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

The faculty of the College are committed to providing both comprehensive general education and concentrated study in a particular field to all students enrolled at The University of Tennessee, Knoxville. 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.

Liberal Arts 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 competence 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 so much 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, Knoxville 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 Liberal Arts 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 Liberal Arts 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 Liberal Arts 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 baccalaureate degree and also several pre-professional curricula which prepare the student for advanced study but do not lead to a degree from this college.

DEGREES OFFERED

(1) BACHELOR OF ARTS

The Bachelor of Arts represents the attainment of a broad knowledge of the arts and sciences as well as a comprehensive understanding of one or more areas of special interest. Four programs leading to this degree are open to the student.

Basic Program - The program appropriate for most B.A. students is developed around the basic skills and distribution requirements plus intensive study in one or more of the specified departmental or inter-departmental major fields described below.

Individualized Program - Designed for students whose educational goals are best met by a program tailored to their particular needs, it is the same as the Basic Program in broad area requirements but permits the student to develop an individual concentration incorporating work in two or more departments.

College Scholars Program - Intended for a limited number of students who are especially qualified and motivated and who have been selected to undertake this honors program, the College Scholars Program permits the students maximum freedom to design a curriculum to meet particular interests and goals.

Pre-Professional Program - The Pre-Professional Program is offered for those who wish to participate in the cooperative 3+2 program in business and liberal arts or the elementary and secondary pre-teaching programs. Students in the 3+2 business and liberal arts program take three years of coursework leading to a B.A. in Liberal Arts, followed by two years of study in the College of Business leading to the M.B.A.

(2) BACHELOR OF SCIENCE

The Bachelor of Science degree, offered in selected departments and programs, is designed for students who wish to pursue a more scientifically or professionally oriented program of study. Three programs leading to this degree are offered.

Basic Program - The Basic Program for the B.S. degree contains basic skills and distribution requirements similar to the Basic Program for the B.A. as well as a unique set of requirements for the major including additional study in mathematics, statistics, or laboratory sciences.

Pre-Professional Program - The Pre-Professional Program is offered for those who wish to participate in the cooperative 3+1 curricula in the health sciences (medicine, dentistry, pharmacy, veterinary medicine, or
will complete their freshman requirement by Students who obtain a grade of A or B in 118 (a) English 101 and 102 (English Composition).

Purpose:
1. To gain and improve the skills necessary to write English expository prose coherently
2. To improve reading skills.
3. To enhance critical and analytical abilities as applied to key issues and texts.
4. To acquire the skills that will aid in the process of critical analysis, problem solving, and decision making.
5. Completion of at least one major concentration in the college.

Placement: Student eligibility for English 118 (Honors: English Composition) will be determined on the basis of 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.

Foreign Language
Purpose:
1. To learn the basic grammar, syntax, and vocabulary of a foreign language.
2. To be able to use a foreign language independently as a tool for oral communication and reading.
3. To acquire techniques of language learning.
4. To develop insight into the phenomenon of language.
5. To complement the study of certain aspects of a foreign culture or civilization.

Distribution
1. Divisional Distribution
a. Non-United States History
Purpose:
a. To acquire an appreciation for the richness of the past as a statement of human capability, aspiration, and achievement.
b. To develop a historical perspective on a civilization that differs from or serves as the foundation for studying one's own.
c. To develop the ability to explore continuity and change among historical events and movements, and to be able to assess them critically.
d. To learn to keep one's own place and time in proper perspective, and to appreciate it more fully because of an awareness of human creativity as revealed through a study of the past of a civilization.
e. To further develop writing skills.

Choice of three courses from the following sequences satisfy this requirement:
- Asian Languages 221-222 Intermediate Modern Standard Arabic I, II.
- Intermediate Chinese I, II.
- Intermediate Modern Hebrew I, II.
- Intermediate Japanese I, II.
- Intermediate Persian I, II.
- Foreign Languages

BACHELOR OF ARTS AND BACHELOR OF SCIENCE

Basic Programs
Each student seeking a Bachelor of Arts or Bachelor of Science degree must develop a program which includes the following:
1. All University degree requirements as stated in the front section of the Undergraduate Catalog;
2. A minimum of 124 credit hours;
3. At least 40 credit hours in courses numbered 300 or above;
4. Appropriate writing to satisfy basic skills and distribution requirements, counting no course in more than one area (not required in the College Scholars Program);
5. Completion of at least one major (24-40 credits at 200 level or above for B.S., majors) or 24-37 credits at 200 level or above for B.A. majors) (up to 6 hours in the major may also be used, where listed, to satisfy basic skills or distribution requirements);
6. Students may choose to develop one or more minors (minimum 15 hours at the 200 level and above); and
7. Students may take up to 20 hours of courses graded Satisfactory/No Credit in any area outside the major or minor, basic skills or distribution requirements.

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 Basic Skills and Distribution Requirements (except where noted otherwise).

Basic Skills
English Composition
Purpose:
1. To gain and improve the skills necessary to write English expository prose coherently and convincingly.
2. To improve reading skills.
3. To enhance critical and analytical abilities as applied to key issues and texts.

Requirement:
Students may meet this requirement in one of the following four ways: (0-6 credits)
1. By completing six credits in English writing courses in one of the following series:
   (a) English 101 and 102 (English Composition).
   (b) English 118 (Honors: English Composition) and English 102 (English Composition).
   Students who obtain a grade of A or B in 118 will complete their freshman requirement by selecting 102, a sophomore literature course in the English Department, or English 355 Advanced Expository Writing. If the sophomore literature course appears on the list for Humanities distribution requirements, it may also be counted toward those requirements.
   (c) English 131 and 132 (Composition for Non-Native Speakers of English).

2. By earning a score of 4 or 5 on the College Board Advanced Placement Test in English.

3. By obtaining CLEP credit for English composition.

Placement: Student eligibility for English 118 (Honors: English Composition) will be determined on the basis of 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 200 level (or above) English courses.

Foreign Language
Purpose:
1. To learn the basic grammar, syntax, and vocabulary of a foreign language.
2. To be able to use a foreign language independently as a tool for oral communication and reading.
3. To acquire techniques of language learning.
4. To develop insight into the phenomenon of language.
5. To complement the study of certain aspects of a foreign culture or civilization.

Mathematics, Formal Reasoning, or Logic
Purpose:
1. To develop the basic calculation skills necessary to fully appreciate the course of study at the university.
2. To understand the logical processes involved in mathematics, inductive or deductive reasoning, or computing.
3. To acquire the skills that will aid in the process of critical analysis, problem solving, and decision making.

Requirement:
One three-credit course chosen from those listed below:
- Students with a Mathematics ACT score of 24 or above (25 or above on the Enhanced ACT) achieve a quantitative score of 500 or above on the SAT, or those who pass a waiver or proficiency examination on material equivalent to any of these courses, will be exempted from this requirement (0-3 credits).

Distribution
1. Divisional Distribution
a. Non-United States History
Purpose:
- To acquire an appreciation for the richness of the past as a statement of human capability, aspiration, and achievement.
- To develop a historical perspective on a civilization that differs from or serves as the foundation for studying one's own.
- To develop the ability to explore continuity and change among historical events and movements, and to be able to assess them critically.
- To learn to keep one's own place and time in proper perspective, and to appreciate it more fully because of an awareness of human creativity as revealed through a study of the past of a civilization.
- To further develop writing skills.

Requirement:
Completion of a six-credit, two-course, writing emphasis, lower-division sequence in non-United States History (6 credits). International students may fulfill this requirement with a United States History sequence. The following sequences satisfy this requirement:
- Asian Studies 101-102 Asian Civilization History 151-152 Development of Western Civilization 157-158; Honors: Development of Western Civilization; 161-162 A History of World Civilization.

Writing Emphasis Courses require at least 2,000 words, normally comprising one sustained essay or report of at least 1,000 words plus additional writing assignments such as in-class essay exams, journals, book reviews, etc. The purpose of the requirement is to help students a) learn course materials through writing; b) develop critical thinking skills; c) demonstrate the ability to sustain an argument; and d) strengthen existing writing skills.
Latin American Studies 251-252 Introduction to Latin American Studies.
Medieval Studies 201-202 Medieval Civilization.
Philosophy 120 Foundations of Western Thought: Antiquity through 1500; Philosophy 121 Foundation of Western Thought: 1500 through Early Twentieth Century

b. Natural Science
Purpose:
a. To know and understand the basic vocabulary of at least one scientific discipline.
b. To learn the basic discoveries and their importance in one scientific discipline.
c. To be able to use the tools (i.e., mathematics, laboratory equipment, computers, etc.) of one scientific discipline.
d. To understand how to devise hypotheses and how to devise and perform experiments to test them.
e. To learn to apply the methods of at least one scientific discipline in a "hands on" laboratory experience.
f. To be able to analyze a situation on a college level from one particular scientific perspective.

Requirement:
a. Bachelor of Arts students must complete a minimum of 12 credits from at least two departments or programmatic areas indicated below.
b. Bachelor of Science students must complete a minimum of 6 credits from at least two departments or programmatic areas indicated below.

1. Part I: Literature or Philosophical Requirement:
a. The following course packages are designated literature packages:
    1. The following course packages are designated literature packages:
        a. To understand how to devise hypotheses and individual relationships.
        b. To develop a critical understanding of one or more approaches, perspectives, or methodologies used in the social sciences.
        c. To develop analytical skills relevant to current social, economic, or political problems, their origins in society and individuals, and possible perspectives for their resolution.

b. Bachelor of Science students must complete a minimum of 6 credits from at least two departments or programmatic areas indicated below:

1. Part II: Arts, Literature or Philosophical Perspectives. Either one course in the study or practice of the arts; or one course in literature if a philosophical perspectives package is chosen to meet Part I; or one course in a philosophical perspective if a literature package is chosen for Part I. Writing Emphasis Courses, except for hands-on practice of the arts courses. Part I and Part II will be satisfied by selecting packages/courses from the following four lists in accordance with the instructions above.

b. Bachelor of Science students must complete a minimum of 6 credits from the courses listed below; not more than 3 credits may be taken in the Arts.

1. The following course packages are designated literature packages:
   a. To learn to appreciate and interpret significant literary, philosophical, or religious texts by study and application of selected methods or traditions of thought.
   b. To develop further abilities to reason critically, to construct arguments, to think creatively, to analyze objectively, to assess evidence, to perceive assumptions, and to respond to and appreciate values.
   c. To develop further writing skills.
   d. To learn to manipulate symbols (i.e., words, sounds, images, body movements) in a variety of ways and to employ these symbols critically, affectively, and evaluatively.
   e. To develop abilities to participate as an enlightened observer or as an artist in a discipline within the visual, spatial, musical, theatrical, rhetorical, or written arts.
   Requirement:
   a. Bachelor of Arts students:
      1. Part I: Literature or Philosophical Perspectives. A two-semester course package in either literature or a philosophical perspective.
      2. Part II: Arts, Literature or Philosophical Perspectives. Either one course in the study or practice of the arts; or one course in literature if a philosophical perspectives package is chosen to meet Part I; or one course in a philosophical perspective if a literature package is chosen for Part I. Writing Emphasis Courses, except for hands-on practice of the arts courses. Part I and Part II will be satisfied by selecting packages/courses from the following four lists in accordance with the instructions above.
   b. Bachelor of Science students must complete a minimum of 6 credits from the courses listed below; not more than 3 credits may be taken in the Arts.
   1. The following course packages are designated literature packages:
   a. To learn to appreciate and interpret significant literary, philosophical, or religious texts by study and application of selected methods or traditions of thought.
   b. To develop further abilities to reason critically, to construct arguments, to think creatively, to analyze objectively, to assess evidence, to perceive assumptions, and to respond to and appreciate values.
   c. To develop further writing skills.
   d. To learn to manipulate symbols (i.e., words, sounds, images, body movements) in a variety of ways and to employ these symbols critically, affectively, and evaluatively.
   e. To develop abilities to participate as an enlightened observer or as an artist in a discipline within the visual, spatial, musical, theatrical, rhetorical, or written arts.
   Requirement:
   a. Bachelor of Arts students:
      1. Part I: Literature or Philosophical Perspectives. A two-semester course package in either literature or a philosophical perspective.
      2. Part II: Arts, Literature or Philosophical Perspectives. Either one course in the study or practice of the arts; or one course in literature if a philosophical perspectives package is chosen to meet Part I; or one course in a philosophical perspective if a literature package is chosen for Part I. Writing Emphasis Courses, except for hands-on practice of the arts courses. Part I and Part II will be satisfied by selecting packages/courses from the following four lists in accordance with the instructions above.
   b. Bachelor of Science students must complete a minimum of 6 credits from the courses listed below; not more than 3 credits may be taken in the Arts.
   1. The following course packages are designated literature packages:
French 291-292 French Literature in English Translation.
Library and Information Science 330 Books and Related Materials for Children.
Medieval Studies 261 Medieval Culture: Readings from the Early Middle Ages, 500-1000; 262 Medieval Culture: Readings from the Later Middle Ages, 1000-1500.
Russian 221-222 Russian Literature in English Translation; 321 Works of Dostoevsky in English Translation; 322 Works of Tolstoy in English Translation; 325 Modern German Novel in English Translation; 326 German Drama in English Translation.
Spanish 291 Spanish Literature in English Translation; 292 Spanish American Literature in English Translation.
2. The following course packages are designated philosophical perspectives packages.

a. United States Studies

Purpose:

a. To develop an appreciation and understanding of the sources of values and traditions that constitute contemporary United States civilization.

b. To develop an understanding of the relationship between individual and societal behavior.

c. To further develop writing skills.

