) Economics 201 or equivalent honors courses as a prerequisite to the major and (2) Economics 311, 313, and 499 plus 18 additional hours in upper division economics courses. Majors are encouraged to satisfy List B of the Natural Science Distribution Requirement with one of the mathematics packages Mathematics 115-123, 123-125, or 141-142. Students planning graduate work in Economics should elect Mathematics 141-142.

Honor: The Department of Economics offers an honors B.A. degree. Candidates for the honors degree must complete 311, 313, and 21 upper division hours to include the honors seminar 491. Students interested in the honors degree should contact the department for details.

A minor consists of (1) Economics 201, and (2) 15 additional hours at the upper-division level. Minors are encouraged to include Economics 311 and 313.

In addition, certification to teach economics in secondary schools is available. Students with such interest should consult the Certification Clerk, Room 212, Claxton Education Building as early in their program as possible to determine the appropriate requirements.

ENGLISH

Professors:
D.A. Carroll (Head), Ph.D. North Carolina; P.G. Adams (Young Professor Emeritus), Ph.D. Texas; E.W. Bratton, Ph.D. Illinois; D.E. Cox (Associate Head), Ph.D. Missouri; R.Y. Drake, Jr. (Young Professor), Ph.D. Yale; A.R. Enser, Ph.D. India; R.J. Finneran (John C. Hodges Professor), Ph.D. North Carolina; J.H. Fisher (John C. Hodges Professor Emeritus), Ph.D. Pennsylvania; S.B. Garner, Jr., Ph.D. Princeton, J.E. Gill, Ph.D. North Carolina; D.F. Goselee, Ph.D. Yale; N.M. Goselee (Alumni Distinguished and Young Professor), Ph.D. Yale; T.J.A. Hefeman, Ph.D. Cambridge; G.B. Hutchinson, Ph.D. Indiana; M. Kallet, Ph.D. Rutgers; M.L. Keene, Ph.D. Texas; R.M. Kelly (Young Professor), Ph.D. Duke; B.J. Leggett (Humanities Professor), Ph.D. Florida; I. Leki, Ph.D. Illinois; M.A. Lofaro, Ph.D. Maryland; C. Maland (Young Professor), Ph.D. Michigan; A.R. Penner (Emeritus), Ph.D. Colorado; J.E. Reeve, Ph.D. Kentucky; N.J. Sanders (Young Professor Emeritus), Ph.D. Shakespeare Institute, Stratford-on-Avon; D.J. Schneider (J. Douglas Bruce Professor Emeritus), Ph.D. Northwestern; D.M. Scura, Ph.D. North Carolina; W.R. Shurr (Humanities Professor, Emeritus), Ph.D. North Carolina; B.T. Stewart (Emeritus), Ph.D. Northwestern; R.E. Stillman, Ph.D. Pennsylvania; J.B. Traher, Jr., Ph.D. Princeton; J.M. White (Young Professor Emeritus), M.A. Cambridge; N. Wright (Emerita), Ph.D. Yale.
Associate Professors:

Assistant Professors:
M. Anderson, Ph.D. Vanderbilt; J.L. Black, Ph.D. Toronto; J. Dickson, Ph.D. Princeton; J.O. Evelev, Ph.D. Duke; D.R. Geis, Ph.D. Michigan; M. Knight, M.F.A. Virginia; K. Mostern, Ph.D. California (Berkeley).

Prerequisites and Corequisites: One two-semester sequence chosen from the following groups: English 201-202 (British Literature); 221-222 (Literature of the Western World); 231-232-233 (Literature); 251-252-253 (Introduction to literary genres).

Major Requirements: The English major consists of ten courses at the 300-400 level in one of the following concentrations:

Creative Writing: (1) a two-course sequence in creative writing; (2) three other writing courses; (3) four courses in literature, two of which must be before 1900; (4) one course in language, theory, cultural, ethnic, or gender studies.

Literature: (1) English 376 (Colloquium in Literature), to be taken, if possible, near the beginning of the student's major program; (2) four courses in literature before 1900, including at least two courses before 1800; (3) one course in American literature; (4) one course in twelfth-century literature; (5) one course in language, theory, cultural, ethnic, or gender studies; (6) two or more courses from any of the department's offerings, including criticism, film, folklore, language, literature, rhetoric, and writing. Courses may count in more than one category.

Rhetoric and Writing: (1) a three-course package in rhetoric and writing; (2) one other course in rhetoric or writing; (3) four courses in literature, two of which must be before 1900, and at least one of those before 1800; (4) one course in language, theory, cultural, ethnic, or gender studies; (5) one course from any of the department's offerings, including criticism, film, folklore, language, literature, rhetoric, and writing.

Technical Communications: (1) a three-course package in technical communications; (2) one other course in rhetoric or writing; (3) four courses in literature, two of which must be before 1900, and at least one of those before 1800; (4) one course in language, theory, cultural, ethnic, or gender studies; (5) one course from any of the department's offerings, including criticism, film, folklore, language, literature, rhetoric, and writing.

See departmental brochure, Undergraduate Study in English, for a list of courses that satisfy the distribution, package, and sequence requirements for the various areas.

Individualized Literature: The Director of Undergraduate Studies is empowered to approve individualized programs developed by students in consultation with their advisors.

These programs should be designed to achieve academically sound objectives that are not addressed by the above requirements.

Honors: For students who qualify, the English Department offers specially designed courses at the freshman, sophomore, junior and senior levels. The freshman and sophomore honors courses are enriched versions of regular sections in composition, and in American and British literatures. To be given "Honors" in English on the transcript, a student must have achieved a 3.0 or better GPA, a 3.5 or better grade point in English courses, and grades of A or B in English 398 and 498.

An English minor consists of at least 15 semester hours of English courses chosen from the following: (1) at least three courses in technical communication (chosen from 360, 460, 462, 466, or any special topics course being offered in technical communication); (2) one course in expository writing, argumentative writing, language, rhetoric, or another technical communication course (chosen from 355, 360, 371, 372, 455, 460, 462, 466, 470, 471, 472, 484, 486, 486, 486; and (3) one or more courses at the 400 level in English courses.

Certificate for Teaching: Students planning to teach English in public schools should consult the Certificate Clerk, Room 212, Claxton Education Building.

Graduate Study: Students wishing to enter a graduate program in English should address inquiries to the Dean of the Graduate School. To be accepted for graduate study in English, the student should in general have had at least eighteen semester hours in English courses above the freshman and sophomore level with a better than B average and a B average in all courses. A student may be required to take and pass with a grade of A or B in one or more 400 level English courses.

Honors: Students who have an overall GPA of 3.0 may elect to participate in an enrichment program that involves the successful completion of Geography 497 and 498. Honors: Senior Thesis under the direction of a faculty mentor. An approved written copy of the thesis must be submitted to the Department of Geography. Interested students should consult their advisor for details about participation.

GEOLoGICAL SCIENCES

Graduate Study: Students wishing to enter a graduate program in English should address inquiries to the Dean of the Graduate School. To be accepted for graduate study in English, the student should in general have had at least eighteen semester hours in English courses above the freshman and sophomore level with a better than B average and a B average in all courses. A student may be required to take and pass with a grade of A or B in one or more 400 level English courses.

Honors: Students who have an overall GPA of 3.0 may elect to participate in an enrichment program that involves the successful completion of Geography 497 and 498. Honors: Senior Thesis under the direction of a faculty mentor. An approved written copy of the thesis must be submitted to the Department of Geography. Interested students should consult their advisor for details about participation.

GEOGRAPHY

FRENCH

See Modern Foreign Languages and Literatures.

GEOGRAPHY

Professors:
C.S. Alkon, Ph.D. Georgia; T.L. Bell, Ph.D. Iowa; R.A. Forest, Ph.D. Rutgers; E.H. Hammond (Emeritus), Ph.D. California (Berkeley); S.R. Jumper, Ph.D. Tennessee; R.G. Long (Emeritus), Ph.D. Northwestern; C.W. Minkel (Vice Chancellor for Academic Affairs and Dean of the Graduate School), Ph.D. Syracuse; L.M. Mohr, Ph.D. Southern Illinois; B.A. Ralston, Ph.D. Northwestern; T.H. Schmude (Emeritus), Ph.D. Wisconsin; T.J. Willbanks (Adjunct), Ph.D. Syracuse.

Associate Professors:
C.P. Harden (Head), Ph.D. Colorado (Boulder); T.J. Blasing (Adjunct), Ph.D. Wisconsin; L.W. Brinkman, Jr., Ph.D. Wisconsin; M.A. Brown (Adjunct), Ph.D. Ohio State; S.P. Horn, Ph.D. California (Berkeley); Cheng Liu (Adjunct), Ph.D. Tennessee; J.B. Rehder, Ph.D. Louisiana State; S.L. Shaw, Ph.D. Ohio State.

Assistant Professors:
R. McKeown (Adjunct), Ph.D. Oregon; Kenneth Orvis, Ph.D. California (Berkeley).

B.A. Major: Geography 131 and 132 are prerequisite to a major in Geography, which consists of Geography 310, 320, 340, 415, 499, and 12 additional credits selected from Geography courses at the 300 and 400 levels. At least one course must be chosen from among Geography 361, 363, 365, 371, 372, 373, 375, and 379 and at least 9 hours must be at the 400 level. No more than 3 hours of Geography 490 may be counted toward the major.

Students who enter the major with more than 60 hours of credit, and who have completed a laboratory science sequence other than Geography, may petition the department to substitute certain upper division physical geography courses for 131 and/or 132.

Minor: The Minor in Geography consists of 15 semester hours of Geography courses at the 300 level or above. Geography 490, 491, 492 and 493 may not be counted toward the minor without departmental permission.

Honors: Students who have an overall GPA of 3.2 may elect to participate in an enrichment program that involves the successful completion of Geography 497 and 498. Honors: Senior Thesis under the direction of a faculty mentor. An approved written copy of the thesis must be submitted to the Department of Geography. Interested students should consult their advisor for details about participation.

GEOLOGICAL SCIENCES

Professors:
W.M. Dunne (Head), Ph.D. Bristol; T.W. Broadhead, Ph.D. Iowa; S.G. Dresd, Ph.D. Wisconsin; R.T. Hatcher (UT Knoxville/ORNL Distinguished Scientist), Ph.D. Tennessee; O.C. Kopp (Emeritus), Ph.D. Columbia; T.C. Laboika, Ph.D. California; V. McCartney (Distinguished Professor of Science), Ph.D. Harvard; K.C. Misra, Ph.D. Western Ontario; R.E. McLaughlin (Emeritus), Ph.D. Tennessee; L.A. Taylor, Ph.D. Lehigh; K.R. Walker, Ph.D. Yale.

Associate Professors:
D.W. Byerly, Ph.D. Tennessee; G. M. Clark, Ph.D. Pennsylvania State; P.A. Delcourt, Ph.D. Minnesota; L.C. Kah, Ph.D. Harvard; L.D. McKay, Ph.D. Waterloo; M. L. McKinnon, Ph.D. Yale; C.I. Mora (Carden Professor), Ph.D. Wisconsin; R.T. Williams, Ph.D. V.P.I.

Prerequisites to a B.S. major are: Geography 101-102; Chemistry 120-130; Mathematics 141-142 or 147-148; plus one two-semester sequence and one additional course from Physics 135-136 and Biology 130-140.