The following courses are designated United States Studies courses:

African and African-American Studies 364 Contemporary Issues in Afro-American Education (Same as Ed. C&I 364); 429 History and Philosophy of Afro-American Education (Same as Ed. C&I 429); 480 Black Communities in Urban America; 483 Afro-American Women in American Society (Same as Women's Studies 483). American Studies 310 Introduction to American Studies.

Anthropology 310 North American Indians; 312 Appalachian Culture; 315 Afro-American Anthropology (Same as African and Afro-American Studies 315); 320 American Cultures; 360 North American Prehistory. Aesthetics; 353 Philosophy of Afro-American Education (Same as Women's Studies 434).

Music General 110 Music Appreciation; 120 History of Rock; 350 Philosophy 350 Aesthetics; 353 Philosophy of Rock; 350 Philosophy and Literature; Theatre 100 Introduction to Theatre; 210-211 Survey of World Drama.

Women's Studies 330 Women in Music (Same as Women's Studies 330).

b. Foreign Studies

Purpose:

a. To develop an appreciation and knowledge of United States culture and civilization.

b. To provide a basis from which to compare foreign cultures and civilizations.

c. To develop a critical understanding of the sources of values and traditions that constitute a foreign culture and civilization.

d. To develop an understanding of the relationship between individual and societal behavior.

e. To further develop writing skills.

The following courses are designated Foreign Studies courses:

American Government 230 Introduction to American Government (Same as Political Science 231, 232); 230 African Prehistory (Same as Afro-American Studies 314); 231 Peoples and Cultures of Africa; 232 Archaeology and Art of Ancient Greece; 233 Archaeology and Art of Etruria and Rome.

Academic 310 Introduction to Studio Art: Various Media.

English 263 Introduction to Creative Writing.

German 323 German Film.


Speech Communication 280 Introduction to Oral Interpretation; 380 Oral Interpretation of Prose Literature; 385 Oral Interpretation of Poetry.

Theatre 220-221 Acting; 245 Basic Stage Costuming; 250 Introduction to Scenery Technology; 260 Fundamentals of Lighting and Sound Production.

4. The following courses are designated Study of the Arts courses:

Art 172 Western Art I; 173 Western Art II; 183 Asian Art I; Classics 232 Archaeology and Art of Ancient Greece; 233 Archaeology and Art of Etruria and Rome.

Writing Emphasis Courses require at least 2,000 words, normally comprising one sustained essay or report of at least 1,000 words plus additional writing assignments such as in-class essay exams, journals, book reviews, etc. The purpose of the requirement is to help students a) learn course materials through writing; b) develop critical thinking skills; c) demonstrate the ability to sustain an argument; and d) strengthen existing writing skills.
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.

**European**

Anthropology 462 Early European Pre-history. Classics 331 Archaeology of the Aegean Bronze Age and Early Greece; 334 Cities and Sanctuaries of the Ancient Greek World; 381 Greek Civilization; 382 Roman Civilization; 383 Women in the Greek and Roman World (Same as Women's Studies 383). Economics 325 Economic History of the North Atlantic Community. English 301 British Culture to 1660; 302 British Culture; 1660 to Present; 401 Medieval Literature.

French 420 French Cinema; 431 Highlights of French Civilization; 324 Women in French Culture (Same as Women's Studies 324); 432 Contemporary French Culture. Geography 375 Geography of the Soviet Union. German 323 German Film; 363 Modern German Culture. History 319 Modern Europe, 1750-1914; 320 Contemporary Europe, 1900-present; 432 Women in European History (Same as Women's Studies 432).

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 361 Politics in Western Democracies; 459 Government and Politics of the Soviet Union; 469 Soviet Foreign Policy. Russian 371-372 Background and Main Currents of Russian Culture. Russian and East European Studies 410 Selected Topics in Russian and East European Studies. Spanish 431 Spanish Civilization.

**Latin American**

Anthropology 313 Peoples and Cultures of Mesoamerica (Same as Latin American Studies 313); 319 Caribbean Societies and Cultures (Same as African and African-American Studies 319 and Latin American Studies 319). Economics 424 Political Economy of World Development (when topic is Latin American). Geography 372 Geography of Middle America (Same as Latin American Studies 372); 373 Geography of South America (Same as Latin American Studies 373). History 360-361 History of Latin America (Same as Latin American Studies 360-361). Latin American Studies 401 Cultural Plurality and Institutional Changes in Latin America. Political Science 355 Latin American Government and Politics I (Same as Latin American Studies 355); 455 Latin American Government and Politics II (Same as Latin American Studies 455). Spanish 471 Latin American Civilization (Same as Latin American Studies 471).

**Middle East**


**Critical Issues in Foreign Studies**


c. *Capstone Experience*

**Purpose:**

a. To offer an intensive integrative experience which will substantially broaden the student's comprehension of the major.

b. To increase significantly an understanding of the ways in which the ideas, methods, and achievements in a major area of study have affected modern society.

c. To examine a major field of study from a value-oriented perspective.

d. To enhance students' mastery of prose communication within the professional context of their major.

The following courses are designated Capstone Courses:

**NOTE:** Consult with major department for additional approved courses. Course credits must be taken in the major area unless otherwise approved by the department. It is recommended that this option be satisfied during the senior year.

**African and African-American Studies**


**AREAS OF CONCENTRATION**

(1) *Required Major*

Requirements for specific majors vary by program and are discussed under each department or program. A major consists of at least 24 credit hours in courses numbered 200 or above as specified by the department or program. Up to 6 credit hours taken in the major may also be used to satisfy basic skills or distribution requirements where listed. In addition, students making A or B in English 116 may use a 200-level literature course in the English Department to satisfy both the second half of their Basic Skills English Composition requirement and part of their Humanities requirement if the course is listed there. A minimum grade of C must be earned in every course counted as part of a major. Students transferring from other institutions must complete at least 9 credit hours at UT, Knoxville in each major awarded on this campus. Students may elect as many courses as desired in any department or program. In lieu of a major, students may develop an Individualized Program (described below). Majors available in the Basic Program for a B.A. or B.S. include: Anthropology, Art, Art History, Audiology, Biochemistry, Biology, Botany, Chemistry, Classics, Computer Science, Economics, English, French, Geography, Geology, German, History, Interdisciplinary Studies, Italian, Mathematics, Microbiology, Music, Philosophy, Physics, Political Science, Psychology, Religious Studies, Russian, Sociology, Spanish, Speech Communication, Statistics, and Zoology.

(2) *Optional Multiple Majors*

After the general requirements of basic skills, distribution and a major have been satisfied, additional majors may be recorded on the transcript without regard to course overlap among majors or among the additional majors and Basic Skills and Distribution requirements. Students developing multiple majors must declare this intent at the time of application for graduation. Once a student has graduated, the establishment of additional majors becomes subject to University second degree requirements.

Students who satisfy the requirements of a degree in a college other than Liberal Arts may also major inside the College of Liberal Arts with the approval of the degree granting unit. These students need complete only the major requirements, not the Basic Skills or Distribution requirements for Liberal Arts degrees. The Liberal Arts major may also be listed on the student's transcript.

(3) *Optional Minors*

At the time of application for graduation, single or multiple minors may be recorded on the academic record without regard to course overlap among minors or major and among minors and Basic Skills and Distribution requirements. Students who satisfy the requirements of a degree in a college other than Liberal Arts may also minor inside the College of Liberal Arts with the approval of the degree granting unit. The minimum requirement for a minor is 15 credit hours in courses numbered 200 or above. Minors are available in most departments or programs in which majors are offered, and also in Portuguese and Cinema Studies. Minors may be developed in other colleges or schools of the University, but must be approved by the department head in which the minor is proposed and by the Associate Dean for Student Academic Affairs.

**Business Minor:**

Requirements include the following courses: Accounting 201-202, Economics 201,
than 3 upper-division hours of Accounting, Economics, or Statistics may be used for the minor. Students are responsible for meeting all prerequisites for upper-division courses taken in a particular concentration.

(4) Supplementary Elective Courses
At least one-fourth of each student’s curricula in the Basic Program will be made up of courses selected according to the individual’s interests to supplement and support the work being done in the major and Basic Skills and Distribution requirements. This dimension of the student’s experience in the University represents that freedom within which total education may be rounded out and enriched. Elective courses should be chosen with care so that they will truly enhance the student’s total program and help in the achievement of well thought-out educational objectives.

Some of the choices which the student might make in selecting the elective courses are:
1. Additional courses in the major field;
2. A related minor;
3. An area in the arts;
4. An off-campus semester.

Only the students’ imagination and initiative and the willingness to conceive and develop a meaningful academic program limit the choices of supplementary elective courses.

INDIVIDUALIZED PROGRAM

The Basic Program described above will meet the educational needs of most students enrolling in the college. Some, however, come with particular strengths in their preparation or with special interests which do not coincide with the departmental or interdepartmental majors specified in the Basic Program. For these students the Individualized Program has been established as a means of attaining a closer correlation between student needs and academic programs.

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. Although 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), there is no restriction in principle on the choice of courses which is composed. The student may design a 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 the Liberal Arts Advising Center.

COLLEGE SCHOLARS PROGRAM

A limited number of freshmen, 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 under ordinary circumstances continues to advise the student throughout the college career. Together they determine what kinds of course work and/or other learning experiences will best 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 minor officially recognized.

Further information and applications may be obtained from the Liberal Arts Advising Center.

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 a combined degree, 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 93 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 comparing their 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 coursework in Liberal Arts, 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 Liberal Arts 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 pre-requisite to the M.B.A.

Students interested in the Dual B.A./M.B.A. program are counseled initially in the Liberal Arts Advising Center regarding admission standards and Liberal Arts 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 Graduate Management Admission Test during 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.

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<th>Hours</th>
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<td>Freshman</td>
<td>93 hours</td>
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**Freshman**
- English 101, 102 or equivalent: 6
- Biology 110-120 or Zoology 117-127: 5-8
- Chemistry 120-130: 6-8
- Mathematics: 6-8

**Sophomore**
- Chemistry 350, 360, 370: 8
- Physics 221, 222: 8
- Divisional Distribution (D) Humanities Part I: 3
- Divisional Distribution (A) Non U.S. History: 6

**Junior**
- Divisional Distribution (D) Humanities Part II: 3
- Divisional Distribution (C) Social Sciences: 6
- Upper Level Distribution (A): U.S. Studies, (B): Foreign Studies or (C) Capstone Experience

**Senior**
- Completion of major program and B.A./B.S. requirements or completion of one year at UT-Memphis: Total: 93 hours

**Pre-Pharmacy Programs/College of Liberal Arts**

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<th>Hours</th>
<th>Credit</th>
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<tbody>
<tr>
<td>Freshman</td>
<td>124 Minimum hours</td>
</tr>
<tr>
<td></td>
<td>93 hours</td>
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</tbody>
</table>

**Freshman**
- English 101-102, or equivalent: 6
- Biology 110-120 or Zoology 117-127: 5-8
- Chemistry 120-130: 6-8
- Mathematics: 6-8
- Divisional Distribution (D) Humanities Part I: 3
- Divisional Distribution (A) Non U.S. History: 6

**Sophomore**
- Biology 110-120 or Zoology 117-127: 8
- Chemistry 350, 360, 370: 8
- Upper Level Distribution: 16

**Senior**
- Completion of major program and B.A./B.S. requirements or completion of one year at UT-Memphis: Total: 124 Minimum hours

**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 or Science degree for students preparing for the study of medicine. Both programs 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, 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 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.

**Pre-Pharmacy Programs**

The college offers three programs preparing students for the study of pharmacy at UT-Memphis. The Doctor of Pharmacy (Pharm.D.) degree is conferred by UT-Memphis upon completion of four years of professional study at Memphis following any of the three programs. Bulletin details of the three pre-pharmacy programs in detail may be obtained from the Health Professions Office, 220 Ayres Hall.