Major requirements: Geology 310, 320, 330, 340, 370, and 440 (24 hours) plus 12 additional hours of geology courses at the 400 level. Geology majors must attend the UK field camp or an approved equivalent elsewhere. (For equivalent camps, prior approval by the Department on an individual-case basis is required.)
Minor requirement consists of:
Prerequisites: Geology 101 and 102 or 103.
Geology courses: at least 16 hours of courses numbered 300 or higher, excluding 303 and 401. A maximum of 3 hours of 493 may be counted toward the minor.

Concentration in Engineering Geology:
Students wishing to prepare for a career in environmental/engineering geology, where communication with engineers is important, may elect this multidisciplinary concentration.
Electives in the major and some of the courses necessary to satisfy the Arts and Sciences College Distribution requirements are specified. Required coursework includes: Geology 310, 320, 330, 340, 370, 440, 455, 460, 470 and 485; Mathematics 141, 142, (or equivalent honors courses) and 231 (or substitution of Geology 401 for Math 231); Physics 231; Basic Engineering 101, 121, and 131; Civil Engineering 330, 435 and any one of the following: 390, 440, 530, 592 or Environmental Engineering 538; Plant and Soil Science 210; English 461; and Speech 240. Courses from the College’s approved listings for satisfying the Social Sciences, Humanities and Upper Level Distribution requirements are recommended and approved by the student’s advisor.

Honors: Students who have completed 5 upper division courses in the major and have an overall GPA of 3.0 may elect to participate in an enrichment program involving research in the geological sciences. Research, in the form of an approved senior thesis, will be accomplished by successful completion of 3 semester hours beyond the normal requirements of Geology 491, 492, or 493 under the direction of a faculty member. The results of the research must be formally presented to the Department’s Seminar (Geology 595), the Tennessee Academy of Sciences, or other acceptable professional organization. Also, an approved written copy of the thesis must be submitted to the Department of Geological Sciences. A GPA of 3.0 must be maintained throughout matriculation. Interested students should consult their advisor for details about participation.

GERMAN
See Modern Foreign Languages and Literatures.

GRADUATE SCHOOL OF PLANNING
David Patterson, Director

Professors:
D.A. Johnson (Emeritus), Ph.D. Cornell; R.B. Kenney (Emeritus), Ph.D. North Carolina; J.M. Prochaska (Emeritus), M.U.P. Michigan State; W.L. Shouse (Emeritus), M.C.P. Harvard; J.A. Spencer, M.C.P. Ohio State.

Associate Professors:
G.E. Bowen, M.A. George Washington; B.E. Tonn, Ph.D. Northwestern.

Assistant Professor:
C. Zanetta, Ph.D. Ohio State.

The Graduate School of Planning offers a program of studies leading to the professional degree of Master of Science in Planning. For complete information, refer to the Graduate Catalog.

The School of Planning also directs the Urban Studies program in the College of Arts and Sciences.
with African and African-American Studies in addition to the AAAS core course offerings.

**Minor:** African-American Studies 201-202 are required in the minor which consists of 15 hours at least 9 of which must be upper division credits. A maximum of 3 hours in AAAS 492 and 493 combined can be applied to a minor. In planning their programs minors must include courses from at least 2 other departments which crosslist courses with African and African-American Studies in addition to the AAAS core course offerings.

**AMERICAN STUDIES**

Chair: George B. Hutchinson (English)

**Major concentration:** English 231 and either 232 or 233 are prerequisite to a major concentration in American Studies which consists of 27 upper-division semester hours including American Studies 310; at least two approved American History courses; and six hours of approved courses chosen from the following disciplines: anthropology, economics, political science, or sociology. Courses in the major will be chosen in consultation with an American Studies advisor, from a list approved by the program, in such a way that at least 3 courses help the student achieve a focus within the field. One course in the student's curriculum must specifically focus upon one or more American ethnic minority cultures. An additional 3-6 hours of American Studies 493 (Independent Study) are recommended for majors in their senior year. A list of approved elective courses is published annually.

All majors and prospective majors should contact the Chair of the program.

The American Studies minor consists of at least 15 hours of coursework chosen from the program's list of electives, including American Studies 310 American Studies 410 or 440, and nine additional hours from at least two different disciplines.

**ANCIENT MEDITERRANEAN CIVILIZATIONS**

Chair: David W. Tandy (Classics)

Co-chair: W.L. Humphreys (Religious Studies)

A minor in Ancient Mediterranean Civilizations consists of 18 hours, including at least two of the three core courses (Classics 381, 382; History 365).

Courses of variable content, topics courses, reading and research, off-campus, or foreign study in the Departments of Art, Classics, History, Philosophy, or Religious Studies can be approved.

Students are encouraged to satisfy the foreign language requirement with Greek, Latin, or Classical Hebrew.

**ASIAN STUDIES**

Chair: Wayne Farris (History)

The Asian Studies major concentration consists of 26 credit hours from the upper-division courses of Asian Studies and approved departmental offerings. Twelve of the hours must be taken from courses listed within one of the four geographical-cultural areas (Islamic World; South Asia; China; Japan), and 6 of those 12 hours must come from Subdivision A and 6 from Subdivision B. Subdivision A includes Art, Literature, Music, Philosophy, and Religious Studies; Subdivision B includes Anthropology, Economics, Geography, History, Political Science, and Sociology.

Six of the 26 hours must be taken from courses listed for other geographical-cultural areas.

Prerequisite to the concentration is Asian Studies 101-102. Corequisite to the major concentration is competence in a major Asian language of the chosen geographical-cultural area. Competence is defined as the successful completion of the 200-level sequence of that language, or by demonstration of equivalent mastery.

The Asian Studies minor consists of Asian Studies 101-102 and 15 credit hours at the 200 level and above. Twelve credit hours must be taken from courses within one of the four geographical-cultural areas. Six credit hours must come from Subdivision A and 6 from Subdivision B. Three hours must be taken from courses in another geographical-cultural area.

**CINEMA STUDIES**

Chair: Charles Maland (English)

The Cinema Studies minor consists of 15 hours, including 281 and either 235, 236 or 330. It is strongly recommended that Introduction to Film Studies be taken before selection of electives provided for in the minor.

For further information consult the chairperson of the Cinema Studies Program, Charles Maland, English Department. Other related courses in such departments as history, philosophy, and sociology may be approved through consultation with Dr. Maland.

Approved Area Courses are: Art Media/Photography 235 Introduction to Cinematography as Art (3); Art Media/Photography 236 Introduction to Video Art (3); Art Media/Photography 433 Modern Art and Film (3); Art Media/Photography 434 Modern Art and Film (3); English 281 Introduction to Film Studies (3); English 334 Film and American Culture (3); English 489 Special Topics in Film (3); French 420 French Cinema (3); German 323 German Film (3); Italian 421 Topics in Italian Literature and Cinema (3); Political Science 320 Popular Culture and American Politics (3); Russian 325 Russian Film (3); Women's Studies 469 Sexuality and Cinema (3).

**COMPARATIVE LITERATURE**

Chair: Carolyn R. Hodges (Germanic and Slavic Languages)

A major concentration in Comparative Literature consists of 27 hours including Comparative Literature 202 and 401-402, 6 hours of literature in a foreign language in courses numbered 300 or above, and 6 hours of literature courses numbered 300 or above in a different department. These 6 hours may be either in English or in a foreign language and should be chosen from the following departments: English, Modern Foreign Languages, and Literature, and Religious Studies.

The Asian Studies major concentration is competence in a major Asian language of the chosen geographical-cultural area. Competence is defined as the successful completion of the 200-level sequence of that language, or by demonstration of equivalent mastery.

The Asian Studies minor consists of Asian Studies 101-102 and 15 credit hours at the 200 level and above. Twelve credit hours must be taken from courses within one of the four geographical-cultural areas. Six credit hours must come from Subdivision A and 6 from Subdivision B. Three hours must be taken from courses in another geographical-cultural area.

**ENVIRONMENTAL STUDIES**

Chair: Don Byerly (Geology)

The major concentration in Environmental Studies provides sound scientific, socio-economic, and philosophical background for understanding the earth's environment with an opportunity to minor in one of the many environmentally related curricula offered by the various colleges within the University.

Prerequisites to a B.A. major in Environmental Studies are: Biology 130-140; or Botany 119-129; Chemistry 120-130; Geology 101; Geography 131; Mathematics 123-125 or 141-142 or 151-152; and Economics 201.

Major concentration consists of a core and a specialty. The core includes: Biology 250; Sociology 360; Philosophy 346; Economics 462; Agriculture 333; Geology 455, Geography 436, or Plant and Soil Science 432. The specialty is satisfied by meeting the course requirements specified for a minor in one of the environmental related curricula offered by the various colleges of the University with a grade of C or better. The specialty will require 15-18 hours specified by the chosen department. Curricula that would be suited for an Environmental Studies major include, but are not limited to: Plant and Soil Sciences, Wildlife and Fisheries Sciences, Forestry, Chemistry, Geography, Geology, Biology, Sociology, Economics, Political Science, Communications, or Business Administration.
JUDAIC STUDIES
Chair: Gilya Gerda Schmidt (Religious Studies)

The major concentration in Judaic Studies offers a course of study that treats Judaism as a historically evolving and culturally specific enterprise. The concentration explores Jewish culture, religion, and heritage through literature, philosophy and history. A multidisciplinary combination of courses permits critical reflection about topics and issues in a world civilization and cross-cultural context. A major concentration consists of at least 27 hours at the 300 level or above, distributed as follows: (a) Religious Studies 381, History 370, and 12 hours from Religious Studies 311, 312, 320, 385, 386, 405; (b) 9 hours selected from Art History 425, 451, 475; German 350; History 369, 395; Philosophy 322.

Students should contact the program advisor early in planning a Judaic Studies major.

The Judaic Studies minor consists of Religious Studies 381, History 370, and 9 hours selected from the Judaic Studies Major Concentration. It is recommended that students Minorin Judaic Studies discuss their program with a member of the Judaic Studies Committee.

LANGUAGE AND WORLD BUSINESS
For a complete list of requirements, see Modern Foreign Languages and Literatures.

LATIN-AMERICAN STUDIES
Chair: Todd Diacon (History)

The major concentration consists of two optional tracks: (1) General Studies or (2) Brazilian Studies. Each program requires 27 hours, of which 12 are in core courses, including Latin American Studies 401 and 402, three hours of an approved History 360 or 361, and three hours of an approved Spanish or Portuguese literature/culture course at either the 300 or 400 level. In addition to the core courses, the General Studies track will consist of fifteen hours selected from courses offered by the three participating departments. The Brazilian Studies track will consist of fifteen hours beyond the core courses including a minimum of six hours in UTK's Summer Study Program in Fortaleza, Brazil (or other programs in Brazil approved by the director of Latin American Studies) and up to nine hours of approved courses that focus on Brazil. Majors are strongly urged to take as a prerequisite Latin American Studies 251-252.

The minor consists of 18 hours including Latin American Studies 251-252, three hours of an approved Spanish or Portuguese literature/culture course at either the 300 or 400 level, and nine additional hours selected from courses offered by three different participating departments.

A practical working knowledge of Spanish or Portuguese is a prerequisite for majors and minors. All students are strongly encouraged to earn credit hours through UT Knoxville's Latin American Studies Abroad Program at the Federal University of Ceara in Fortaleza, Brazil. Other foreign study programs are also available for Brazil and Spanish-speaking Latin America.

For further information, consult with Dr. Cynthia Duncan (601 McClung Tower), Chairperson of the Latin American Studies Program.

LEGAL STUDIES
Chair: James A. Black (Sociology)

The major in Legal Studies places the study of law within the context of a liberal arts education. This major offers a course of study that treats law as a historically evolving and culturally specific enterprise. The concentration seeks to attract students interested in exploring the ways in which law and legal institutions shape and are shaped by values, behavior, communication patterns, and organization of social, economic, and political systems. A multidisciplinary combination of courses permits critical reflection about how law and social life are interconnected historically and culturally. The program is designed to provide education about law and legal culture. It should not be viewed as a preferred avenue for admission to law school.

Specific objectives of the program are to:
1. Foster an appreciation for the larger context within which law-based phenomena are developing and nourished.
2. Comprehend the connections between law and other components of society.
3. Promote an interest in studying how law shapes, and is shaped by the larger social, behavioral, political, historical, and cultural context.
4. Present an interdisciplinary program that speaks to the need to address problems about law that will face us in the next century.
5. Offer an integrated program drawn from the existing curriculum and faculty.

The concentration consists of 27 hours, including Sociology 455, Psychology 395, and 403, and 12 hours of upper-division courses majoring among five categories: (1) analysis - 3 hours from Communications-300, English 490, Political Science 330, Psychobiology 424; (2) 4-3 hours from Psychology 330, Sociology 331; (3) processes - Sociology 351, and 3 hours from Political Science 331, 400, 442; (4) historical and global dynamics - 3 hours from Classics 342; Political Science 340, Psychobiology 424; (5) issues - 6 hours from Communications 410, Philosophy 344, Political Science 410, Speech Communication 469, Women's Studies 340. The remaining three hours are to be chosen from one of the five categories or an approved elective.

Students should contact program advisors early in planning a Legal Studies major. It is strongly recommended that Sociology 455 and Sociology Law, be taken before selecting electives. Other law-related courses consistent with the purposes and objectives of the major may be approved through consultation with the Chair of the Legal Studies Committee.

LINGUISTICS
Chair: Bethany K. Dumas (English)

This major concentration offers a broad exposure to the various fields of linguistics (including historical, descriptive, theoretical and applied linguistics) along with an opportunity to study areas where linguistics overlaps with other disciplines such as psycholinguistics, sociolinguistics, and speech pathology. The program of study is designed to prepare a student for graduate work in linguistics or related areas or to serve as a general survey of language and linguistics. The program of study provides the additional possibility of emphasizing the teaching of English as a second language for the student interested in language-related employment at the B.A. level.

Students should consult program advisors early in planning a Linguistics major or minor. Linguistics 200 is highly recommended. Audiology and Speech Pathology 305 should be taken as soon as possible. Other 300-level courses should, if possible, be completed before 400-level courses are begun.

Corequisites: (a) Completion of a third year of foreign language study (literature) which satisfies the Foreign Languages option to fulfill the upper-level distribution requirement (required); (b) Two semesters of a course in a non-Indo-European language must be taken from the following: Asian Languages and Cultures 121-122 (5.5) (Arabic); Asian Languages and Cultures 131-132 (3.5) (Chinese); Asian Languages and Cultures 141-142 (4.4) (Hebrew); Asian Languages and Cultures 151-152 (5.5) (Japanese); Religious Studies 300-310 (3.3) (Hebrew); other non-Indo-European language sequence approved by the Linguistics Committee (required).

The concentration shall consist of 30 hours distributed as follows: (a) 21 hours composed of Audiology and Speech Pathology 305; English 371, 372, and 471; French, German, Russian or Spanish 425-426; Linguistics 423; (b) 9 hours of the following, selected in consultation with the Linguistics Committee: Anthropology 413, 486; Audiology and Speech Pathology 320, 579; Educational Curriculum and Instruction 457; Special Education and Rehabilitation 522; English/Linguistics 472, 474, 475, 476, 485, 490, 508-509, 680; French 421, 422, 429, 521-522; German 435-436, 571-572; Holistic Teaching/Teaching Learning 504; Language, Communication, and Humanities Education 455, 567; Linguistics 400, 430, 439, 442; Philosophy 310, 420, 470, 473; Political Science 330, Speech Communication 469, Women's Studies 340. The remaining three hours are to be chosen from one of the five categories or an approved elective.

A minor in Linguistics shall consist of 18 credit hours composed of (1) either English 471 (3) or 3 hours from section (b) of the major, selected in consultation with the Linguistics Committee; and (2) 15 hours as follows: Audiology and Speech Pathology 305 (3); English 371 (3) or 372 (3); French, German, Russian or Spanish 425 (3) or 426 (3); and Linguistics 420-430 (3.3).

Note: In addition to the above listed courses for the concentration and the minor there are occasional offerings in the psychology series or in graduate seminars which may be substituted for certain requirements subject to written approval of the Linguistics Committee and the Office of the Dean.

MEDIEVAL STUDIES
Chair: T.E. Burman (History)

A major concentration in Medieval Studies consists of Medieval Studies 201 and 203 and 21 hours of upper-division courses concerned primarily with the medieval experi-
ence, divided among the following three categories: (1) history, philosophy, political science, and religious studies; (2) language and literature; (3) the arts: history of art, architecture, music, and speech and theatre. Courses should either from a related pattern (for example, courses in the literature and history of Medieval England or Italy), or should revolve around a particular discipline or two closely related disciplines (for example, courses in the history of art and architecture).

A concentration in Medieval Studies focuses upon culture and society from the collapse of the Roman Empire to the 16th century. Such a concentration offers the opportunity to deepen one's self-awareness and broaden one's view of the range of human possibilities by studying a very different and remote culture, its conditions of life, its politics, its institutions, values and ideals, and modes of perception and expression.

Latin is the most appropriate language for students in the Medieval Studies concentration and is essential for those who plan to continue their studies in graduate school. In addition, students planning to go on to graduate school are strongly advised to supplement their Medieval Studies concentration with extensive work in one of the traditional disciplines.

A minor in Medieval Studies consists of Medieval Studies 201 and 403 and 12 additional hours distributed among the categories listed above for the minor. Each student's program, major or minor, must be approved in advance by the Medieval Studies Committee, chairperson Dr. Paul Barrette.

Category #1—History, Philosophy, and Political Science: History 312 Medieval History: 300-1100 (3); History 313 Medieval History: 1100-1400 (3); History 330 History of England to 1888 (3); History 334 History of Germany to 1815 (3); History 369 History of the Middle East (3); History 474 Studies in Medieval and Early European History (3); Philosophy 322 Medieval Philosophy (3); and Political Science 475 Ancient and Medieval Political Thought (3).

Category #2—Language and Literature: Classics 435 Medieval Latin (3); English 371 Foundations of the English Language (3); English 401 Medieval Literature (3); English 402 Chaucer (3); French 410 Medieval French Literature (3); Italian 401 Dante and Medieval Culture (3); and Italian 402 Petrarch and Boccaccio (3).

Category #3—The Arts: Architecture 415 Seminar in Medieval Architecture (3); Art 371 Early Christian and Byzantine Art to 1350 (3); Art 372 Northern European Painting, 1350-1600 (3); Art 381 Medieval Art of the West, 800-1450 (3); Art 382 The Art of Italy, 1250-1400 (3); and Music History 210 History of Music to 1750 (3).

URBAN STUDIES

Chair: James A. Spencer (Graduate School of Planning)

Urban studies involves the interdisciplinary study of cities and their regions. Faculty from Planning, Architecture, Geography, History, Political Science, Sociology, History, Business participate in the program which has variable emphases from the relationship of the individual to the environment, the process of problem solving in an urban context, or the nature of current urban issues.

Prerequisites to the program are economics 100 or 201 or 207, Political Science 101 or 102 or 107, and Sociology 110 or 120. Courses required for the major are Urban Studies 250, 350 and 400, plus 4 hours from each of these groups:

Group 1—History and Theory: Urban Studies 401, 454, 410, 363

Group 2—Physical Issues and Design: Urban Studies 322, 441, 464

Group 3—Planning and Policy: Urban Studies 321, 402, 280, 446


A minor in Urban Studies consists of 18 semester hours, including Urban Studies 250 and 350, plus additional semester hours from Group 1, 2, 3 or 4 above. For more information contact the chairperson of Urban Studies.

WOMEN'S STUDIES

Chair: Nancy Gooslee (English)

Women's Studies encourages inquiry into the full range of the human experience by raising new questions and opening new areas of research concerning women. The discipline enriches the traditional Arts and Sciences curriculum by adding new perspectives on women's lives and accomplishments. Women's Studies can broaden the education of both male and female students by helping them to understand the limitations placed on both sexes by narrowly defined roles. Whether there is a need to understand women and an interest in the new role they are playing in society, Women's Studies can enhance a student's career preparation and opportunities.

The major concentration in Women's Studies consists of 30 semester hours, including one of the Images of Women courses (either 210 or 215), Women in Society (220), and at least one course from each of these three areas: Women's History (364, 380, 383, 432, 453, 466, 483), Contemporary Issues (378, 382, 410, 425, 434), and Literature and the Arts (330, 332, 422). As its content varies, 400 may be included in any of these areas. Students are encouraged to take at least nine hours in one of these areas.

The Women's Studies minor consists of one of the Images of Women courses (either 210 or 215), Women in Society (220), and an additional 12 hours of upper-division Women's Studies courses. Approved special topics courses related to Women's Studies may also be applied toward a major or a minor.

ITALIAN

See Modern Foreign Languages and Literatures.

JAPANESE

See Interdisciplinary Programs (Modern Foreign Languages and Literatures).

JUDAIC STUDIES

See Interdisciplinary Programs.

LATIN

See Classics.

LATIN AMERICAN STUDIES

See Interdisciplinary Programs.

LEGAL STUDIES

See Interdisciplinary Programs.

LINGUISTICS

See Interdisciplinary Programs.

MATHEMATICS

Professors:
J.B. Conway (Head), Ph.D. Louisiana State; V. Alexiadis, Ph.D. Delaware; D.F. Anderson, Ph.D. Chicago; G.A. Baker, Ph.D. Cornell; J.S. Bradley (Emeritus), Ph.D. Iowa; C.E. Clark, Ph.D. Louisiana State; R.J. Davverman, Ph.D. Wisconsin; D.E. Dobbis, Ph.D. Cornell; G. Dyak, Ph.D. Warsaw (Poland); H. Frandsen (Emeritus), Ph.D. Illinois; L.J. Gross, Ph.D. Cornell; T.G. Hallam, Ph.D. Missouri; D.B. Hinton, Ph.D. Tennessee; L.S. Husb, Ph.D. Florida State; K. Johannson, Ph.D. Bielefeld, Germany; G. Samuel Jordan, Ph.D. Wisconsin; Channes Karakashian, Ph.D. Harvard; Suzanne Lenhart, Ph.D. Kentucky; Robert M. McConnel, Ph.D. Duke; Balan S Jafurt, Ph.D. Illinois; S. Mulay, Ph.D. Purdue; S. Richter, Ph.D. Michigan; K.C. Reddy (Space Institute, Tullahoma), Ph.D. Indian Institute of Technology; J. Radoski, Ph.D. Wroclaw University; P.W. Schaffer, Ph.D. Maryland; B.M. Scalin, Ph.D. Cornell; Henry Simpson, Ph.D. California Institute of Technology; H.P. Soni, Ph.D. Oregon State; F.W. Stalman (Emeritus), Ph.D. Giessen (Germany); K.R. Stephenson, Ph.D. Wisconsin; C. Sundberg, Ph.D. Wisconsin; M. Thistlethwaite, Ph.D. Univ. Manchester (England); W.R. Wade, Ph.D. California (Riverside); C.G. Wagner, Ph.D. Duke.