**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.

**Freshman**
- English 101, 102 or equivalent: 6
- Biology 110-120 or Zoology 117-127: 5-8
- Chemistry 120-130: 6-8
- Mathematics: 6-8

**Sophomore**
- Chemistry 350, 360, 370: 8
- Physics 221, 222: 8
- Divisional Distribution (D) Humanities Part I: 3
- Divisional Distribution (A) Non U.S. History: 6

**Junior**
- Divisional Distribution (D) Humanities Part II: 3
- Divisional Distribution (C) Social Sciences: 6
- Upper Level Distribution (A): U.S. Studies, (B): Foreign Studies or (C) Capstone Experience

**Senior**
- Completion of major program and B.A./B.S. requirements or completion of one year at UT-Memphis: Total: 93 hours

**Pre-Pharmacy Programs**

The college offers three programs preparing students for the study of pharmacy at UT-Memphis. The Doctor of Pharmacy (Pharm.D.) degree is conferred by UT-Memphis upon completion of four years of professional study at Memphis following any of the three programs. Bulletin details of the three pre-pharmacy programs in detail may be obtained from the Health Professions Office, 220 Ayres Hall.
Humaneis requirements; not more than 3 credits may be taken in the Arts.
*The remaining hours may include courses from economics, history, political science, psychology and sociology. BA students must complete a minimum of 12 credits from at least two areas; BS students must complete a minimum of 6 credits from at least two areas for the Social Science requirement.
*BA students must complete a minimum of 6 credits in one of the three areas and 3 credits from one of the remaining two areas. BS students must complete a minimum of 6 credits in two of the three areas.*

Depending upon course selection, a student may require less than the listed elective hours to reach the minimum total of 93 hours. Recommended electives include courses in computer science, and business administration, particularly accounting, economics, and marketing.

**PRE-TEACHING PROGRAMS FOR PROSPECTIVE K-8 TEACHERS**

These programs are designed to prepare students for teaching grades K-8. Alternatively, prospective K-8 teachers may complete a Liberal Arts Major in a department, in one of the Interdisciplinary Programs, or, if eligible, in the College Scholars Programs. (Prospective teachers of secondary school must fulfill the requirements of appropriate content majors in Liberal Arts.

To be licensed for teaching, students must also gain formal admission, normally by the end of the sophomore year, to the Teacher Education Program in the College of Education. This involves completing a series of requirements, including presentation of satisfactory scores on certain tests; completing professional courses in Education, maintenance of a 2.5 or higher GPA and completing a fifth year program that emphasizes 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 must include 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 core curriculum stresses the interrelatedness of biological and physical systems. The two tracks beyond the core stress the two major emphases of the ecological sciences—the biological and the chemical-physical. The student choosing to emphasize the biological-physical track should be prepared to teach courses in biological science through the middle school years. The student choosing to emphasize the chemical-physical 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 (14-16 hours) may be used to satisfy general education requirements.

1. **Mathematics 121-115 (3,3) or Mathematics 121-122 (3,3) or Mathematics 141-142 (4,4)**
2. **Chemistry 100-110 (4,4) or Chemistry 120-130 (4,4)**
3. **Biology 110-120 (4,4) or Botany 110-120 (4,4) or Zoology 117-118 (4,4)**

Total: 22-24 hours

Core courses: (14-16 hours)

1. **Biology 220: General Genetics (4)**
2. **Biology 230: General Ecology (4)**
3. **Geology 201-102 (4,4) or Geography 131-132 (4,4) or Physics 141-142 (3,3)**

Beyond the core curriculum, the student must choose to follow either a Biological Sciences track (12 hours) or a Physical-Chemical Sciences track (12 hours).

A. Biological Sciences Track (At least 12 hours chosen from the following):

- Botany 305: Socio-Economic Impact of Plants (3)
- Botany 310: Plants: Evolutionary Survey I (3)
- Botany 320: Plants: Evolutionary Survey II (3)
- Botany 330-339: Field Botany (4)
- Botany 346: Introduction to Oceanography (3)
- Botany 431: Plant Ecology (3)
- Botany 451: Plant Tissue Culture (3)
- Ecology 370: Environment and Conservation (2)
- Forestry 201: Wildlife and Fisheries: Dendrology, Ecology, Silvics (3)
- Geography 435: Biogeography (3)
- Geology 320: Paleoanthropology (3)
- Geology 420: Paleoecology (4)
- Geology 426: Paleobotany and Palynology (3)
- Microbiology 310-19: Introduction to Microbiology and Lab (3,1)
- Zoology 380: General Entomology (3)
- Zoology 450-456: Comparative Animal Behavior and Lab (3,3)
- Zoology 470: Aquatic Ecology (3)
- Zoology 473: Herpetology (3)
- Zoology 474: Ichthyology (3)
- Zoology 475: Ornithology (3)
- Zoology 476: Mammalogy (3)

B. Physical-Chemical Sciences Track (At least 12 hours chosen from the following):

- Biochemistry 310: Introduction to Biochemistry (3)
- Chemistry 350-360-369: Organic Chemistry (3,2,2)
- Ecology 370: Environment and Conservation (2)
- Geography 334: Meteorology (3)
- Geography 343: Land Surface System (3)
- Geography 434: Climatology (3)
- Geography 436: Water Resources (3)
- Human Anatomy (3)
- Human Physiology (3)
- Zoology 450: Process Geomorphology (3)
- Zoology 455: Basic Environmental Geology (3)
- Zoology 485: Principles of Geochemistry (3)

Total: 26-28 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, biology, botany, microbiology, psychology, zoology) and in physical science (astronomy, geography, geology, physics) in addition to the 19 hours in the core curriculum is designed to fulfill the state competencies for I General Science and Physical Science and II Biology.

Prerequisite courses: NB: One mathematics and one science sequence or two science sequences (14-16 hours) may be used to satisfy general education requirements.

1. **Mathematics 121-115 (3,3) or Mathematics 121-122 (3,3) or Mathematics 141-142 (4,4)**
2. **Chemistry 100-110 (4,4) or Chemistry 120-130 (4,4)**
3. **Biology 110-120 (4,4) or Zoology 117-118 (4,4) or Botany 110-120 (4,4)**

Total: 22-24 hours

a. Core courses:

1. Two of the following three courses must be taken: **Biology 210: Cell Biology (4)**
2. **Biology 220: General Genetics (4)**
3. **Biology 230: General Ecology (4)**

b. One sequence from among the following:

- **Astronomy 161-162 (4,4) or Geography 131-132 (4,4) or Geology 101-102 (4,4)**

3. Philosophy 360: Introduction to the Philosophy of Science (3)

Total: (part a) 19 hours

At least twelve hours must be taken from the courses listed below, but no more than nine hours may be taken from either part b (Biological Sciences) or part c (Physical Sciences).

b. Biological Sciences

4. Of the following three courses you may choose one of each:
   - Botany 305: Socio-Economic Impact of Plants (3)
   - Botany 306: Genetics and Society (3)
   - Botany 309: Biology of Human Affairs (3)
   - Botany 310: Plants: Evolutionary Survey I (3)
   - Botany 320: Plants: Evolutionary Survey II (3)
   - Botany 321: Introductory Plant Physiology (3)
   - Botany 330: Field Botany (4)
   - Geology 201: Fossils and the Meaning of Evolution (3)
   - Geology 320: Paleobiology (3)
   - Geology 420: Paleoecology (4)
   - Microbiology 201: General Microbiology (3)
   - Microbiology 310-319: Introduction to Microbiology and Lab (3,1)
   - Psychology 210: Biological Basis of Behavior (3)
   - Psychology 370: Ethology and Sociobiology (3)
   - Psychology 410: Sensory Processes and Perception (3)
   - Psychology 481: Physiological Psychology (3)
   - Zoology 230: Human Physiology (3)
   - Zoology 240: Human Anatomy (3)
   - Zoology 330-331: Animal Development and Embryology and Lab (3,2)
   - Zoology 350: Comparative Vertebrate Biology (4)
   - Zoology 360: Comparative Invertebrate Biology (4)
   - Zoology 380: General Entomology (3)
   - Zoology 450-459: Comparative Animal Behavior and Lab (3,3)
   - Zoology 473: Herpetology (3)
   - Zoology 474: Ichthyology (3)
   - Zoology 476: Mammalogy (3)

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

c. Physical Sciences

2. Geography 334:
Mathematics

This concentration aims at developing a fundamental understanding of some of the primary avenues of mathematical thought including algebra, calculus, computing, geometry, history of mathematics, probability, and statistics.

Mathematics 115: Statistical Reasoning (3); Mathematics 130: Precalculus I (3); Mathematics 141-142: Calculus I and II (4,4); Mathematics 221: Discrete Mathematics (3); Mathematics 241: Calculus III (3); Mathematics 251: Matrix Algebra (3); Mathematics 252: Probability (3); Mathematics 400: History of Mathematics (3); Mathematics 401: Math and Microcomputing (3); Mathematics 460: Geometry (3).

Total: 35 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 pursuing this option 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 science 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 sequence: Mathematics 151-152: Biocalculus I and II (3,3).

Mathematics (12 hours): Mathematics 221: Discrete Mathematics (3); Mathematics 251: Matrix Algebra (3) Any two of the following: Mathematics 400: History of Mathematics (3); Mathematics 401: Microcomputing (3); Mathematics 460: Geometry (3).

Science (20-24 hours) NB: One of the science sequences listed below may be used to satisfy general education requirements.

Part I. (14-16 hours) A sequence from two of the following three scientific areas (A, B, or C):

A. Biological Sciences (two of the following three courses): Biology 210: Cell Biology (4); Biology 220: General Genetics (4); Biology 230: General Ecology (4); Zoology 230-240: Human Anatomy (4,3)

B. Chemistry: Either Chemistry 100-110: Principles of Chemistry, Introduction to Organic and Biochemistry (4,4) or Chemistry 120-130: General Chemistry I and II (4,4)

C. Physical Sciences: Either Geology 101-102: General Geology and II (4,4) or Geography 131-132: Geography of the Physical World I and II (4,3)

Part II. (6-8 hours) Either another sequence from Part I above or two of the following courses:

Astronomy 161: Introductory Astronomy with Lab (4); Botany 305: Socio-Economic Impact of Plants (3); Botany 309: Biology of Human Affairs (3); Geology 334: Meteorology (3); Geology 201: Fossils and the Meaning of Evolution (3); Geology 203: Geology of National Parks (3); Geology 380: Resource Crises; Minerals and Energy (3).

Total: 32-36 hours

PRE-TEACHING HUMANITIES OPTIONS: BACHELOR OF ARTS

(5) Arts

This concentration should develop the knowledge and understanding of the role of the arts in society and should include experiences with the visual arts, music, drama, and creative dance. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 212, 115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses:

Art 172: Western Art I (3) or Art 183: Asian Art (3); Music 110: Music Appreciation (3); Theatre 100: Introduction to Theatre (3)

9 hours in performance courses from 2 or 3 of the following areas: Studio Art (any course); Dance (any course); Music Performance (any course); Speech Communication 280: Introduction to Oral Interpretation (3); Speech Communication 380: Oral Interpretation of Prose Literature (3); Speech Communication 385: Oral Interpretation of Poetry (3); Speech Communication 480: Ensemble Interpretation (3); Theatre 220: Acting (3); Theatre 221: Acting (3); Theatre 245: Basic Costuming (3); Theatre 250: Introduction to Scenic Technology (3); Theatre 260: Fundamentals of Light and Sound (3); Theatre 320: Advanced Acting (3); Theatre 340: Introduction to Costume Design (3);

Biology 110-122 (4,4) or Biology 150 (5) or Zoology 117-118 (4,4) or Botany 110-120 (4,4) or two years of high school biology are prerequisite to both Biology 210-220-230 and Zoology 230-240.