Assistant Professors:
C. Collins, Ph.D. Minnesota; X. Feng, Ph.D. Purdue; A. Freire, Ph.D. Princeton; Bo Guan, Ph.D. Massachusetts; K. R. Kinble (Space Institute, Tullahoma), Ph.D. Ohio State; Y. Kuo, Ph.D. Cincinnati; C. P. Plaut, Ph.D. Maryland; D.A. Polignone, Ph.D. Virginia; A. Smith, Ph.D. California (Berkeley); K. B. Soni (Space Institute, Tullahoma), Ph.D. Texas; J. Xiong, Ph.D. North Carolina, Chapel Hill.

Assistant Professors:
G. Matthews, Ph.D. Louisiana State; T. Schultz, Ph.D. Northwestern.

Instructors:
Kenneth Bonea, M.S. Tennessee; Tony Campbell, M.M. Tennessee; T. Davis, Ph.D. Tennessee; Richard Little, Ph.D. California (Los Angeles); Rita Reagan, M.M. Tennessee; Jennifer Stevens, M.A. Kentucky.
All entering freshman and all other students who have not completed a college level mathematics course, except students who have received AP calculus credit, must take the UT mathematics placement exam before enrolling in a mathematics course. Placement in the appropriate course will be determined by the score on the exam. Ordinarily a student will not be allowed to enroll in a course at a level above that determined by his or her placement exam score. In exceptional circumstances, students will have the right to appeal their placement to the Mathematics Department. The exam will be administered during the summer session and at designated times during the Fall, Spring, and Summer registration.

B.S. Major: The undergraduate Mathematics major is designed to provide a broad introduction to mathematics which serves as preparation for a wide variety of careers. The requirements below, which provide a solid introduction to the four core components of mathematics, should be regarded as minimal preparation for careers in mathematics or closely related mathematical fields. Students with special interests in any of these fields are encouraged to take as many other mathematics courses as their schedule permits.

Prerequisites to the major are: Mathematics 141-142 (or Honors version: 147-148) and 171 or 172.

Major requirements consist of 37 semester hours of mathematics courses including (1) Math 231, 241 (or 247), 251 (300), and (2) eight additional courses at the 300-400 level (except 399, 401, 405, 411 and 490) satisfying the following conditions:

(A) At least one course must be taken from each of the following categories:
- ALGEBRA: 351, 455-56 (457-58)
- ANALYSIS: 341, 445-46 (447-48)
- NUMERICAL ANALYSIS: 371 or CS 370, 372
- PROBABILITY/STATISTICS: 323, 423-24
(B) At least one 400 level two-semester sequence must be taken from the list above. (C) CS 311 and CS 380 may be used as upper division math electives in part (2).

There are many careers one can pursue with a mathematics major. Sample programs for three different goals are listed below. Additional information is available in the Mathematics Department Office.

INDUSTRIAL EMPLOYMENT

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
<th>Mathematics 141-142 (or 147-148) and 171</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English Composition</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foreign Language (beginning level, preferably French, German, or Russian)</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lab Science Distribution Requirement</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td>Mathematics 231, 241 (or 247), 251 (257), and 300</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-US History Distribution Requirement</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Distribution Requirement</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foreign Language (completion of secondary level)</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Junior</td>
<td>Mathematics 351, 431 (or 436), 341, 371</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Distribution Requirement</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Distribution Requirement</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>Mathematics 471-472, 423, 475</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upper Level Distribution Requirement (may include Math 400 or 411)</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Honor B.S. Major: Candidates for an honors degree in Mathematics must fulfill all of the requirements for the B.S. degree in Mathematics, but take nine courses (rather than eight) at the 300-400 level and take two 400 level two-semester sequences (rather than one). The grade point average computed on the nine 300-400 level courses mentioned above will determine the honors category: GPA at least 3.4—Honors; GPA at least 3.6—High Honors; GPA at least 3.8—Highest Honors. Students with more than nine courses at the 300-400 level may designate which courses will be used to compute these GPA's.

PREPARATION FOR GRADUATE SCHOOL

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 141-142 (or 147-148) and 171</td>
<td>11</td>
</tr>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language (beginning level, preferably French, German, or Russian)</td>
<td>6-8</td>
</tr>
<tr>
<td>Lab Science Distribution Requirement</td>
<td>8</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Mathematics 231, 241 (or 247), 251 (257), and 300</td>
<td>13</td>
</tr>
<tr>
<td>Non-US History Distribution Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Social Science Distribution Requirement</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language (completion of secondary level)</td>
<td>6-8</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Mathematics 323 (or 423), 431 (or 421), 371, 436 (461)</td>
<td>12</td>
</tr>
<tr>
<td>Humanities Distribution Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Social Science Distribution Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Mathematics 445-46 (or 447-48) and 455-56 (457-58)</td>
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<tr>
<td>Upper Level Distribution Requirement (may include Math 400 or 411)</td>
<td>6</td>
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</table>

Total: 124 Minimum hours

SECONDARY EDUCATION

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 141-142 (or 147-148) and 171</td>
<td>11</td>
</tr>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language (beginning level, preferably French, German, or Russian)</td>
<td>6-8</td>
</tr>
<tr>
<td>Lab Science Distribution Requirement</td>
<td>8</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Mathematics 231, 241 (or 247), 251 (257), and 300</td>
<td>13</td>
</tr>
<tr>
<td>Non-US History Distribution Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Social Science Distribution Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Mathematics 323, 351, 341, 371</td>
<td>12</td>
</tr>
<tr>
<td>Humanities Distribution Requirement</td>
<td>6</td>
</tr>
<tr>
<td>Social Science Distribution Requirement</td>
<td>3</td>
</tr>
<tr>
<td>Psychocultural Studies</td>
<td>210</td>
</tr>
<tr>
<td>Electives</td>
<td>8</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Mathematics 445-446, 460, 421 (or 431)</td>
<td>12</td>
</tr>
<tr>
<td>Upper Level Distribution Requirement (strongly recommended: Math 400)</td>
<td>12</td>
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<tr>
<td>Education 400, 401, 403</td>
<td>7</td>
</tr>
<tr>
<td>Education in the Science, Math, Research and Technology 304, 355, 365</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 124 Minimum hours

MEDIEVAL STUDIES

The Department of Medieval Studies of the University of Tennessee offers a B.A. degree and a B.S. degree in Medieval Studies and a minor in Medieval Studies. The degree program is designed for students who wish to pursue a career in teaching, writing, or research in the field of Medieval Studies.

MEDICINE

The Medical Technology program is designed for students who wish to pursue a career in the field of Medical Technology.

MICROBIOLOGY

Professors: P.N. Moore (Head), Ph.D. Texas (Austin); R.W. Beck (Emeritus), Ph.D. Wisconsin; J.M. Becker, Ph.D. Cincinnati; D. Bernis, Ph.D. Cornell; D.A. Brian, Ph.D. D.V.M. Michigan State; B. A. G. Blyth, Ph.D. Maryland; W.S. Gribbs, Ph.D. Yale; B.T. Rouse; Ph.D. Quebec (Canada); B.V.S.C., Bristol (England); Dwayne C. Savage, Ph.D. California (Berkeley); G.S. Sayler, Ph.D. Idaho; Pam Small, Ph.D. Stanford; Gary Stacey, Ph.D. Texas (Austin); D.C. White (Distinguished Scientist), M.D. Tufts, Ph.D. Rockefeller, J.M. Woodward (Emeritus), Ph.D. Kansas.

MIDWESTERN STUDIES

The Midwestern Studies program is designed for students who wish to pursue a career in the field of Midwestern Studies.

MEDICAL TECHNOLOGY

Courses in this major are open only to qualified students who have completed the first three years of the Science-Medical Technology Curriculum, described in the College of Arts and Sciences curricula section of this catalog, and who have been approved by the Medical Technology Admissions Committee.
graders, majors will be required to take a pro-
ficiency test in German. It is recommended that
German majors also take History 241-242 or 334-335 and 6 hours of 200-level English
courses. Majors are strongly urged to consider a minor in some other areas of the humanities.

B.A. Honors in German: The Honors B.A. consists of at least 32 hours of German in
courses numbered above 300, including completion of German 477 or 478 with a grade of A or B+.
To complete the Program, students must present a cumulative grade point average in German major
courses of at least 3.5 and have an overall GPA of not less than 3.2. Students should apply for admis-
sion to the B.A. Honors Program at the end of their junior year. Application forms are avail-
able in the department office. Since courses taken abroad are not calculated in the overall average, the department reserves the right to make a judgment on the appropriateness of a
study-abroad curriculum for acceptance as honors work and to require other 400-level courses as a condition for the degree.

Italian Major: Consists of 30 hours in
courses numbered 311 and above.

Russian Major: The Russian major has two options, a traditional major with a literary
emphasis and an area studies major. Russian 201-202 is a prerequisite for both. Majors should prepare their programs in consultation with the departmental faculty advisor. Both options consist of 30 hours of courses, and both require Russian 311-312 and 401-402. The
major with literary emphasis also requires Russian 301-302, 451-452, and 6 hours from Russian
221, 222, 320, 371, 372, or other courses numbered above 300. The additional require-
ments for the major are Russian 371-372: 3 or more credits chosen from Russian
and East Europe Studies 410 or Russian 221, 222, and Russian courses numbered 300 and above; and 6 or more credits chosen from Geography 375, History 340-341, Philoso-
phy 393, and Political Science 459.

Spanish Major: Consists of 30 hours in
courses numbered 323 or above. The following are required: 323, 335, 336, 421, 422, 431 or
471, 459. Remaining hours can be chosen from language, civilization, or civilization
courses. Students must have a minimum of 6 hours of literature at the 400 level, and 6 hours of conversation and/or composition courses. The survey courses (435-436 and 473-474) are strongly recommended. Majors are encouraged to take as many as possible.

Major in French, German, Italian, 
Russian, or Spanish with a Concentration in 
Language and World Business or a Major 
Concentration in Language and World 
Business with Chinese, Japanese, or 
Portuguese: Students who wish to prepare for careers in international business may complete 
a) a special major in Chinese, French, 
German, Italian, Japanese, Portuguese, 
Russian, or Spanish; and b) a professional 
emphasis in International Business, Intern-
tional Retail Merchandising, or International 
Agricultural Economics, and (c) some form of 
practical experience related to the concentra-
tion. Admission is by permission of the 
program director.

A. The language requirements are as follows:

1. The Chinese concentration consists of 30 hours. The following are required: Chinese 
231, 232, 331, 332, three hours of 490 or 491, and 9 hours of courses from the following: Art
386, Asian Studies 102, History 362, 363, 364, 476, Political Science 454, Religious Studies/ 
Philosophy 376, 379, or other courses approved by the Asian Studies Advisor.

2. The French major consists of 33 hours. The following are required: French 333, 345, 
351, 352, 400, 422, 432, 445, a 400 level literature elective, and 3 hours of 491, 490 or 493.
3. The German major consists of 30 hours. The following are required: German 301-302, 
311, 312, 356, 485, three credit hours of 490, 491 or 493, and three courses numbered 
320 or above.

4. The Italian major consists of 30 hours. The following are required: Italian 314, 341, 
342, 401, 490 or 491, and 12 hours of any 400-
level literature course of 3 credits.