Theatre 355: Introduction to Scenic Design (3); Theatre 362: Introduction to Lighting Design (3); Theatre 380-388: Stage Makeup (3); Theatre 430: Principles of Play Directing (4)

9 hours of non-performance courses from 2 or 3 of the following departments: Art 173: Western Art II (3); Art 232: History of Photography (3); Art 371: Early Christian and Byzantine Art, to c. 1350 (3); Art 372: Northern European Painting, 1350-1600 (3); Art 374: Art of Northern Europe, 1600-1675 (3); Art 375: History of Modern Sculpture in Europe and America (3); Art 381: Medieval Art of the West, 800-1400 (3); Art 382: The Art of Italy: 1250-1450 (3); Art 383: The Art of Italy: 1475-1575 (3); Art 384: Art of Southern Europe: 1575-1700 (3); Art 385: Chinese Art (3); Art 386: Japanese Art (3); Art 471: History of North American Art (3); Art 472: History of 20th Century Art (3); Art 473: 19th Century American Painting (3); Art 475: History of 19th Century Painting in Europe and America (3); Art 476: History of 20th Century Painting in Europe and America (3); Art 486: Art of Indian Art (3); English 252: Introduction to Drama (3); English 306: Introduction to Shakespeare (3); English 334: Film and American Culture (3); English 404: Shakespeare I: Early Plays (3); English 405: Shakespeare II: Later Plays (3); English 406: Renaissance Drama (3); English 412: British Drama from 1660-1800 (3); English 453: Continental Drama (3); English 491: Foreign Study (1-15); French 430: Theatrical French (2-3); German 373: German Film (3); German 422: German Drama (3); Music: all courses in Music History and Music Theory, *Spanish 450: 20th Century Hispanic Theatre* (3); Theatre 210-211: Survey of World Drama (3,3); Theatre 310-311: History of the Theatre: (3,3); Theatre 312-313: History of the American Theatre (3); Theatre 410: Dramatic Theory and Criticism (3); 6 additional hours at the 300 level or higher from any of the courses listed above.

Course requires intermediate level in the language.

Total: 33 hours (at least 15 at 300 level or above)

(6) Language Arts

This concentration should develop knowledge, understandings, and skills for effective communication, appreciation of literature, and competence in use of language.

Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 115, 122-115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required: Linguistics 200: Language, Linguistics, and Society (3)

12 hours in courses from at least two of the following areas: Audiology and Speech Pathology; Comparative Literature, English, Library and Information Science, Linguistics, Speech Communication
6 hours in expository and/or creative writing courses in the English Department or Theatre 470-471: Playwriting (3,3)

6 hours from: Audiology and Speech Pathology 305: Speech Science I: Phonetics and Acoustics of Speech (3); Audiology and Speech Pathology 320: Speech and Language Development (3); Audiology and Speech Pathology 465: Speech and Language of the Culturally Different Child (3); English 371: Foundations of the English Language (3); English 372: The Structure of Modern English (3)

6 hours in literature courses in Departments of English, Classics, or Foreign Language at 300 level or above

Total: 33 hours
(at least 24 at 300 level or above)

(7.) Ideas and Values
This concentration aims at developing an understanding of the variety of ideas and values evolved by different civilizations in their attempts to comprehend and manage the human condition. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses: (15 hours)
- Philosophy 110-111: The Human Condition (3,3)
- Religious Studies 101: World Religions in History (3)
- Religious Studies 211: Ways of Understanding Religion (3)

At least 9 hours at the 200 level or above from the following or as an option approved by petition:
- Classics 221: Early Greek Philosophy (3)
- Classics 222: Classical Greek and Roman Mythology (3)
- Philosophy 320: Ancient Western Philosophy (3)
- Philosophy 322: Medieval Philosophy (3)
- Philosophy 324: Seventeenth and Eighteenth Century Philosophy (3)
- Philosophy 326: Nineteenth and Twentieth Century Philosophy (3)
- Philosophy of Religion (3)
- Philosophy 390: Philosophy of Science (3)
- Philosophy 393: Philosophy of Science (3)
- Philosophy 395: Existentialism (3)
- Philosophy 411: Modern Religious Philosophies (3)
- Philosophy 425: American Philosophy (3)
- Philosophy 439: Introduction to Philosophy (3)
- Philosophy 441: Historical and Continental Philosophy (3)
- Religious Studies 305: Contemporary Religion (3)
- Religious Studies 311: Ancient Hebraic Religious Traditions (3)
- Religious Studies 315: Reformaton Europe (3)
- Religious Studies 321: Testament Origins (3)
- Religious Studies 322: Christian Thought (3)
- Religious Studies 326: Images of Jesus (3)
- Religious Studies 331: Judaism (3)
- Religious Studies 342: Religious Ethics (3)
- Religious Studies 351: Introduction to U.S. Religious History (3)
- Religious Studies 352: Afro-American Religion in the U.S. (3)
- Religious Studies 355: Religion and Culture in the U.S. (3)
- Religious Studies 425: Seminar in Western Religions (3)

At least 6 hours in non-Western philosophy and religion to be chosen from the following or from an option approved through petition:
- Religious Studies 302: Religion of Primitive People (3)
- Religious Studies 332: Islam (3)
- Religious Studies 373: African Religions (3)
- Religious Studies 374: Philosophy and Religion in India (3)
- Religious Studies 376: Buddhists and Religion (3)
- Religious Studies 379: Religion and Philosophy in China (3)
- Religious Studies 383: Religion in Japan (3)
- Religious Studies 412: Classical Indian Systems of Philosophy (3)
- Religious Studies 435: Seminar in Asian Religions (3)

Total: 30 hours
(at least 21 at 300 level or above)

PRE-TEACHING SOCIAL SCIENCE OPTIONS: BACHELOR OF ARTS

(8.) United States Culture
The aim of this concentration is to develop both breadth and depth of understanding about American culture, its uniqueness, its strengths, and its origins. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-125, 121-141, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses: (6 hours)
- American Studies 310: Introduction to American Culture: Voices of Dissent (3)
- American Studies 410: Topics in American Culture (3)

6 hours from any U.S. History courses

3 hours in Appalachian Studies selected from:
- Anthropology 312: Appalachian Culture (3)
- Geography 365: Geography of Appalachia (3)
- History 449: Tennessee History (3)

6 hours in American Literature at 400 level

9 hours from the following:
- Anthropology 310: North American Indians (3)
- Anthropology 315: Afro-American Anthropology (3)
- Anthropology 360: North American Prehistory (3)
- Art 471: History of North American Art (3)
- Art 472: History of North American Art (3)
- Art 473: 19th Century American Painting (3)
- Economics 331: Government and Business (3)
- Economics 325: Economic History of the North Atlantic Community (3)
- English 322: Women in American Literature (3)
- English 324: Film and American Culture (3)
- Geography 361: Regional Geography of the U.S. and Canada (3)
- Geography 363: Geography of the United States (3)
- Geography 365: Geography of Appalachia (3)
- Geography 425: Historical Geography of the United States (3)
- Geography 441: Urban Geography (3)
- Geography 443: Rural Geography (3)
- History 440: America: Mind, Mood and Society (3)
- History 445: The Afro-American Experience from the Colonial Period to the Present (3)
- History 453: Women in American History (3)
- History 454: Cities and Urbanization in American History (3)
- Music 350: History of Jazz (3)
- Music 440: Music of North America (3)
- Philosophy 425: American Philosophy (3)
- Political Science 315: Tennessee Government and Politics (3)
- Political Science 350: Law in American Society (3)
- Political Science 381: Judicial Process (3)
- Political Science 374: American Political Thought (3)
- Political Science 411: The Presidency (3)
- Political Science 412: Congress (3)
- Political Science 431: U.S. Constitutional Law: Civil Rights and Liberties (3)
- Religious Studies 351: Introduction to U.S. Religious History (3)
- Religious Studies 352: Afro-American Religion in the U.S. (3)
- Religious Studies 353: Topics in Afro-American Religion (3)
- Sociology 490: Sociology of Sport (3)
- Sociology 491: Sociology of Aging (3)
- Sociology 495: Sociology and Law (3)

Total: 30 hours

(9.) Human Learning and Behavior
The purpose of this option is to develop knowledge and insights into societal influences and the ways in which humans learn, think, and act through various stages of development. Of the 33 hours, at least 21 must be within the College of Liberal Arts. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-125, 121-141, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Core courses:
- 6 hours from: Child and Family Studies 210: Human Development (3); Child and Family Studies 213: Development in Middle Childhood and Adolescence (3); Educational and Counseling Psychology 210: Psychology of Human Development for Teachers (3); Psychology 300: Child Psychology (3)
- 9 hours from courses related to culture and society from at least 2 of the following areas: Afro-American Studies 480: Black Communities in Urban America (3)
- Anthropology 130: Cultural Anthropology (3)
- Anthropology 230: American Cultures (3)
- Anthropology 312: Appalachian Culture (3)
- Anthropology 313: Peoples and Cultures of Mesoamerica (3)
- Anthropology 314: Peoples and Cultures of Africa (3)
- Anthropology 410: Principles of Cultural Anthropology (3)
- Anthropology 413: Dynamics of Culture (3)
- Anthropology 310: American Society (3)
- Sociology 343: Race and Ethnicity (3)
- Sociology 363: The City (3)
- Sociology 380: Rural Sociology (3)

6 hours in courses related to family from: Afro-American Studies 420: Families: Race, Class and Culture (3); Child and Family...
Studies 312: Adulthood and Aging (3); Child and Family Studies 360: Family Stress (3); Sociology 311: Family (3); Women's Studies 230: Marriage and Family: Roles and Relationships (3)

12 hours related to human development, learning and behavior in at least 2 of the following areas (courses not taken in the core may be used): Child and Family Studies 211: Development in Infancy and Early Childhood (3); Child and Family Studies 450: Assessment in Early Childhood Programs (3); Educational and Counseling Psychology 431: Personality and Mental Health (3); Psychology 310: Learning and Thinking (3); Psychology 400: Cognitive Psychology: Language and Symbolic Processes (3); Psychology 430: Health Psychology (3); Psychology 450: Theories of Learning (3)

Total: 33 hours (at least 21 at 300 level or above and at least 21 within the College of Liberal Arts)

(10.) Multicultural Studies
This concentration should develop a greater sensitivity, appreciation, and knowledge regarding other cultures both nationally and internationally. It should also increase understanding of issues of race and ethnicity. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Required courses: (9 hours)
Geography 101-102: World Geography (3,3); Anthropology 130: Cultural Anthropology (3)
3 hours from: Sociology 340: Class Structure (3); Sociology 343: Race and Ethnicity (3); Sociology 344: Power and Society (3)
3 hours Sociology 446: The Modern World System (3)
3 hours Curriculum and Instruction 451: Education in Cultural Perspective (3)
18 hours selected from, Geography, Afro-American Studies, Anthropology, Economics, History, Latin-American Studies, Religious Studies, Sociology with a multicultural/international emphasis or in a given geographic area (such as Africa, Asia, Latin America)

Total: 36 hours (at least 18 at 300 level or above)

(11.) Social Studies
This concentration should develop perceptions of the broad field of social science and broaden the historical and geographic knowledge base. Prerequisite to this concentration is Mathematics 201-202 or one of the Mathematics sequences listed under Natural Science, Part II of the Liberal Arts Distribution requirements: Math 121-115, 121-122, 121-Statistics 201, 122-115, 141-142, or 151-152. If the Math 201-202 sequence is chosen, it will satisfy the distribution requirements under Natural Science, Part II.

Prerequisite courses: History 151-152: Development of Western Civilization (3,3) or History 161-162: History of World Civilization (3,3); Geography 101-102 (3); Political Science 101: United States Government and Politics (3) or Political Science 102: Government and Politics (3); History 251-252: History of the United States (3,3); Anthropology 120: Prehistoric Archaeology (3) or Anthropology 130: Cultural Anthropology (3); or Sociology 100: General Sociology (3)

Total: 24 hours

Core courses: Geography 320: Cultural Geography: Core Concepts (3); History 373: Historical Issues (3) or History 379: American Issues: Individualism and Community (3) or History 380: American Issues: War and the Peaceful Ideal (3)

6 hours from the following: History 360-361: History of Latin America (3,3); History 362-363: History of East Asia (3,3); History 364: History of China (3); History 365: History of Japan (3); History 366: Ancient Near East Civilization (3); History 369-370: History of the Middle East (3,3)

6 hours from the following: Afro-American Studies: 371-372: African History (3,3); Economics 261: Introductory Economics: A Survey Course (4); History 376: History Behind the News (3); History 449: History of Tennessee (3); Human Services 220: Introduction to Human Services (3); Psychology 110: General Psychology (3); Women's Studies 310: Emergence of the Modern American Woman (3); Women's Studies 332: Women in American Literature (3); Women's Studies 340: Women, Politics, and The Law (3)

Total: 18 hours

12 additional hours at 300 level or above from one of the following: U.S. History, European History, Ancient and Medieval History; Geography; Political Science; Modern History; African and/or Asian History

Total: 30 hours (at the 300 level or above)

**PRE-VETERINARY MEDICINE PROGRAM**

The following program is designed for students who wish to pursue a Liberal Arts degree while preparing for the study of Veterinary Medicine. Students in this program must complete at least 93 credit hours while enrolled in the College of Liberal Arts, 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 Liberal Arts.

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.

**SCIENCE-MEDICAL TECHNOLOGY CURRICULUM**

Students who complete the Science-Medical Technology Curriculum receive the B.S. degree with a major in medical technology from the College of Liberal Arts. The curriculum requires a minimum of 94 hours of credit which includes the Basic Skills and Distribution requirements of the college prior to application for admission to a final year of study at the University of Tennessee Medical Center, Knoxville (UTMCK). After the course of study is completed, UTMCK, awards the student a Certificate of Laboratory Training. Students are then eligible for examination by the Board of Registry of the American Society of Clinical Pathologists to earn certification as registered medical technologists.
This requirement assumes a student has had enough admission to the medical technology course of study. General chemistry may be eligible to go directly into the college, therefore, in effect certifies the student in 3 quarters. For additional information contact Teacher Certification Office, Room 212 Claxton Education Building.

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 liberal arts students is 18, exclusive of elective work in ensemble 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 hours earned by examination, military service, etc. Credit per semester will vary from 1-15 hours. Up to 21 hours of credit earned in this way may be applied toward a degree in the college, although individual departments may limit the number of hours which may be applied toward a specific major.

INDEPENDENT STUDY
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 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 per semester will vary from 1-15 hours. Up to 21 hours of credit earned in this way may be applied toward a degree in the college, 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 arranged 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, Knoxville students with approval may enroll for credit. Assistance in identification of and registration in such programs may be obtained through the Overseas Study Information Service located in the University’s Division of International Education. A third opportunity is through individualized programs under the foreign study number 481. The nature of this work as well as credit for it should be negotiated by students prior to departure with the appropriate liberal arts departments. Credit will be awarded only after completion of all agreed upon requirements, and may vary from 1-15 hours in any one department. Up to 21 hours of such credit.
Anthropology 110, 120, 130 are prerequisites to a minor in anthropology, which consists of 15 hours of upper division Anthropology courses, chosen in consultation with an Anthropology advisor.

ART

Professors:  

Associate Professors:  

Assistant Professors:  
P. Longobardi, M.F.A. Montana State; B. Lyons, M.F.A. Arizona State; D. Wilson, M.F.A. California (San Diego).

B. F. A. in Studio Art  
The B.F.A. is Studio Art is a professionally oriented degree especially intended for those students planning careers or graduate study in the visual arts. Majors must pass a portfolio review, usually at the end of the sophomore year in order to be admitted into upper division courses and concentrations. All studio courses require 3 hours per week attendance for each credit hour earned. Completing the B.F.A. program may take more than 8 semesters. Students are urged to seek departmental advice each semester to ensure proper scheduling.

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. Transfers who expect 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 graphic or fine media concentrations in Ceramics, Drawing, Sculpture, Watercolor; or Inter-Area Concentration - Ceramics; Drawing; Watercolor; or Inter-Area (approved combinations of studio media).

Additional hours in studio course electives to be chosen in consultation with an advisor.  
Student must pass a portfolio review (Pre-requisite to 300 and 400 courses) (S/NC).

Total: 46

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

Portfolio Review (Pre-requisite to 300 and 400 courses) (S/NC)

Total: 32

Studio Electives  
Additional hours in studio course electives to be completed in the Art Department or at our affiliated facility, Arrowmont School of Arts and Crafts. Students may also apply a maximum of 6 hours of approved studio courses from Architecture, Art Education, Broadcast Journalism, Computer Science, Vocational Technical Education, Interior Design or Theaters. Students electing an additional major in Art Education and licensure to teach must take 14-15 hours in undergraduate Education courses.  

Total: 15 hours

General Curriculum  
English Composition, 6  
Non-U.S. History/Social Science, 6  
Natural Science/Mathematics, 6-8  
Liberal Arts Non-Art Electives, 14-16  

Total: 34 hours

Total: 127 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/Illustration  
The Graphic Design/Illustration major is specifically designed to provide the basic visual education for those persons who wish to pursue careers in the commercial application of art in fields such as advertising, art direction, package design, publications, television, etc. 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. Transfers who expect 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 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. Two options are available: Graphic Design or Illustration. Students are advised that courses in Graphic Design/Illustration must be taken in sequence, and that successful completion of Art 350 (Portfolio Review, S/NC) is prerequisite to all upper-division courses.

GRAPHIC DESIGN CONCENTRATION

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Core</td>
<td>9</td>
</tr>
<tr>
<td>Art History electives</td>
<td>6</td>
</tr>
<tr>
<td>Art 101, 103</td>
<td>4</td>
</tr>
<tr>
<td>Art 295, 211, 213 (or 215)</td>
<td>9</td>
</tr>
</tbody>
</table>

Total: 28

Graphic Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 350 (S/NC)</td>
<td>6</td>
</tr>
<tr>
<td>Art 212, 3 hours drawing elective</td>
<td>6</td>
</tr>
<tr>
<td>Art 231</td>
<td>3</td>
</tr>
<tr>
<td>Art 151</td>
<td>2</td>
</tr>
<tr>
<td>Art 251, 252, 351/356</td>
<td>22</td>
</tr>
<tr>
<td>Art 356</td>
<td>6</td>
</tr>
<tr>
<td>Art 456</td>
<td>12</td>
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</table>

Total: 62

Design and Professional Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising 250, 350; Broadcasting 330; Marketing 301</td>
<td>6</td>
</tr>
</tbody>
</table>

Total: 30

General Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
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<tr>
<td>Non U.S. History/Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science/Mathematics</td>
<td>14-16</td>
</tr>
<tr>
<td>Liberal Arts Non-Art Electives</td>
<td>14-16</td>
</tr>
</tbody>
</table>

Total: 34

In addition to the general B.A. requirements (found in the Undergraduate Catalog), the following are required for B.A. majors in the Art Department:

B.A. Majors in Art History

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Art 172, 173, 183</td>
<td>9</td>
</tr>
<tr>
<td>Major: Art History courses numbered 200 and above (May include Greek and Roman Art and Archaeology, Department of Classics)</td>
<td>21</td>
</tr>
<tr>
<td>Studio courses numbered 200 and above</td>
<td>6</td>
</tr>
<tr>
<td>Studio courses numbered 200 and above, including a minimum of 15 hours in 300-400 level courses</td>
<td>24</td>
</tr>
</tbody>
</table>

Total: 40 hours

Undergraduate work in Art History is enhanced by knowledge of at least one foreign language and by additional studio art experience. Graduate work normally requires reading knowledge of German, French, and any other language appropriate to an area specialization.

Students anticipating possible careers in the museum or gallery field are advised that elective hours in Art 482, Museology II, should be considered.

B.A. Major in Studio

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Art 101, 295, 103</td>
<td>7</td>
</tr>
<tr>
<td>Major: Studio courses numbered 200 and above, including a minimum of 15 hours in 300-400 level courses</td>
<td>24</td>
</tr>
</tbody>
</table>

Total: 31 hours

In addition to the general B.A. requirements, the following are required for minors in the Art Department:

B.A. Minor in Art History

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Art 172, 173</td>
<td>6</td>
</tr>
<tr>
<td>Minor: Art History courses numbered 200 and above</td>
<td>15</td>
</tr>
</tbody>
</table>

Total: 21 hours

B.A. Minor in Studio

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisites: Art 101, 103, 295</td>
<td>7</td>
</tr>
<tr>
<td>Major: Studio courses which include a minimum of 6 additional upper-division hours. Concentration may be Ceramics, Drawing, Fiber-Fabric, Painting-Watercolor, Printmaking, Sculpture or a combination of these areas.</td>
<td>15</td>
</tr>
</tbody>
</table>

Total: 28 hours

ILLUSTRATION CONCENTRATION

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Core</td>
<td>9</td>
</tr>
<tr>
<td>Art History electives</td>
<td>6</td>
</tr>
<tr>
<td>Art 101, 103</td>
<td>4</td>
</tr>
<tr>
<td>Art 295, 211, 213 (or 215)</td>
<td>9</td>
</tr>
</tbody>
</table>

Total: 28

Illustration

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 350 (S/NC)</td>
<td>0</td>
</tr>
<tr>
<td>Art 212, 3 hours drawing elective</td>
<td>12</td>
</tr>
<tr>
<td>Art 231</td>
<td>3</td>
</tr>
<tr>
<td>Art 151</td>
<td>2</td>
</tr>
<tr>
<td>Art 251, 252, 351/356, 354/355, 453, 454, 455 in sequence</td>
<td>27</td>
</tr>
<tr>
<td>Art 356</td>
<td>1</td>
</tr>
<tr>
<td>Art 353, 354, 453, 454 in sequence</td>
<td>12</td>
</tr>
</tbody>
</table>

Total: 44

In addition to the general B.A. requirements, the following are required for minors in the Art Department:

B.A. Minor in Art History

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: Art 172, 173</td>
<td>6</td>
</tr>
<tr>
<td>Minor: Art History courses numbered 200 and above</td>
<td>15</td>
</tr>
</tbody>
</table>

Total: 21 hours

B.A. Minor in Studio

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisites: Art 101, 103, 295</td>
<td>7</td>
</tr>
<tr>
<td>Major: Studio courses which include a minimum of 6 additional upper-division hours. Concentration may be Ceramics, Drawing, Fiber-Fabric, Painting-Watercolor, Printmaking, Sculpture or a combination of these areas</td>
<td>15</td>
</tr>
</tbody>
</table>

Total: 28 hours

PI BETA PHI ARROWMONT SCHOOL OF ARTS AND CRAFTS

Director: S.J. Blain, M.F.A. Wisconsin.

Arrowmont, 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 Fraternity established an affiliation with The University of Tennessee, and with the Department of Art in 1976. 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 resident accommodations. The Arrowmont 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 chapters of the Pi Beta Phi Fraternity, alumnae clubs, and individual members.

Courses are offered periodically at the Pi Beta Phi Arrowmont School of Arts and Crafts, Gatlinburg, Tennessee. Content varies with faculty. Students should check specific course content as printed in the Arrowmont timetable published each spring.

ASIAN STUDIES

See Interdisciplinary Programs.

ASTRONOMY

See Physics and Astronomy.

AUDIOLINGUAL AND SPEECH PATHOLOGY

Professors:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.J. Carney (Head)</td>
<td>Ph.D. Iowa; S. Adler</td>
</tr>
<tr>
<td>Ph.D. Ohio State; C.W. Asp</td>
<td>Ph.D. Ohio State; D.M. Lipson</td>
</tr>
<tr>
<td>comb (Adjunct); Ph.D.</td>
<td>Washington; H.L. Luper</td>
</tr>
<tr>
<td>Ph.D. Iowa State; I.V. Nabelek; Ph.D.</td>
<td>Czech Technical (Prague); H.A. Peterson, Ph.D. Illinois; B. Silverstein, Ph.D. Purdue.</td>
</tr>
</tbody>
</table>

Associate Professors:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.B. Burchfield</td>
<td>Ph.D. Michigan State; C.J.</td>
</tr>
<tr>
<td>Ferrell; M.A. Tennessee; E.I. Hamby, Ph.D. Iowa; J. Thein, Ph.D. Iowa; G. Wallace, Ph.D. Northwestern.</td>
<td></td>
</tr>
<tr>
<td>Assistant Professors:</td>
<td></td>
</tr>
<tr>
<td>P. Gordon, Ph.D. Tennessee;</td>
<td></td>
</tr>
<tr>
<td>A. Krishnan, Ph.D. Texas</td>
<td></td>
</tr>
<tr>
<td>(Dallas).</td>
<td></td>
</tr>
</tbody>
</table>

Instructors:

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. King, M.A. Tennessee; T.R. Singletary, M.S. Colorado State.</td>
<td></td>
</tr>
</tbody>
</table>
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 most professional certificates and employment positions. Information about the audiology and speech pathology programs may be obtained from the departmental office, 457 South Stadium 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 304, 305, 320, 331, 433, 461, 465, 473 plus six (6) hours from the following courses: 431, 440, 494.

The B.A. major in speech pathology consists of Audiology and Speech Pathology 304, 305, 306, 320, 331, 371, 433, 461, 465, 473 plus four (4) hours from the following courses: 431, 440, 494.

Additional recommended courses for audiology and speech pathology majors include appropriate coursework from: Anthropology, Biology, Curriculum and Instruction, Educational Psychology, Psychology, Physics, Special Education and Child and Family Studies. Students majoring in Audiology and Speech Pathology are strongly encouraged to consult frequently with their advisors before selecting additional recommended courses.

BACTERIOLOGY
See Microbiology.

BIOCHEMISTRY

Professors:
W.D. Wicks, Ph.D. Harvard (Head); J.E. Churchich (Chancellor’s Research Scholar), Ph.D. Sheffield (England); J.G. Joshi, Ph.D. Poona (India); K.J. Monty, Ph.D. Rochester.

Associate Professors:
J. Koontz, Ph.D. Kentucky.