5. The Japanese concentration consists of 30 hours. The following are required: Japanese 
251, 252, 351, 352, three hours of 490 or 491, and 9 hours of courses from the following: Art 
368, Asian Studies 102 or 472 (if related to Japan). History 365, Japanese 313 or 314, 
Religious Studies 383.

6. The Portuguese concentration consists of 33 hours. The following are required: Portuguese 301, 302, 309, 315, 316, 409, 431, six hours of 490 or 491, and 6 hours from the following: 221, 222, 331, 371, 372, or any 400-level course.

7. The Russian major consists of 30 hours. The following are required: Russian 301-302, 
311, 312, 401-402, 451-452, 490 or 491, and 3 hours from the following: 221, 222, 331, 371, 372, or any 400-level course.

8. The Spanish major consists of 30 hours. The following are required: Spanish 323, 335, 
336, 421, 422, 424, 423, 431, 445, 459, three hours 490 or 491, and any 400 level 
literature course.

B. Professional Emphasis: 
1. International Business students will take 
24 hours. The following are required: 
Accounting 201, 202 and Business Administration 495. Students then choose two courses 
from the following General Business Courses: Marketing 301, Management 301, 303, 
Logistics and Transportation 301, 302, Finance 301, or Business Law 301. Students choose 
three courses from the following International Business courses: Management 471, 
Marketing 440, Logistics and Transportation 441, Economics 321, Business Administration 
311, Retail and Consumer Sciences 421. 
2. International Retail Merchandising 
Students will take 25 hours. The following are required: 
Accounting 201, Marketing 301, 
Retail and Consumer Sciences 210, 310, 321, 
410, 421, and three additional credit hours from the following: Retail and Consumer Sciences 350, 411, 415, 416, 420 or 493.
3. International Agricultural Economics 
students will complete 24 hours. The following are required: Accounting 201, Agricultural 
Economics 210, 320, 342, 350, 420, 430, and 
three credit hours from the following: Marketing 301, Management 301, Finance 301, 
Logistics and Transportation 301 or 302.

C. Practical experience: Through Asian 
Languages 490, French 490, German 490, 
Italian 490, Portuguese 490, Russian 490, or 
Spanish 490, each Language and World 
Business student must undertake study 
abroad, an internship, or a relevant research 
project for a minimum of 3 hours (included in 
major requirements).

Additionally, Language and World Business
students must consult an advisor in the Department in selecting relevant courses under the Basic Skills and Distribution requirements for the College.

Students interested in the Language and World Business Program should contact the Director for advising as early as possible in their college careers. The academic record presented will be assessed by the Director of Language and World Business. Minimum requirements for progression to the concentration are a 2.75 cumulative average in the courses specifically required by the College of Arts and Sciences in Basic Skills and Distribution and in the Language and World Business programs, and a 3.0 average in language courses. Course prerequisites for the program include Asian Languages, French, German, Italian, Portuguese, Russian, or Spanish 199, Economics 201 (under Social Sciences electives) and Math 125 and Statistics 201 (under Part II of the Basic Skills electives). Progression is based on availability of space in the program. Program standards are adjusted periodically, and current requirements are available from the Director of the Language and World Business Program.

For further information, inquire in 701 McClung Tower.

Placement Examination: Students who have had previous work (either two or more years in high school or one year in college) in Chinese, French, German, Italian, Japanese, Portuguese, Russian, or Spanish should take a placement test to determine the appropriate level course for which to register. Placement tests are given for incoming students during summer orientation and throughout the year. Please contact the department for further details.

Proficiency Examinations: Students who have acquired a knowledge of French, German, Italian, Russian, or Spanish should request a proficiency test. A student earning a grade of C or better will receive credit for an appropriate number of courses. Superior students are encouraged to proceed as rapidly as their achievement permits.

Study Abroad: Five summer study abroad opportunities are available through the Department. The department sponsors programs in Brazil, France, Italy, Mexico, and Spain. Students can earn up to six credit hours by participating in these programs. In most cases, the courses will fulfill part or all of the foreign language requirement for graduation (completion of the elementary or intermediate level). Upper division classes in literature, culture, and language are also available for major and minor credit. Participation in these programs will satisfy the foreign study requirements for the Language and World Business degree. A faculty member accompanies students on the program. In addition to formal classes held at a major university in the city, excursions to cultural and historical sites are an integral part of the programs. For more information concerning course prerequisites, lodging arrangements, costs, and dates of an individual program, contact the Department of Modern Foreign Languages and Literatures, 701 McClung Tower. Students are also encouraged to study abroad, particularly through participation in the University's International Student Exchange Program (ISEP). The department is also prepared to recommend summer study programs and year abroad programs for students who are interested in foreign study. Credits from recognized foreign study programs can readily be transferred to UT. For qualified students, the department also offers Asian Languages 491 Foreign Study, German 491 Foreign Study, and Russian 491 Foreign Study. Students should consult the department before registering for the foreign study course.

The Chinese Minor: Asian Languages 231-232 or its equivalent is a prerequisite to the minor. The minor shall consist of at least 17 hours of Chinese courses, including Asian Languages 331-332, 431; and 6 hours from Asian Languages 311-312 or other Chinese courses above 300.

The French Minor: Consists of 18 hours in courses numbered 333 and above, distributed as follows: 333 or 334; 351-352; 421; plus 6 hours of electives at the 300 or 400 level. French 300 does not count toward the minor, but is recommended for students needing grammar review.

The German Minor: German 201-202 or its equivalent is a prerequisite to the minor. The minor shall consist of at least 18 hours of German courses numbered above 300, which normally include German 301-302 and 12 additional hours of courses numbered above 300 (excluding 331-332 and courses in English translation).

The Italian Minor: Consists of 18 hours in courses numbered 311 or above. Students pursuing a minor must consult with a departmental advisor.

The Japanese Minor: Asian Languages 251-252 or its equivalent is a prerequisite to the minor. The minor shall consist of at least 17 hours of Japanese courses, including Asian Languages 351-352; 451; and 6 hours from Asian Languages 313-314 or other Japanese courses above 300.

The Portuguese Minor: Consists of 18 hours in courses numbered 300 or above. Students pursuing a minor must consult with a departmental advisor.

The Russian Minor: Russian 201-202 or its equivalent is a prerequisite to the minor. The minor in Russian shall consist of at least 18 hours of Russian courses, including Russian 301-302; 311-312; and 6 hours from Russian 221-222 or other Russian courses numbered above 300.

The Spanish Minor: Consists of 18 hours in courses numbered 323 or above, including 335 and 336; 423; one course in conversation and composition from among the following: 323, 324, 423, 424; and the remaining courses to be chosen among conversation and composition, civilization, phonetics, or literature. Students pursuing a minor are strongly advised to consult with a departmental advisor.

MUSIC

Professors:

Associate Professors:

Assistant Professors:
A.L. Batey, D.M.A. South Carolina; W. Baldwin, M.M. New England Conservatory; S. Binder, D.M. Florida State; C. Freeman, BPA, Oklahoma City University; W.W. Hawthorne, Ph.D. Cincinnati; E. Keathley, Ph.D. SUNY (Stonybrook); P. Moore, M.M. University of Kansas; J. Richter, M.M. Andrews University; A.N. Wentzel, M.M. Southern California.

BACHELOR OF MUSIC DEGREE

The School of Music offers curricula leading to the Bachelor of Music degree with concentrations in music theory/composition, music education, and applied music (voice; piano; organ; sacred music; organ or piano; sacred music; voice; organ; music; voice; piano; organ; sacred music; organ; piano; opera; strings; woodwind, brass, and percussion instruments; studio music and jazz). This study prepares students for graduate music study or for positions in music for which a professional music degree is required.

The General Education (6 hours foreign language requirement) is in addition to the University admission requirement. Students may continue at the 200 level in a language begun in high school or elect to begin a new language at the 100 level. Students majoring in vocal performance must complete one year each of two languages chosen from French, German, and Italian.

PROGRESSION REQUIREMENTS

All new music students (freshman and transfer) must perform an audition in applied music and take a music theory examination, the results of which will determine his or her placement in applied music and theory. Both the audition and theory exam should be completed during a visit to the University prior to final arrival to begin classes. Applicants are urged to contact the School to schedule appointments for satisfactory both requirements as early as possible, but certainly no later than the Summer Orientation period.

No student officially progresses to a Major in Music until both the audition and entrance examination have been successfully completed.

MINIMUM PERFORMANCE STANDARDS

Potential performance and music education majors not meeting minimum performance standards, but showing potential, will be allowed to register for applied music (Music 140—Fundamentals of Performance) in order to attain the desired level. Such students are normally expected to demonstrate sufficient progress by the end of the first academic year to perform on a level commensurate with a freshman student accepted without reservation by the School. The addition of the extra semesters of study usually results in lengthening the period needed to satisfy requirements for advanced standing (Music 300 level).

Students entering any one of the three emphases in music education must complete the same audition procedures as those of performance majors. At the end of the second year...
or after having completed the required courses, students will participate in an interview with an appointed Admissions Board. Upon receiving the positive recommendation from this board, students are admitted to the teacher education program and are required to take required upper division education courses.

Students who pursue the music education curriculum are subject to all rules and regulations of the Teacher Education Program, which is housed in the College of Education, notwithstanding the fact that their degree will be awarded from the College of Arts and Sciences.

ENSEMBLES

Ensemble participation during each semester of residence is required of all students studying applied music. Students are required to participate in ensembles appropriate to their specific degree program as approved by the faculty of the department. String students must participate in the university symphony orchestra. The School of Music requires all music students to participate in either a full-time or a registered auditor, in a major instrumental or vocal organization at least once each semester as partial fulfillment of the College of Arts and Sciences requirements as outlined in the catalog section of the College of Arts and Sciences curricula.

APPLIED MUSIC

Applied study is classified as Principal or Secondary.

Students studying their principle (major) instrument register for credit appropriate to their program, 2-4 credit hours; students studying a second instrument register for 1 credit hour. Study at the principal level receives one hour of private instruction per week or a one-hour class lesson plus a half-hour private lesson. Determination of the mode of instruction rests with the student. Study at the secondary level receives one-half hour private instruction per week or its equivalent in class instruction. Applied music courses do not permit non-credit registration or may students elect non-conventional grading.

Area study guides for all sections of the examination are available in the Music Office.

All music majors are required to register for Music General 200—Solo Class every fall and spring semester with the exception of the semester in which they are student teaching. The requirements for this course are to attend scheduled concerts, recitals, master classes, repertoires, and solo classes, and to perform at least once each semester as partial fulfillment of applied music credit requirements.

Applied Music Fees: $80 per semester for half-hour lesson (1 credit hour) $120 per semester for hour lesson (2-4 credit hours).

Computer registration and applied music fee payment must be verified in the School of Music office no later than the end of the second day of classes of the fall, and spring semesters and the first day of the summer term in order to be accepted for applied music study. Applied music fees are not refundable after lessons have been scheduled.

KEYBOARD SKILLS PROFICIENCY EXAMINATION

Proficiency in keyboard skills is required of all music majors and is usually acquired in the four-semester series of Class Piano I, II, III, IV (Mus Kbd 110, 120, 210, 220). Students who already possess keyboard skills may pass a proficiency examination within these courses.

Recital Attendance Policy

The faculty of the School of Music believes that exposure to a variety of live musical performances is an important part of the education of students studying music at the undergraduate level. As a result, the faculty has put in place a recital attendance requirement for undergraduate music students. Regular recital attendance helps students to become acquainted with accepted norms of recital presentation, furnishes them with opportunities to get to know and respect the talents of other students and faculty in the School of Music, and helps them to establish the habit of attending musical performances after graduation. Specific recital attendance requirements are listed in the School of Music Undergraduate Student Handbook.