Assistant Professors:
H. Howell, Ph.D. Lehigh; C. Peterson, Ph.D. Louisiana State; D. Roberts, Ph.D. California (Davis); E. Serpersu, Ph.D. Hacettepe (Turkey).

The B.S. major in Biochemistry consists of Biology 210-220, Chemistry 350-360-380-389, Physics 221-222, Biochemistry 410, either Chemistry 310-319 or Biochemistry 419, and 12 hours of upper division courses. Upper division courses must be selected from Biochemistry 419, 420, 430, 440, 452; Botany 310-320, 321, 412, 441, 451; Microbiology 310-319, 400, 410, 419, 430-439, 440-446; Zoology 320-331, 350, 360, 400, 403, 404, 410, 420, 440, 445, 449, 460, 465, 490. Not more than 8 hours may be selected from one department. No more than 3 credits of research courses may be counted toward the major.

Concentration in Organismal and Systems Biology consists of Biology 210, 220, 230, Chemistry 350, 360, 369, Biochemistry 410, either Chemistry 310-319 or Biochemistry 419, and 12 hours of upper division courses. Upper division courses must be selected from Biochemistry 419, 420, 430, 440, 452; Botany, any 300- or 400-level courses but not more than one course from 305, 306, or 309; Microbiology, any 300- or 400-level courses; Zoology, any 300- or 400-level courses. At least 6 hours must be at the 400 level. Not more than 12 hours may be selected from one department. No more than 3 credits of research courses may be counted toward the major.

Concentration in Ecology consists of Biology 210, 220, 230, Chemistry 350, 360, 369, one course from among Botany 431, Zoology 450 or 460; either Zoology 470 or Botany 434; and one course from among Forestry, Wildlife and Fisheries 311, 315 or; Wildlife and Fisheries Science 443, 444, or 445. An additional 9 hours must be chosen from among these courses: Either Biochemistry 310 or 410; Botany 321, 330, 346, 401, 402, 403, 411; one course from among Geography 413, 433, or 434; Microbiology 470, 479; Zoology 445, 449, 459, 460. 70.

A Minor consists of Biology 210, 220, 230 and 8 hours of upper-division courses chosen from the list below. Biochemistry 410-419; Botany, any 300- or 400-level courses; Microbiology, any 300- or 400-level courses; Zoology, any 300- or 400-level courses. (In meeting the upper-division minimum requirement, not more than 6 hours may be credited from any one biological science department, and not more than 3 hours of research courses may be credited.) Prerequisites to the minor are introductory biology courses (Biology 110-120 or Botany 116-120 or Zoology 117-118) and Chemistry 120-130.

BOTANY

Professors:

Associate Professors:
C.C. Amundsen, Ph.D. Colorado; A.S. Heilman, Ph.D. Ohio State; O.J. Schwarz, Ph.D. North Carolina State; D.K. Smith (Undergraduate Coordinator), Ph.D. Tennessee; B.E. Wofford (Director of Herbarium) Ph.D. Tennessee.

Lecturer:

The B.S. major in Botany may be obtained by completing one of the three concentrations: General Program, Organismal Botany, or Cellular and Molecular Botany. Prerequisites for all three concentrations are: Botany 110-120 or 118-128 (recommended), or Biology 110-120, and Chemistry 120-130. Corequisites to the General Program is one of the following sequences: Mathematics 115-121 or 141-142 or 151-152, or Physics 121-122, or Geology 101-102, or Chemistry 350-360-369. Corequisites for both of the other concentrations are: Mathematics 141-142 or 151-152, Physics 121-122 or Geology 101-102; and Chemistry 350-360-369.

General Program requirements are: 3 courses from Botany 210-220-230; Botany 310, 320, 321, 330, 1 hour of 371, 1 hour from 400 or 441-442; 4 hours of additional Botany; and 3 hours of upper division non-Botany courses selected from Biochemistry, Microbiology, or Zoology. A minimum of 31 hours completes this major's option.

Concentration in Organismal Botany requirements are: Biology 210, 230, Botany 310, 320, 321, 330, 1 hour of 371, 1 hour from 400 or 441-442; 7 additional hours selected from Botany 305, 306, 309 do not meet this requirement), Biology (220 is recommended for partial fulfillment of this requirement), or upper division Biochemistry, Microbiology, or Zoology. A minimum of 31 hours completes this major's option (includes 8 hours of Organic Chemistry).

Concentration in Cellular and Molecular Botany requirements are: Biology 210, 220; Botany 321, 310, 320, 330, or 451, 1 hour of
371, 2 hours from 400 or 411-442; Biochemistry 410; and 3 additional hours selected from Botany (305, 306, 309) or upper division Biochemistry, Microbiology, Zoology. A minimum of 40 credits completes this major's option (includes 8 hours of Organic Chemistry).

**Minor** consists of 2 courses from Biology 210, 220, 230, 1 hour of Botany 371, and 6 additional hours of upper-division Botany (not more than one course from 305, 306, 309) and 3 additional hours of upper-division Botany or related Biological Sciences. Prerequisite to the minor is Botany 110, 120, or 118, 128 (recommended) or Biology 110, 120.

**CHEMISTRY**

**Professors:**
- G. Mamantov (Head and Alumni Distinguished Service Professor), Ph.D. Louisiana State; D.C. Baker, Ph.D. Ohio State; J.E. Bloor, Ph.D. Manchester (England); W.E. Bull, Ph.D. Illinois; J. Q. Chambers, Ph.D. Kansas; J.A. Dean (Emeritus), Ph.D. Minnesota; F.A. Grimm, Ph.D. Cornell; G.A. Guiochon (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Universite de Paris (France); G.W. Kabalka, Ph.D. Purdue; D.C. Kleinfeifer, Ph.D. Princeton; J.D. Kovac, Ph.D. Yale; M.H. Lietzke, Ph.D. Wisconsin; L.J. Magid, Ph.D. Tennessee; F.M. Magid, Ph.D. Yale; R.M. Pagni, Ph.D. Wisconsin; J.R. Peterson, Ph.D. California (Berkeley); G.K. Schweitzer (Alumni Distinguished Service Professor), Ph.D. Illinois; M.J. Sepaniak, Ph.D. Iowa State; W.T. Smith (Emeritus), Ph.D. Ohio State; W.A. Van Hook, Ph.D. Johns Hopkins; E.L. Wehry, Ph.D. Purdue; T.F. Williams (Alumni Distinguished Service Professor), Ph.D. London (England); B. Wunderlich (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Northwestern.

**Associate Professors:**
- J.L. Adcock, Ph.D. Texas; S.D. Alexandratos, Ph.D. California (Berkeley); C.E. Barnes, Ph.D. Stanford; J.E. Bartmess, Ph.D. Northwestern; K.D. Cook, Ph.D. Wisconsin; C.A. Lane, Ph.D. California (Berkeley); C.S. Feigerle, Ph.D. Colorado; F.M. Schell, Ph.D. Indiana; C. Woods, III (Associate Dean), Ph.D. North Carolina State.

**Assistant Professor:**

**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. Only 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 positions in research and college teaching. A student in the B.S. in Chemistry program should, at the earliest opportunity, ask the Liberal Arts Advising Hall or to the Department of Chemistry. For further information, contact the Head of Department of Chemistry, 575 Buell Hall. For information concerning the Cooperative Program in chemistry, see description of the B.S. program below.

**CURRICULUM REQUIREMENTS:**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
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<tr>
<td><strong>Freshman</strong></td>
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<tr>
<td>Chemistry 120-130 or (preferably) 121-131 or 128-138</td>
<td></td>
<td>8</td>
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<tr>
<td>Mathematics 141-142</td>
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<td>8</td>
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<tr>
<td>English Composition</td>
<td></td>
<td>6</td>
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<tr>
<td><em>Foreign Language (intermediate level sequence)</em></td>
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<td>6</td>
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<tr>
<td><em>Distribution</em></td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Chemistry 340</td>
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<td>2</td>
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<tr>
<td>Chemistry 350-360</td>
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<tr>
<td>Chemistry 369</td>
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<tr>
<td>Chemistry 230</td>
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<tr>
<td>Mathematics 241-251</td>
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<td>7</td>
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<tr>
<td>Physics 131-231</td>
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<td>7</td>
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<tr>
<td><em>Distribution</em></td>
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<tr>
<td><strong>Junior</strong></td>
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<tr>
<td>Chemistry 310-320</td>
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<tr>
<td>Chemistry 319-329</td>
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<td>Chemistry 473-483</td>
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<td>Chemistry 479-499</td>
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<tr>
<td><em>Distribution</em></td>
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<tr>
<td><em>Electives</em></td>
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<tr>
<td><strong>Senior</strong></td>
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<tr>
<td>Chemistry 430</td>
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<tr>
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<td>Chemistry 409</td>
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<td>Chemistry Electives</td>
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<td><em>Distribution</em></td>
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<tr>
<td><em>Electives</em></td>
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<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>124</td>
</tr>
</tbody>
</table>

*Must be chosen from German, French or Russian; a student who has not had two years of one of these languages in high school will need to complete the intermediate sequence before taking the intermediate level sequence.*

*The distribution requirements of the College of Liberal Arts are satisfied by taking: Non-U.S. History (6 hours), Social Sciences (6 hours), Humanities (6 hours), and Upper Level Distribution (3 hours in either U.S. Studies or Foreign Studies and 3 hours French or Spanish language proficiency through at least the intermediate level sequence. Courses 100 and 110 are 120-130, 121-131, and 128-138; chemistry majors are strongly encouraged to take either of the latter sequences. Courses 100 and 110 emphasize organic and biochemical, and may be used as prerequisites only for 431. 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, pending completion of 431. Credit may be received for only one of the courses 100, 120, 121, 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 B in 128 will complete the year's work by taking 130 or 131.

Beginning students who have had high school chemistry and who have had additional experience (e.g. summer institute study, special research in 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 semester (or course) 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.

COMPARATIVE LITERATURE
See Interdisciplinary Programs.

COMPUTER SCIENCE

Professors:
J.H. Poore (Head), Ph.D. Georgia Tech; Jack Dongarra, Ph.D. New Mexico; R.C. Gonzalez (ECE), Ph.D. Florida; G.R. Sherman (Director, JTCC), Ph.D. Purdue; M.G. Thomason, Ph.D. Duke.

Associate Professors:
J.D. Case, Ph.D. Illinois; M.A. Langston, Ph.D. Texas A&M; B.J. MacLennan, Ph.D. Purdue.

Assistant Professors:
Michael W Berry, Ph.D. Illinois; J.R.S. Blair, Ph.D. Pittsburgh; H.A. Booth, Ph.D. Princeton; Jens Gregor, Ph.D. Aalborg (DK); D.C. Mutcher, Ph.D. Duke; D.W. Straight, Ph.D. Texas; B.T. Vander Zanden, Ph.D. Cornell; M.D. Vose, Ph.D. Texas.

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

Computer Science

The Computer Science Department directly.
Students who enter the College of Liberal Arts as freshmen or sophomores are expected to apply for the major immediately after completing 10 hours in Computer Science.

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 definitely prior to 75 hours. As a minimum, all students must be admitted to the CS major for at least the last 30 hours of work. Only in exceptional circumstances will application be considered after 75 hours of coursework (at UTK or elsewhere) have been completed. It should not be supposed that CS admission must be granted to those who accumulate a substantial number of hours in CS courses. On the contrary, an academic record reflecting substantial work after 75 hours in the CS curriculum may be taken as prima facie evidence of intent to evade this policy and may result in denial of admission.

In 1991 the progression standards were:

1. Has completed at least the following three courses at UTK with an average of 3.0 or better: CS 102, 111, 112.
2. Has achieved an average of 2.5 or better of grades in all Computer Science courses taken at UTK that apply to the major. All grades received for these courses are averaged.
3. Has received at most one W or repeated grade in a Computer in a Computer Science courses.
4. Has not been disciplined for academic dishonesty in a Computer Science course or for abuse of university computing privileges.

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

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 can 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

Director:
Dewey L. Bunting

Basic Faculty:
C.C. Amundsen, Ph.D. Botany; B.G. Blaylock, Ph.D. O.R.N.L.; E.R. Buckner, Ph.D. Forestry; D.L. Bunting, Ph.D. Zoology; G.M. Burghardt,
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 Liberal Arts.

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 and 313 plus 21 additional hours in upper division economics courses. Majors are encouraged to satisfy Part II of the Natural Science Distribution Requirement with one of the mathematics packages Mathematics 115-121, 121-122, or 141-142. Students planning graduate work in Economics should elect Mathematics 141-142.

Honors: 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) 12 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

Producers:
D.A. Carroll (Head), Ph.D. North Carolina; P.G. Adams (Young Professor Emeritus), Ph.D. Texas; E.W. Brarton, Ph.D. Illinois; D.R. Cox (Associate Head), Ph.D. Missouri; K. Curry (Emeritus), Ph.D. Yale; Y.V. Drake, Jr., Ph.D. Yale; W. Dykeman (Adjunct), B.A.
Northwestern; A.R. Ensor, Ph.D. Indiana; R.J. Finninan (John C. Hodges Professor), Ph.D. North Carolina; J.H. Fisher (John C. Hodges Professor Emeritus), Ph.D. Pennsylvania; N.M. Goslee (Alumni Distinguished Professor), Ph.D. Yale; T.J. Heffernan, Ph.D. Cambridge; R.M. Kelly (Young Professor), Ph.D. Duke; B.J. Leggett (Humanities Professor), Ph.D. Florida; M.A. Lofaro, Ph.D. Maryland; C. Maland, Ph.D. Michigan; F.D. Miller (Emeritus), Ph.D. Virginia; R.B. Miller, Ph.D. Brown; A. Panner, Ph.D. Colorado; J.E. Reese, Ph.D. Kentucky; N.J. Sanders (Young Professor), Ph.D. Shakespeare Institute, Stratford-on-Avon; D.J. Schneider (J. Douglas Bruce Professor), Ph.D. Northwestern; D.M. Scura, Ph.D. North Carolina; W.R. Shurr (Majors Professor), Ph.D. North Carolina; B.T. Stewart (Emeritus), Ph.D. Northwestern; J.B. Treharn, Jr. Ph.D. Princeton; R.H. Walker (Emeritus), M.A. Texas; T.V. Wheeler, Ph.D. North Carolina; J.M. White (Young Professor), M.A. Cambridge; N. Wright (Emeritus), Ph.D. Yale.

Associate Professors:

Assistant Professors:

Instructors:
G. Brewer, Ph.D. Duke; G. Burkmann, M.A. Denver; M.J. Caffee, M.A. Tennessee; A. Danielsen, M.A. Purdue; C. DiBiase, Ph.D. Ohio State; L. Faulk, Ph.D. Florida; R. Gee, Ph.D. Tennessee; P.J. Hesse, Ph.D. Cornell; A. Holmes, Ph.D. Alabama; G. Lee, Ph.D. Tennessee; A.A. Long, Ph.D. Iowa; D. McKinstry, Ph.D. Tennesse; E.D. Overbey, M.A. Virginia; M.G. Ringer, Ph.D. Oklahoma State; P. Ryerson, M.A. Florida State; F. Sultana, Ph.D. Tufts; C. Taft, M.A. Utah State; P.A. Tschantz, M.A. New Mexico State; J. Torricelli, Ph.D. Iowa; J. Vincent, M.A. Michigan State.

Prerequisites and Corequisites: English 101 and 102, or the equivalents, are prerequisites to all English courses at the 300, 400, and 500 levels.

Major Requirements: At least 36 semester hours of course work in the English Department, 30 of which must be at the 300 or 400 level. For all English Majors: English 201-202 (British Literature), or 221-222 (Literature of the Western World), or any two of 231-232-233 (American Literature). This requirement should be satisfied, if possible, before the student takes courses at the 300-400 level. Courses in the study of the English language, 371 or 372 and 373 are recommended for all majors.

Concentration in Literature: Ten English courses at the 300-400 level, including: (1) English 376 (Colloquium in Literature), to be taken, if possible, near the beginning of the student’s major program; (2) at least four courses in literature before 1900, including at least two before 1800 (see departmental brochure, Undergraduate Study in English, for a course list); and (3) five other courses, at least one of which is based on an approach to literature other than literary history (see departmental brochure, Undergraduate Study in English, for a course list).

Concentration in Writing: Ten English courses at the 300-400 level, including: (1) a two-course sequence in expository, technical, or creative writing; (2) two other courses in writing; and (3) five other courses, at least three of which must be literature courses selected in consultation with the advisor.

Individualized Program: 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 designated courses at the freshman, sophomore, junior and senior levels. The freshman and sophomore honors courses are enriched versions of regular sections in composition, in introduction to the various genres, and in American, British, and world 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 at the 300-400 level.

Certification for Teaching: Students planning to teach English in public schools should consult the Certification 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. The student should in general have had at least eighteen semester hours of undergraduate English may be required to take and pass with a grade of B or better a designated number of undergraduate courses at The University of Tennessee before being admitted to graduate study. Admission is also dependent on satisfactory GRE scores. Consult the Graduate Catalog for specific requirements.

FRENCH
See Romance Languages.

GEOGRAPHY

Professors: S.R. Jumper (Head), Ph.D. Tennessee; C.S. Aiken, Ph.D. Georgia; T.L. Bell, Ph.D. Iowa; E.H. Hammond (Emeritus), Ph.D. California (Berkeley); R.G. Long (Emeritus), Ph.D. Northwestern; C.W. Minkel (Vice Chancellor for Academic Affairs and Dean of the Graduate School), Ph.D. Syracuse; C.T. Paludan (UTSI), Ph.D. Denver; B.A. Ralston, Ph.D. Northwestern; T.H. Schmuide, Ph.D. Wisconsin; T.J. Wilbanks (Adjunct), Ph.D. Syracuse.

Associate Professors: T.J. Blasing (Adjunct), Ph.D. Wisconsin; L.W. Brinkman, Jr., Ph.D. Wisconsin; M.A. Brown (Adjunct), Ph.D. Ohio State; R.A. Foresta, Ph.D. Rutgers; L.M. Pulsipher, Ph.D. Southern Illinois; J.B. Rehder, Ph.D. Louisiana State.

Assistant Professors: C.P. Harden, Ph.D. Colorado (Boulder); S.P. Horn, Ph.D. California (Berkeley); Cheng Liu, Ph.D. Tennessee; J.J. Ray (Adjunct), Ph.D. Tennessee.

A B.A. major in Geography Geography 131 and 132 are prerequisite to a major in Geography, which consists of Geography 310, 320, 340, 415, and 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, 393, 365, 372, 373, 375, and 379, and at least nine hours must be at the 400 level. 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 B.A. minor in Geography consists of 15 semester hours of Geography courses at the 300 level or above.

GEOLOGICAL SCIENCES

Professors: H.Y. McSween (Head), Ph.D. Harvard; R.D. Hatcher (UT, Knoxville/ORNL Distinguished Scientist), Ph.D. Tennessee; O.C. Kopp, Ph.D. Columbia; K.C. Misra, Ph.D. Western Ontario; R.E. McLaughlin (Emeritus), Ph.D. Tennessee; L.A. Taylor, Ph.D. Lohigh; K.R. Walker (Carden Professor), Ph.D. Yale; J.G. Wals (Emeritus), Ph.D. North Carolina.

Associate Professors: D.W. Byerly, Ph.D. Tennessee; T.W. Broadhead, Ph.D. Iowa; G. Clark, Ph.D. Pennsylvania State; P.A. Delcourt, Ph.D. Minnesota; S.G. Driese, Ph.D. Wisconsin; W.M. Dunne, Ph.D. Bristol; T.C. Labotha, Ph.D. Caltech; M. L. McKinney, Ph.D. Yale; R.T. Williams, Ph.D. V.P.I.

Assistant Professor: Hazel R. Delcourt, Ph.D. Minnesota; Claudia I. Mora, Ph.D. Wisconsin.

Prerequisites to a B.S. major are: Geology 101-102; Chemistry 120-130; Mathematics 141-142; three semesters from Physics 131-132; Biology 110-120. This requirement includes a two-semester sequence in one area plus a single semester in the other; the single semester may be satisfied by high school course work in that area.

Major requirement consists of: Geology 310, 320, 330, 340, 370 (16 hours); 3 courses from Geology 410, 420, 440, 450, 460, 470, 480; and 6 hours of geology courses numbered 300 or above. Geology 440 (field camp) is strongly recommended for students planning a career in geology.

Minor requirement consists of: Prerequisites: Geology 101-102. Geology courses: at least 16 hours of courses numbered 200 or higher.

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 Liberal Arts College Distribution requirements are specified. Required coursework includes: Geology 310, 320, 330, 340, 370, 440, 450, 465, 460, 470 and 485; Mathematics 111 or 141; Physics 131 or 132; Basic Engineering 141 and 142; Civil Engineering 330, 335 and any one of the following: 340, 390, 530, 532 or Environmental Engineering 535; Plant and Soil Science 210; English 459; and Speech 240. Courses from the College's approved list for satisfying the Social Science, Humanities and Upper Level Distribution requirements will be 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 a minimum of 6 semester hours 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 Science, 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.

GERMANIC AND SLAVIC LANGUAGES

Professors: James E. Falen, Ph.D. Pennsylvania; Donald M. Fiene, Ph.D. Indiana; H.W. Fuller (Emeritus), Ph.D. Wisconsin; Henry Kratz, Ph.D. Ohio State; John C. Osborne, Ph.D. Northwestern; Martin P. Rice, Ph.D. Vanderbilt; Ursula C. Fitzhonnoff, Ph.D. Connecticut.

Associate Professors: Carolyn Hodges, Ph.D. Chicago; Nancy A. Lauckner, Ph.D. Wisconsin; David E. Lee (Head), Ph.D. Stanford; Chauncey J. Meiller, Ph.D. Chicago.

Instructors: Rosemarie Greenman, M.A. Pennsylvania State; Avigail Rashkovsky, M.A. Tartu.

Placement Examination: Students who have had previous work in German or Russian either in high school or at another college should take a placement test to determine what level course they should elect. Placement tests are given for incoming freshmen during orientation in the summer and also the first week of each semester.

Proficiency Examinations: Students who have acquired a knowledge of German or Russian through private study, tutoring, residence in foreign countries, or the like, should request a proficiency test. A student earning a grade of C or better on such a test will receive credit for an appropriate number of courses. Superior students are encouraged to proceed as rapidly as their achievement permits. Students who omit any course in a sequence may receive credit for it by passing a proficiency examination.

Foreign Study: Students are encouraged to study abroad, participate 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 generally be transferred to UT, Knoxville. For qualified students, the department also offers German 491 Foreign Study and Russian 491 Foreign Study. Students should consult the department before registering for the foreign study course.

B.A. Major in German: Majors or minors in German should carefully prepare their programs in consultation with a departmental faculty advisor. German 201-202 or the equivalent is a
prerequisite to the major. The major shall consist of at least 24 hours of German in courses numbered above 300, including German 363 or 485, and 6 hours of sophomore level English courses. Majors are also strongly urged to consider a minor in some other area of the humanities.

Minor in German: 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).

Major in German with a Concentration in Language and World Business: Students who wish to prepare for careers in international business may complete (a) a special major in German, (b) a professional emphasis in International Business, or (c) the Language and World Business and a minor in some other area of the humanities.

(a) Language Major: The German major with a concentration in Language and World Business consists of 28 hours. The following are required: German 199, 301-302, 311-312, 363, 485, 3 hours from either 491 or 493, and at least two courses chosen from among German 323, 411-12, 420-24, 426, or 435-38. 411-12 is strongly recommended.

(b) Professional Emphasis:

(1) International Business students will take 25 hours. The following are required: Accounting 201, Economics 201 or 207, and 321, Business Administration 331 and 495, Management 471, Logistics and Transportation 441, and an elective from a related business area chosen in consultation with an advisor.

(2) International Logistics and Transportation students will take 25 hours. The courses required are: Accounting 201, Economics 201 or 207, Business Administration 331 and 495, Management 471, and Logistics and Transportation 301, 302, and 441.

(c) Practical Experience: Through German 491 or 493 each L&WB student must undertake an internship, an advisor, or a relevant research project for a minimum of 3 hours (included in the requirements for a concentration in Language and World Business).

Additionally, L&WB students must consult an advisor in the Department of Germanic and Slavic Languages for help in selecting relevant courses under the Basic Skills and Distribution requirements of the College.

Students interested in the Language and World Business program should contact the Director for advising as early as possible in their college career. Students must have attempted 45 hours in order to be considered for progression to the L&WB concentration. 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 Liberal Arts in Basic Skills and Distribution and in the Language and World Business plan of studies, and a 3.0 average in language courses. Progression is based on availability of space in the program. Progression standards are adjusted periodically, and current requirements are available from the Director of L&WB.

B.A. Major in Russian: Russian 201-202 is a prerequisite to the major. Russian majors should consult with the department faculty advisor and the Chair of the department at least two courses chosen from among Russian 301-302, 311-312, 401-402, 451-452; and 6 hours from Russian 221, 222, 262, 321, 322, 326, 371, 372, or other courses numbered above 400. It is recommended that majors also take Russian History 340-341 and 6 hours of sophomore English. Majors are urged to consider a minor in some other area of the humanities.

Minor in Russian: Russian 201-202 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.

GREEK
See Classics.