BACHELOR OF MUSIC IN MUSIC EDUCATION

Students seeking licensure to teach music in the public schools should pursue one of the options within this degree program. Four-year and five-year options are available to prepare teachers for instrumental teaching or for the teaching of vocal and general music. The four-year program leads to the degree and to teaching licensure. The five-year program provides for the granting of the degree at the end of four years, with teacher licensure being awarded after a fifth-year, graduate level internship. Students choosing the five-year program earn twenty-four hours which may be applied to the Master's degree.

BACHELOR OF ARTS DEGREE

The School of Music offers curricula leading to the Bachelor of Arts degree with a major in Music, designed for students who are interested in music, but desire a comprehensive liberal studies program.

THE BACHELOR OF ARTS DEGREE—MUSIC MAJOR

Music Course Requirements: The Bachelor of Arts Degree—Music Major Music Course Requirements Prerequisites: Music Theory 110, 120 (6); Music Theory 130, 140 (2); Music Performance 100 Level (2). Courses toward the major: Music Theory 210, 220 (6); Music Theory 230, 240 (2); Music History 200 (3); Music History 210, 220 (6); Music Performance 200 level or above (four semester minimum) (6); Music Ensemble 4 (4 semester minimum) (0); Music Ensemble 4 (4 semester minimum) (0); Music Theory 310 (3) 3 hours selected from: Music History 350, 380, 390. Music electives (0-3 hours) selected from: Music History 460 (3); Music General 301 (0); Music Theory 493 (3) or Music History 493 (3); Music General 411 (0). Total of 45-48 hours.

1. Students must complete a minimum of four semesters of Music Performance, major instrument/voice at the 200 level or above.

2. Music General 200 must be completed a minimum of four semesters.

Degree requires a total of 124 hours. Remainder of hours to be structured per requirements as outlined in the catalog section of the College of Arts and Sciences catalog entry.

Music Minor (a) Concentration in Applied Music—consists of 17 hours in courses numbered 200 and above, distributed as follows: Music History 200, 8 hours in applied music, and 6 hours in music electives. Prerequisites are Music General 100 or equivalent and two semesters of applied music study (Music Performance) at the 103-190 levels. (b) Concentration in Music History and Literature—consists of 17 hours in courses numbered 200 and above, distributed as follows: Music History 200, 9 hours in Music History and Literature courses, and 5 hours in music electives. Prerequisites are Music General 100 or equivalent and two semesters of applied music study at the 103-190 levels.

B.M. Curriculum in Music Education—Wind/Percussion Emphasis (5-year option)

<table>
<thead>
<tr>
<th>Hours Credit</th>
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</tr>
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<tbody>
<tr>
<td>12</td>
<td>Music</td>
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<tr>
<td>12</td>
<td>Theory</td>
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<tr>
<td>12</td>
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<td>Education</td>
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<tr>
<td>12</td>
<td>Music</td>
</tr>
<tr>
<td>12</td>
<td>General</td>
</tr>
<tr>
<td>12</td>
<td>Performance</td>
</tr>
<tr>
<td>12</td>
<td>Theory</td>
</tr>
<tr>
<td>12</td>
<td>Ensemble</td>
</tr>
<tr>
<td>12</td>
<td>Wind/Percussion</td>
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<tr>
<td>12</td>
<td>Elective</td>
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</table>

Total: 124 hours plus 24 graduate hours

“Requirements for Degrees” in the general section of the College of Arts and Sciences catalog entry.

College of Arts and Sciences
### B.M. Curriculum in Music Education—Wind/Percussion Emphasis (4-year alternative)

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th><strong>B.M. Curriculum in Music Education—Wind/Percussion Emphasis (4-year alternative)</strong></th>
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<tbody>
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<td></td>
</tr>
<tr>
<td>English 101, 102</td>
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<td>Music Theory 310</td>
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<td>Music Theory 320</td>
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<td>Music Education 430</td>
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<td>Electives in Music Education or Music</td>
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<td><strong>Total: 124 hours plus 24 graduate hours</strong></td>
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### B.M. Curriculum in Music Education—Vocal/General Concentration/Keyboard Emphasis (5-year option)

<table>
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<th>Hours Credit</th>
<th><strong>B.M. Curriculum in Music Education—Vocal/General Concentration/Keyboard Emphasis (5-year option)</strong></th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>English 101, 102</td>
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<tr>
<td>Music Theory 110, 120</td>
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<td>Music Theory 130, 140</td>
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<tr>
<td>Music Performance (keyboard)</td>
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<tr>
<td>Music General 200</td>
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<td>Music General 301</td>
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<td>Music Education 221</td>
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<td>Music Ensemble</td>
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<td>Music General</td>
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<td>Non-US History</td>
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<td>Music Theory 210, 220</td>
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<tr>
<td>Music Theory 230, 240</td>
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<tr>
<td>Music Performance (major instrument)</td>
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<tr>
<td>Music History 210, 220</td>
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<td>Music General 200</td>
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<td>Music History 380</td>
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<tr>
<td>Non-US History</td>
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<tr>
<td><strong>Junior Year</strong></td>
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<td>Music Performance (major instrument)</td>
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<tr>
<td>Music General 301</td>
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<td>Music Ensemble</td>
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<td>Music Education 420</td>
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<td>Music Education 430</td>
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<td>Chamber Ensemble</td>
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<td>Math 115</td>
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<td>Non-US History</td>
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<tr>
<td><strong>Senior Year</strong></td>
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<tr>
<td>Music Performance (keyboard)</td>
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<tr>
<td>Music General 200</td>
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<tr>
<td>Music General 301</td>
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<td>Music Ensemble</td>
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<td>Music Education 420</td>
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<td>Music Education 430</td>
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<td>Education 466</td>
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<td>Non-US History</td>
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<td>Social Science</td>
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<tr>
<td><strong>Total: 125 hours plus 24 graduate hours</strong></td>
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</tbody>
</table>
### B.M. Curriculum in Music Education—Vocal/General Concentration/Keyboard Emphasis (4-year alternative)

**Freshman**
- English 101, 102: 6
- Music Theory 110, 120: 6
- Music Theory 130, 140: 6
- Music Performance (keyboard): 2
- Music Performance (voice): 2
- Music Education 240 or 241: 1
- Music General 200: 0
- Music Ensemble: 0
- Music History 200: 3
- Foreign Language: 6
- Social Sciences: 6

**Sophomore Year**
- Music Theory 210, 220: 6
- Music Theory 230, 240: 6
- Music Performance (keyboard): 2
- Music Performance (voice): 2
- Music General 200: 0
- Music Ensemble: 0
- Music History 200: 3
- Foreign Language: 6
- Social Sciences: 6

**Junior Year**
- Music Performance (voice): 2
- Music General 200: 0
- Music Ensemble: 0
- Music Education 201: 0
- Music Theory 230, 240: 2
- Music Education 240 or 241: 1
- Music Performance (voice): 1
- Music Keyboard 210, 220: 1
- Music History 380: 3
- Non-US History: 3

**Senior Year**
- Music Performance (voice): 2
- Music General 200: 0
- Music Ensemble: 0
- Music General 301*: 0
- Music Education 330: 6
- Music Education 350: 3
- Music Education 430: 3
- Music Education 430*: 3
- Music Education 430: 3
- Music Education 401: 3
- Social Sciences: 3

**Total:** 134 hours

---

### B.M. Curriculum in Music Education—Vocal/General Concentration/Keyboard Emphasis (5-year alternative)

**Freshman**
- English 101, 102: 6
- Music Theory 110, 120: 6
- Music Theory 130, 140: 6
- Music Performance (keyboard): 2
- Music Performance (voice): 2
- Music Education 240 or 241: 1
- Music General 200: 0
- Music Ensemble: 0
- Music History 200: 3
- Foreign Language: 6
- Social Sciences: 6

**Sophomore Year**
- Music Theory 210, 220: 6
- Music Theory 230, 240: 6
- Music Performance (voice): 2
- Music Keyboard 210, 220: 1
- Music History 200: 3
- Non-US History: 3
- Junior Year
- Music Theory 310: 3
- Music Performance (voice): 2
- Music General 200: 0
- Music Ensemble: 0
- Music Education 240 or 241: 1
- Music Education 240 or 241: 1
- Music Education 300, 310: 3
- Music Education 401: 3
- Social Sciences: 3

**Senior Year**
- Music Performance (voice): 2
- Music General 200: 0
- Music Ensemble: 0
- Music General 301*: 0
- Music Education 330: 6
- Music Education 350: 3
- Music Education 430: 3
- Music Education 430*: 3
- Music Education 430: 3
- Music Education 401: 3
- Social Sciences: 3

**Total:** 129 hours

---

### B.M. Curriculum in Organ

**Freshman**
- English 101, 102: 6
- Music Theory 110, 120: 6
- Music Theory 130, 140: 6
- Music Performance (voice): 2
- Music Keyboard 210, 220: 1
- Music Keyboard 240: 1
- Music Theory 430: 3
- Music Ensemble: 0
- Music General 301*: 0
- Social Sciences: 3
- Electives: 6
- Junior
- Music Education 310: 3
- Music Keyboard 310, 320: 2
- Electives: 6
- Senior
- Music Performance 480: 6
- Music Ensemble: 1
- Natural Science: 6
- Music General 401: 0
- Music Keyboard 460, 470: 6

**Total:** 129 hours

---

### B.M. Curriculum in Piano

**Freshman**
- English 101, 102: 6
- Music Theory 110, 120: 6
- Music Theory 130, 140: 6
- Music Performance (voice): 2
- Music Keyboard 210, 220: 1
- Music Keyboard 240: 1
- Music Theory 430: 3
- Music Ensemble: 0
- Music General 301*: 0
- Social Sciences: 3
- Electives: 6
- Senior
- Music Education 310: 3
- Music Keyboard 310, 320: 2
- Electives: 6
- **Total:** 129 hours
### B.M. Curriculum in Piano Pedagogy and Literature

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<td>Music Ensemble 399</td>
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<td>Natural Science</td>
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<td>Music Keyboard 420, 430</td>
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<td>Music Theory 310</td>
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<td>Social Science</td>
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Total: 130 hours

### B.M. Curriculum in Strings

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<tbody>
<tr>
<td>English 101, 102</td>
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<td>Music Theory 110, 120</td>
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<td>Music Performance 100 level</td>
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<td>Music General 401</td>
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<td>Music Education 310</td>
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<tr>
<td>Music Education 490-491 Internship</td>
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<td>Electives</td>
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Total: 130 hours

### B.M. Curriculum in Sacred Music

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>English 101, 102</td>
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<td>Music History 200</td>
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<td>Foreign Language</td>
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<td>Sophomore</td>
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<tr>
<td>Music Theory 210, 220</td>
<td>6</td>
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<tr>
<td>Music Theory 230, 240</td>
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<tr>
<td>Music Performance 280</td>
<td>4</td>
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<tr>
<td>Music General 200</td>
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<tr>
<td>Music Ensemble 399</td>
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<td>Music Education 340-350</td>
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Total: 130 hours

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

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<th>Course</th>
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<tbody>
<tr>
<td>English 101, 102</td>
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<td>Music Jazz 110</td>
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<td>Music Ensemble</td>
<td>1.1</td>
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<tr>
<td>Music General 200</td>
<td>0.0</td>
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<td>Music General 301</td>
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<tr>
<td>Music History 210, 220</td>
<td>3</td>
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<td>Music History 350</td>
<td>3</td>
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<td>Music Jazz 130, 140</td>
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<tr>
<td>Music Theory 210, 220</td>
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<td>Music Theory 230, 240</td>
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<tr>
<td>Music Jazz 120</td>
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<tr>
<td>Music Jazz 210, 220</td>
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<td>Music Performance</td>
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<td>Music General 200</td>
<td>0.0</td>
</tr>
<tr>
<td>Music General 301</td>
<td>1.1</td>
</tr>
<tr>
<td>Non-US History</td>
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<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
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</table>

Total: 130 hours

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

<table>
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<th>Course</th>
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<tbody>
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<td>Music Ensemble</td>
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<tr>
<td>Music General 200</td>
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<td>Music General 301</td>
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<td>Music Education 310</td>
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<td>Music Electives</td>
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<td>Natural Science</td>
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<td>Music History 380</td>
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<td>Music Jazz 110</td>
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<td>Music Technology 290 or 340</td>
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<td>Music General 301</td>
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<td>Music Ensemble</td>
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<td>Music History 210, 220</td>
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<td>Music History 350</td>
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<td>Music Jazz 130, 140</td>
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<td>Music Theory 210, 220</td>
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<td>Music Theory 230, 240</td>
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<td>Music Jazz 120</td>
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<td>Music Jazz 210, 220</td>
<td>4</td>
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<td>Music General 200</td>
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<td>Music General 301</td>
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<tr>
<td>Non-US History</td>
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<td>Electives</td>
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Total: 130 hours

### B.M. Curriculum in Sacred Music

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>English 101, 102</td>
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<td>Music Jazz 110</td>
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<td>Music Ensemble</td>
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</tr>
<tr>
<td>Music General 200</td>
<td>1.1</td>
</tr>
<tr>
<td>Music General 301</td>
<td>0.0</td>
</tr>
<tr>
<td>Music Education 310</td>
<td>3</td>
</tr>
<tr>
<td>Music Electives</td>
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<tr>
<td>Natural Science</td>
<td>3</td>
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<tr>
<td>Senior</td>
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<tr>
<td>Music Performance (400 level)</td>
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<td>Music General 301</td>
<td>0.0</td>
</tr>
<tr>
<td>Music Ensemble 399</td>
<td>1.1</td>
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<td>Music Education 310</td>
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<td>Music Electives</td>
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<td>Non-US History</td>
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<td>Electives</td>
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Total: 130 hours


### Arts and Sciences Electives

1. Music General 200
2. Social Science
3. Electives

**Total: 129 hours**

### General Education

- **Humanities-Arts (Non-Music), Literature, Philosophical Perspectives, Interdisciplinary Studies**
  - **Humanities-Arts (Non-Music), Literature, Philosophical Perspectives, Interdisciplinary Studies**: English 101, 102
  - **Humanities-Arts (Non-Music), Literature, Philosophical Perspectives, Interdisciplinary Studies**: Music History 210, 220, Music Ensemble, Music Performance 155, Music Ensemble, Music Keyboard 110, 120, Foreign Language
  - **Humanities-Arts (Non-Music), Literature, Philosophical Perspectives, Interdisciplinary Studies**: Music General 200, Music Performance, Music General 301
  - **Humanities-Arts (Non-Music), Literature, Philosophical Perspectives, Interdisciplinary Studies**: Music Performance 455, Electives
  - **Humanities-Arts (Non-Music), Literature, Philosophical Perspectives, Interdisciplinary Studies**: Music General 200, Music Performance 401, Non-US History

**Total: 127 hours**

### ORGANIZATIONAL PSYCHOLOGY PROGRAM

See Graduate School.

**PHILOSOPHY**

**Professors:**
- C.H. Reynolds (Interim Head), Ph.D. Harvard
- R.E. Aguila, Ph.D. Northwestern
- L.B. Cebik, Ph.D. Nebraska
- S.M. Cohen, Ph.D.
- J.R. Northwestern
- R.B. Edwards (Emeritus), Ph.D.
- Emory
- G.C. Graber, Ph.D. Michigan
- J.L. Nelson, Ph.D. SUNY Buffalo
- B.C. Postow, Ph.D.
- D. Van de Vate, Ph.D. Yale

**Associate Professors:**
- K.A. Bohstedt, Ph.D. Ohio State
- J.O. Bennett, Ph.D.
- D. Tufano, J.E. Nott, Ph.D.
- Ph.D. Ohio State
- M.L. Osborne, Ph.D. Tennessee

**Assistant Professors:**
- H.P. Hamlin, Ph.D. Georgia
- J.M. Keplan, Ph.D.
- Stanford
- M. Lenzi, Ph.D. Pennsylvania

**Major Prerequisite:**
- Three hours of logic, normally 130 or 135.
- Requirements: 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 320, and three in modern, normally 324. Majors are required to discuss their programs with a member of the Philosophy faculty.

**Minor:** 18 hours in courses 200 or above. Minors should discuss their program with a member of the Philosophy faculty.

### PHYSICS AND ASTRONOMY

**Professors:**
- L.L. Riedinger (Head), Ph.D. Vanderbilt
- F.E. Barnes (Collaborating Professor), Ph.D.
- California
- C.R. Bingham, Ph.D. Tennessee
- W.E. Blass, Ph.D. Michigan State
- M.J. Breining, Ph.D. Oregon

**Associate Professors:**
- J. Burgdoerfer (Distinguished Professor), Ph.D.
- T.A. Callcott, Ph.D.
- R.W. Childers, Ph.D. Vanderbilt
- H.W. Crater (UTSI), Ph.D.
- K.E. Duke, Ph.D. Tennessee
- C.G. Eguiluz, Ph.D. Brown
- S.B. Elston, Ph.D. University of Massachusetts
- S. Georgiho, Ph.D. Manchester
- M.W. Guidry, Ph.D. Tennessee
- T. Handler, Ph.D. Rutgers
- E.L. Hart, Ph.D.
- E.M. Karkchuk, Ph.D.
- W.L. Lewis (Distinguished Professor), Ph.D.
- Michigan
- J. Mack (Distinguished Scholar), Ph.D.
- Rensselaer Polytechnic Institute
- G.D. Mahan (Distinguished Scientist), Ph.D.
- University of California
- W. Nazerewicz, Ph.D.
- M. Wassaw
- L.R. Painter, Ph.D. Tennessee
- D.J. Pegg, Ph.D.
- New Hampshire
- E.W. Plummer (Distinguished Scientist), Ph.D.
- J.J. Quinn (Lincoln Chair)
- J.R. Maryland
- S. Sellin (Distinguished Professor), Ph.D.
- Chicago
- C.S. Shih (Liasion), Cornell
- S. Sorensen, Ph.D.
- Denmark
- M.R. Strayer, Ph.D.
- Massachusetts Institute of Technology
- J.R. Thompson, Ph.D. Duke
- B.F.L. Ward, Ph.D. Princeton

**Assistant Professors:**
- S.J. Daunt, Ph.D. Queens
- J.C. Levin, Ph.D. Oregon
- K.P. Read (Collaborating Scientist), Ph.D.
- Cornell
- S.Y. Shieh, Ph.D.
- H.H. Weltinghr, Ph.D. Groningen

**Research Assistants:**
- H.O. Cohn, Ph.D.
- N. Thonnard, Ph.D.
- J. Zheng, Ph.D. Lanzhou

**Research Associate Professors:**
- P.E. Datskos, Ph.D.
- D.L. McCorkle, Ph.D.
- L.A. Pinnaduwa, Ph.D.

**Research Assistant Professors:**
- L. Davis (UTSI)
- Ph.D. Auckland
- Y.Y. Efremenko, Ph.D. ITEP (Russia)
- S.A. Yost, Ph.D. Princeton

**Director of Undergraduate Laboratories:**
- J.E. Parks, Ph.D. Kentucky

**Instructor:**
- T. Riedinger, M.S. Vanderbilt

**PHYSICS**

**B. S. Major:** The undergraduate physics major provides a thorough introduction to all of the core areas of physics. At the same time, it allows students with special interests to pursue different concentrations.

An academic concentration is intended for students interested in professional employment or graduate work in physics or closely related fields such as astronomy, engineering, laser technology, or computational science.

An applied concentration introduces students to the physics and technology of today and tomorrow. Such a broad physics background is increasingly useful in fields outside of physics. The applied concentration is intended for students majoring in physics but planning...
Careers in other areas where scientific literacy is important, such as industry, secondary education, medicine, law, journalism, and business. Students in both concentrations are encouraged to pursue special courses through additional courses, research projects, and independent study under the direction of members of the physics faculty.

Prerequisites of the Major are: Physics 137-138 or Physics 135-136, Mathematics 141-142, and Computer Science 102. The Major with an Applied Concentration consists of: Mathematics 241; Physics 240, 311-312, 321, 361, 401, 421, 441-442, 453-454, and 461. Total Major hours: 40


Physics Minor: A minor in physics shall consist of Physics 137-138, 240, or 135-136, 240 and twelve hours from Physics and Astronomy courses numbered 300 and above.

Astronomy Minor: A minor in Astronomy shall consist of one year of introductory astronomy, Astronomy 411, 480 (3), Physics 311-12, and 421.

**POLITICAL SCIENCE**

Professors: Patricia K. Freeland (Head), Ph.D. Wisconsin; Robert B. Cunningham, Ph.D. Indiana; Michael M. Grant, Ph.D. Michigan State; Michael R. Fitzgerald, Ph.D. Oklahoma; Robert Gorman, Ph.D. New York; William Lyons, Ph.D. Oklahoma; Hyrum Plaas, Ph.D. Utah; John M. Scheb, Ph.D. Florida; Thomas A. Smith, Ph.D. Ohio State; Otis H. Stephens, Jr. (ALumni Distinguished Service Professor), Ph.D. Johns Hopkins; Thomas D. Unger (Emeritus), Ph.D. Iowa.

Associate Professors: David H. Folz, Ph.D. Tennessee; Anthony J. Fournes, Ph.D. Kansas; David J. Honston, Ph.D. SUNY-Binghampton; Robert L. Peterson, Ph.D. Yale; Lillard E. Richardson, Ph.D. Texas; Yang Zhong, Ph.D. Kentucky.

Assistant Professors: Janet Kelly, Ph.D. Wayne State; Donna Van Cott, Ph.D. Georgetown.

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:

- International Relations: 395, 396, 470, 471, and 472.
- Political Theory: 300, 374, 475 and 476

Minor: Prerequisites to the minor are Political Science 101 or 107. The minor consists of 15 hours of courses numbered 300 and above.

Honors in Political Science: The Honors concentration encourages highly motivated students to obtain a superior liberal education and more rigorous preparation in the discipline. Admission is selective. The Honors concentration is normally a two year program. Political Science 101 or 107, and 102 are prerequisites to the major. The major consists of 27 hours of courses numbered 300 or above, including 387, 388, 467, and 488. These 27 hours must include at least one course in each of the four areas of the discipline: Political Science 387 and 388 may be used to satisfy this requirement in the appropriate area.

To graduate with Honors in Political Science, the student must have a minimum GPA of 3.3 in Political Science, and a minimum cumulative GPA of 3.0.

Major in Political Science with a Concentration in Public Administration: Students majoring in Political Science who wish to prepare for a career in the public service may select to follow the concentration in Public Administration. Political Science 101 or 107, 102 and Economics 201 are prerequisites to the major in Political Science with a concentration in Public Administration. The major consists of course work in Political Science, Economics, and Accounting. Students must complete Political Science 340, 401, two of the following: Political Science 440, 441 or 442; and two of the following: Economics 471, 472 or Accounting 201. Students must also include one course in each of the three remaining fields of Political Science: Comparative Government and Politics, International Relations, and Political Theory.

**PSYCHOLOGY**

Professors: James E. Lawler (Head), Ph.D. North Carolina; G.M. Burghardt (Alumni Distinguished Professor), Ph.D. Chicago; A.G. Burstein, Ph.D. Chicago; W. H. Calhoun, Ph.D. California (Berkeley); H.J. Fine (Emeritus), Ph.D. Syracuse; S.J. Handel, Ph.D. Johns Hopkins; L. Handler, Ph.D. Michigan State; Warren H. Jones, Ph.D. Oklahoma State University; K.A. Lawler, Ph.D. North Carolina; J.W. Lounsbury, Ph.D. Michigan State; J.C. Malone, Ph.D. Duke; K.R. Newton (Emeritus), Ph.D. Tennessee; H.R. Polito (Alumni Distinguished Service Professor), Ph.D. Michigan; F. Samejima, Ph.D. Chicago; R.A. Saudargas, Ph.D. Florida State; R.S. Shadar (Emeritus), Ph.D. Tennessee; E.D. Sundstrom, Ph.D. Utah; C.B. Travis, Ph.D. California (Davis); R.G. Wahler, Ph.D. Washington; J.A. Wiberley (Emeritus), Ph.D. Syracuse.

Associate Professors: David H. Folz, Ph.D. Tennessee; Anthony J. Fournes, Ph.D. Kansas; David J. Honston, Ph.D. SUNY-Binghampton; Robert L. Peterson, Ph.D. Yale; Lillard E. Richardson, Ph.D. Texas; Yang Zhong, Ph.D. Kentucky.

Assistant Professors: Janet Kelly, Ph.D. Wayne State; Donna Van Cott, Ph.D. Georgetown.

Major: The Department offers two concentrations, General and Academic. The General Concentration in Psychology offers flexibility for those who wish to tailor their course work. The Academic Concentration in Psychology is structured to assure a broad foundation in both substantive and research traditions of psychology. Early advising on the selection of a concentration is important.

All students wishing to follow the General 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 GPA of at least 2.00. Completion of this Concentration requires: (1) One of the following: Psychology 385, Math 115, or Statistics 201, NOTE: If a student takes Math 115, then 3 hours of Psychology courses numbered 200 and above must be taken to complete the major; (2) Three courses from Psychology 210, 220, 300, 310, 320, 330, 360, 370; (3) Two elective Psychology courses at the 300 level or higher; (4) Two elective Psychology courses at the 400 level. (5) The Honors Concentration in Psychology requires a minimum GPA of 3.0. Students placed on Academic Review will be informed in writing that they are on probation and their records will be reviewed. Students who continue on Academic Review will be dropped from the major.

All students wishing to follow the Academic Concentration must satisfy Mathematics prerequisites of one semester of Calculus and one semester of Statistics (Statistics 110 is recommended for suggestions), one year of biological science, Psychology 110 with a grade of C or better, and have a GPA of at least 3.0. Completion of this Concentration requires: (1) Psychology 395; (2) Two courses Psychology 300, 310, 320, 330, 360 and 370; (3) One course from Psychology 410, 430, 450, and 461; (4) One course from Psychology 430, 440, 444, or 445; (5) One course from Psychology 415, 454, 470, or 475; (6) Psychology 496; (7) One of Statistics 399, 445, 459, 489, or 498; and (8) One elective course at the 300 or 400 level. 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.

Continuation in the General Psychology Concentration requires a maintenance of a GPA of 2.25. At any time a student drops below this level, or for a semester the student’s GPA is below 2.25, the student will be transferred to the General Concentration, and must apply for re-admission upon achieving a 2.25 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. If re-admission to the Academic Concentration is denied, the Minor: Consists of 110 or equivalent; and 15 additional hours at the 300 level and above. NOTE: 389, 499, 491, 492, 493 cannot be used in this minor.

Honors Program: The Psychology Department offers an Honors Concentration that is a specially designed individualized mentorship program. University Honors students and psychology majors with ACT scores of 25 or higher (or SAT equivalent) may apply. Admission to the program will be based on the basis of the candidate’s application and interview by the Psychology Honors faculty, normally in the student’s second year. Any semester with a GPA below 3.2 will lead to consideration of a student’s dismissal from the program by the program faculty. The honors concentration includes all the requirements of the General Psychology Concentration and at least ten hours of upper division psychology honors courses including at least 4 hours of Psychology 347 (continuous registration is preferred), 3 hours of Psychology 267 and 3 hours of Psychology 467.
RELIGIOUS STUDIES

Professors:
C.H. Reynolds (Head), Ph.D. Harvard; F.S. Luddy (Emeritus), M.Div., Colgate (Rockester); D.L. Dungan, Th.D. Harvard; R.L. Hackett, Ph.D. Aberdeen; W.L. Humphreys, Ph.D. Union; D.E. Linge, Ph.D. Vanderbilt; R.V. Norman, Jr., Ph.D. Yale; Gilya Schmidt, Ph.D. Pittsburgh.

Associate Professors:
J.L. Fitzgerald, Ph.D. Chicago; R.W. Gwynne, Ph.D. Washington; J.O. Hodges, Ph.D. Chicago; Mark Huulsthein, Ph.D. Minnesota; M.L. Levering, Ph.D. Harvard.

Adjunct:

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 five first categories and two courses from each category afterwards, one of which must be RS 400 or 401. Majors are strongly urged to take RS 300 and to do so as soon as possible after declaring their major. The remaining 3 hours, which complete this major, shall not include related language courses.

2. Religions and Cultures of South Asia: 374, 376.
3. Religions and Cultures of East Asia: 379, 383, 384.
4. Religions and Cultures of West Asia and Europe: 311, 321, 322, 332, 381, 385.
5. Religions and Cultures of Africa: 373.
7. Two 400-level courses including 499.

As an alternative to the basic concentration, a student-initiated concentration is available for students with special educational needs, such as those who intend to enter a graduate or professional school (seminary, law, medicine) which recommends a specific course of undergraduate study. A faculty member in Religious Studies will assist a student to formulate this major consisting of at least 27 hours of credit at the 300 level or above, including 499. Up to 9 hours in this major may be taken in approved courses from other programs or departments in the College of Arts and Sciences. Students whose vocational goals would best be served by such a major must discuss this option with a faculty member in the department, who will submit any specific proposal to the faculty in religious studies for approval. Further details on the major and on department courses are in the departmental office, located in 501 McClung Tower, or from any member of the religious studies faculty.

Minor: Fifteen hours of courses at the 300 level or above, not including related language courses. It is recommended that students minor in religious studies discuss their program with a member of the department faculty.

SOCILOGY

Professors:
D.M. Betz, Ph.D. Michigan State; J.A. Black, Ph.D. Iowa; D.W. Hastings, Ph.D. Massachusetts; T.C. Hood, Ph.D. Duke; R.G. Perrin, Ph.D. British Columbia; N.E. Shover, Ph.D. Illinois (Urbana); S.E. Wallace, Ph.D. Minnesota.

Associate Professor:
S. Kurth (Head), Ph.D. Illinois (Chicago); M.L. Benson, Ph.D. Illinois; S. Cable, Ph.D. Pennsylvania State; A. Jalata, Ph.D. SUNY-Binghamton.

Assistant Professors:
R.E. Jones, Ph.D. Washington State; J. Shefler, Ph.D. California (Davis).

Instructor:
D.K. Harris, M.A. Tennessee.

Major: Before applying to the Sociology Department for admission to the major a student must complete either Sociology 110 or 120 with a grade of C- or above. Upon granting admission to the major, the department will assign the student an academic advisor who will help the student plan a program of study for the major. The major consists of 24 upper-division hours in sociology. The concentration in Methodology requires 18 upper-division hours in Sociology (either 110 or 120).

Concentration in Criminal Justice: All prerequisites and upper-division courses required for general majors are required for this concentration. In addition, the concentration consists of 18 hours of upper-division sociology and must include 331 and 333. With an acceptable minor, 321 and 331 by the end of their junior year.

Minor: The minor consists of 15 upper-division hours in Sociology and must include 314 and 331. Prerequisite to the minor is 3 lower-division hours in Sociology (either 110 or 120).

Concentration in Environment and Society: All prerequisites and upper-division courses required for general majors are required for this concentration. In addition, the concentration consists of 18 hours of upper-division sociology as follows: 350, 351, 451, either 455, 459, or 492, and two courses selected in consultation with advisor.

Concentration in Environment and Society: The minor consists of Sociology 321, 331, and two courses from 344, 345, 442, 446, and 464. Prerequisites to the minor either Sociology 110 or 120.

COLLEGE SCHOLARS HONORS

Director:
David Tandy, Professor of Classics

College Scholars is a major with selective admission. For details contact the director. All Scholars must enroll in one College Scholars Seminar 317-318 each term. They are encouraged to complete work in College Scholars Honors 491-492-493.

SPANISH

See Modern Foreign Languages and Literatures.

STATISTICS

See faculty list in the College of Business Administration.

Arts and Sciences students may major or minor in statistics under the supervision of the faculty of the Statistics Department in the College of Business Administration. The major is designed to prepare students for graduate studies in statistics or for professional work in various applications of statistical methods, including applications in the natural and social sciences, business and industry. Contact the Statistics Department for further information on careers in statistics and appropriate courses to take. It is highly recommended that a student majoring in statistics have a minor in an area of application.

Major: The major requires 33 semester hours including (a) Statistics 201 or 251; (b) Statistics 320, 330, 365, 471; (c) two courses selected from Statistics 472, 473, 475, Math 423, 424, 425; (d) Math 141-142 and 241-251, or upper division Math; (e) two technical electives to be selected from upper division courses in Mathematics, Computer Science, Engineering, Physics, or Chemistry, with the approval of the student's advisor in the Department of Statistics.

Minor: The minor consists of Statistics 201 or 251; an additional 12 hours from Statistics 320, 330, 365, 471, 472, 473, 475; and Math 423, 424, 425.

*Students who have completed Math 123-125 should see an advisor to select courses to complete this requirement.

THEATRE

Professors:

Associate Professors:
E. Craven, M.A. Tennessee; L.J. DeCuire, M.F.A. Tulane; B.K.A. Gould, M.F.A. Catholic.

Assistant Professor:
R. Coleman, M.F.A. Yale; K. van den Barg, Ph.D. Indiana; T. Weber, M.F.A. Alabama.

Major: Theatre 100 is a prerequisite to a major which consists of 220, 245, 250, 260, 310, 311 and 430; and 12 additional hours of Theatre courses numbered 200 and above, 3 of which may be in cognate areas approved by the Department. At least one half of the hours in the major must be at the 300 level or above. No more than 6 hours of Theatre 481, 482, 483, 484, or 485 may apply to the major.

Minor: Theatre 100 is a prerequisite to a minor which consists of 15 hours of Theatre courses, 6 of which must be in upper division.

General requirements for the master's degree are given in the Graduate Catalog.

URBAN STUDIES

See Interdisciplinary Programs.

WOMEN'S STUDIES

See Interdisciplinary Programs.