HEBREW
See Religious Studies.

HISTORY

Professors:
P.H. Bergeron, Ph.D. Vanderbilt; R.D. Buhite (Head), Ph.D. Michigan State; E.V. Chmielowski, Ph.D. Harvard; J.C. Cobb (Bernadotte Schmidt Professor), Ph.D. Georgia; J.R. Finger, Ph.D. Washington; L.P. Good Distinguished Service Professor and Emeritus), Ph.D. Harvard; Y.P. Hao (Lindsay Young Professor), Ph.D. Harvard; A.G. Haas, Ph.D. Chicago; R.W. Haskins (Emeritus), Ph.D. California (Berkeley); C.O. Jackson (Associate Dean, Liberal Arts College), Ph.D. Emory; M.M. Klein (Alumni Distinguished Service Professor, Lindsay Young Professor and Emeritus), Ph.D. Columbia; M.J. McDonald, Ph.D. Pennsylvania; L.A. Ratner (Dean, Liberal Arts), Ph.D. Cornell; W.B. Wheeler, Ph.D. Virginia.

Associate Professors:

Assistant Professors:
P.H. Brummell, Ph.D. Chico; T.E. Burman, Ph.D. Toronto; T.A. Dacion, Ph.D. Wisconsin; P.R. Gavitt, Ph.D. Michigan; B.L. Plummer, Ph.D. Maryland; R. Wakeman, Ph.D. California-Davis.

The department's program is designed to provide students with a knowledge of their cultural traditions and of their world, past and present, and thus to prepare them for the responsibilities of citizenship in today's complex society. Students take history courses to develop their skills in thinking, reading, writing and speaking; to understand the links between past, present and future; and to assist them in their search for personal identity.

B.A. Major: Majors in history should prepare their programs in consultation with a department faculty advisor. History 151-152 (or their honors equivalents) or 161-162 are prerequisites to the major which consists of 27 hours, including: (1) 6 hours of History 251-252 (or their honors equivalents); and (2) 21 upper-division hours. The distribution of the upper-division courses shall be in such a way that they include at least one course dealing predominantly with a period prior to 1750 and at least one course in each of the following areas: (a) Europe-Latin America, (b) United States, and (c) Asia-Africa.

Minor: History 151-152 (or honors equivalents) are prerequisites to a minor which consists of 15 hours of courses numbered 200 or above, including at least (1) 6 hours in United States history; and (2) 9 upper-division hours.

History for Non-Majors: The department welcomes non-majors in its courses. Few history courses have formal prerequisites.

Honors Program: The Department of History offers honors sections of the Western Civilization and United States history survey course. Some entering freshmen are invited to participate; other interested students may apply. These survey courses are open to non-majors. An honors major requires successful completion of one special course at the junior level (307), and a senior thesis (407-408). The honors major consists of 30 hours, including 27 hours as outlined above, plus 307. All prospective juniors who are declared history majors with an overall GPA of at least 3.0 are invited to join the Junior-Senior Honors Program. Students interested in honors work should consult the department's honors coordinator.

INTERDISCIPLINARY PROGRAMS

Director:
Lorayne Lester (College of Liberal Arts)

In keeping with the philosophy that integration of knowledge is as important as proficiency in a given field, the College of Liberal Arts has combined the resources of several departments to offer a series of interdisciplinary majors and minors. These programs are as follows: Afro-American Studies, American Studies, Ancient Mediterranean Civilizations, Asian Studies, Cinema Studies, Comparative Literature, Latin American Studies, Linguistics, Medieval Studies, Russian and East European Studies, Urban Studies, and Women's Studies. See individual program descriptions below for the major and/or minor requirements.

AFRICAN AND AFRICAN-AMERICAN STUDIES

Director:
Dr. Cynthia G. Fleming (History and African and African-American Studies)

Assistant Professors:
Dr. Asafo Jalata (Sociology), Ph.D. State University of New York (Binghamton); Dr. Betty Plummer (Special Programs/History), Ph.D. University of Maryland.
The Afro-American Studies Program offers both a major concentration and a minor in Afro-American Studies. AAS courses are offered not only by the program itself but also by numerous departments within the College of Liberal Arts and some other colleges as well. This diversified sponsorship of AAS courses enables the University to offer a particularly varied range of courses in the field of Afro-American Studies.

Major concentration: Afro-American Studies 201-202 are required in the concentration which consists of 24 hours from the Afro-American Studies curriculum. At least 15 hours must represent upper division credits. Majors are required to take AAS 431, preferably in their senior year. A maximum of 6 hours in AAS 492 and 493 combined can be applied toward the AAS major. In planning their program majors must include courses from at least 2 other departments which crosslist courses with Afro-American Studies in addition to the AAS core course offerings.

Minor: Afro-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 AAS 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 Afro-American Studies in addition to the AAS core course offerings.

AMERICAN STUDIES

Chair: Dr. 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 and 440; at least one approved American History course besides History 440; 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, insuch 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: Dr. David W. Tandy (Classics)

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

The major concentration in Ancient Mediterranean Civilizations consists of Classics 381 and 382, History 366, and 18 additional hours from the following list, distributed in such a way that no more than 12 hours are in any one of the three divisions: (a) Ancient Near Eastern Civilizations: Religious Studies 311, 312, 326; (b) Greek Culture: Classics 221, 222, 223, 233, 253, 331, 334, 383; History 310; Philosophy 120, 320; Political Science 475; Religious Studies 321, 322, 326; and (c) Roman Culture: Classics 222, 233, 254, 326, 452; History 311; Philosophy 120, 320; Political Science 475; Religious Studies 321, 322, 326, 416.

A minor in Ancient Mediterranean Civilizations consists of 18 hours, including at least two of the three core courses (Classics 381, 382, History 366). At least one of the remaining hours can come from one division.

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 applied to the three divisions as approved. Students are encouraged to satisfy the foreign language requirement with Greek, Latin, or Classical Hebrew.

ASIAN STUDIES

Chair: Mr. Stephen Young (Music)

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 the remaining 12 hours must be 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 16 credit hours at the 200 level and above. Twelve of these credit hours must be from courses chosen from Subdivision A and 6 from Subdivision B. Three additional courses must be taken from courses in another geographical-cultural area.

CINEMA STUDIES

Chair: Dr. Charles Maland (English)

The Cinema Studies minor consists of fifteen hours, including English 281 Introduction to Film Studies, and Art 292 Film Design. It is strongly recommended that Introduction to Film Studies and Film Design 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 292 Film Design (3); Art 392 Intermediate and Advanced Film Design (3-6); Broadcasting 275 Introduction to Broadcasting (3); Broadcasting 430 Producing for Television (3); English 281 Introduction to Film Studies (3); English 334 Film and American Culture (3); English 469 Special Topics in Film (3); French 420 French Cinema (3); German 323 German Film (3); Italian 221 Toscani Italian Cinema (3); Philosophy 120 Sociological Theory of Film (3); Political Science 312 Popular Culture and American Politics (3); Women's Studies 469 Sexuality and Cinema (3).

COMPARATIVE LITERATURE

Chair: Dr. H.C. Rutledge (Classics)

A major concentration in comparative literature consists of 27 hours including Comparative Literature 201 and 401-402, and 9 hours of literature in a foreign language in courses numbered 300. The remaining 9 hours should include literature courses, either in English or in a foreign language, numbered 300 or above, from at least two of the following departments: Classics, English, Germanic and Slavic Languages, Religious Studies, Romance Languages. Certain courses in Religion and Speech Communication may be substituted with the approval of the chairperson of the Comparative Literature Program.

Students concentrating in comparative literature are strongly encouraged to acquire a working knowledge of a second foreign language, especially if they hope to pursue comparative literature on the graduate level. A minor in comparative literature consists of 18 hours including Comparative Literature 201 and either Comparative Literature 401 or 402, 6 hours of literature in a foreign language in courses numbered 300 and above, and 6 hours of literature courses numbered 300 and 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: Classics, English, Germanic and Slavic Languages, Religious Studies, Romance Languages. Certain Philosophy and Theatre courses may be substituted with the approval of the chairperson of the Comparative Literature Program. Minors in comparative literature are strongly encouraged to continue study of a foreign language beyond the minimum requirement.

LATIN-AMERICAN STUDIES

Chair: Dr. Cynthia K. Duncan (Spanish)

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 401 and 402, three hours of either History 350 or 351, 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 three different participating departments. The Brazilian Studies track will consist of fifteen hours beyond the core courses including a minimum of six hours from the UT 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 and Spanish-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. Michael Handelsman (501 McClung Tower), Chairperson of the Latin American Studies Program.

LINGUISTICS

Chair: Dr. Chauncey J. Miller (German)

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 the program of study. 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.

A major concentration in Medieval Studies consists of Medieval Studies 201 and 403 and 21 hours of upper-division courses concerned primarily with the medieval experience, 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 form 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 15th 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 rare perspective on conditions of life, social and political institutions, values and ideas, 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 in linguistics and at least 15 additional semester hours from the Urban Studies curriculum. A minor in Medieval Studies consists of Medieval Studies 201 and 403 and 12 additional hours distributed among the categories listed above for the major. Each student's program, major or minor, must be approved in advance by the Medieval Studies Coordinating 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 1688 (3); History 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 (5).

Category #2—Language and Literature: Classics 435 Medieval Latin (3); English 371 Medieval Literature (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 (5).

Category #3—The Arts: Architecture 415 Early Christian and Byzantine Art to 1300 (3); Art 372 Northern European Painting, 1350-1450 (3); Art 468 The Art of Italy, 1250-1400 (3); and Music History 210 History of the Music to 1750 (3).

RUSSIAN AND EAST EUROPEAN STUDIES

Chair: Dr. Donald Flene (Germanic and Slavic Languages)

The major concentration consists of 30 hours from the following: Geography 375, six hours from History 340-341, Philosophy 355, Political Science 459 and four additional hours from Political Science 469, 574; Russian 311-312; Russian and East European Studies 410; and additional hours in courses numbered 301 and above offered by the Russian section of the Department of Germanic and Slavic Languages. Recommended prerequisites to the major concentration are the completion of Russian 201-202 and Russian Culture 371-372.

URBAN STUDIES

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

Urban Studies is a valuable major concentration for students who plan to work in such areas as housing, real estate, development, neighborhood organization, and environmental design.

A major concentration in Urban Studies consists of a minimum of 30 semester hours, including Urban Studies 250, 350, 450, 460, and at least 15 additional semester hours from the Urban Studies curriculum. A minor consists of 18 semester hours, including Urban Studies 280 and 350 plus additional semester hours from the Urban Studies curriculum. Curricular planning should be done with an advisor in Urban Studies. For more information, contact the chairperson of the Urban Studies Committee. Approved Courses in other departments: Geography 355 Geography of Appalachia;
WOMEN'S STUDIES

Chair:
Dr. Martha L. Osborne (Philosophy)

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 liberal arts 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 sex roles. Wherever 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 Women's Studies Program offers a wide variety of courses, some interdisciplinary in nature and others originating in supporting departments throughout the university. These courses may be taken as electives, they may be used to satisfy requirements in various colleges, or they may serve as a concentration in Women's Studies within an Interdisciplinary Program major or minor.

The major concentration in Women's Studies consists of 30 semester hours including one of the Images of Women in Literature courses (either 210 or 215), Women in Society (220), Emergence of the Modern American Woman (310), at least three hours of Independent Study (483), and at least one course from each of the three major areas: Women's Heritage (324, 380, 383, 432, 453, 456, 483), Contemporary Issues (375, 382, 410, 425, 434), and Literature and the Arts (330, 332, 422). As its content varies, 400 may be included.

The Women's Studies minor consists of one of the Images of Women in Literature 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 minor.

ITALIAN
See Romance Languages.

JAPANESE
See Interdisciplinary Programs (Asian Studies).

LATIN
See Classics.

LATIN AMERICAN STUDIES
See Interdisciplinary Programs.

LINGUISTICS
See Interdisciplinary Programs.

MATHEMATICS

Professors:
J.B. Conway (Head), Ph.D. Louisiana State; B.E. Albert (Emeritus), Ph.D. Wisconsin, N. Alkakos, Ph.D. Brown, V. Alexandru, Ph.D. Delaware; D.F. Anderson, Ph.D. Chicago; G.A. Baker, Ph.D. Cornell; J.S. Bradley, Ph.D. Iowa; J.H. Carruth, Ph.D. Louisiana State; C.E. Clark, Ph.D. Louisiana State; R.J. Deverson, Ph.D. Wisconsin; D.J. Dessert, Ph.D. Maryland; D.E. Dobbs, Ph.D. Cornell; G. Dydek, Ph.D. Warsaw (Poland); E.D. Eaves (Emeritus), Ph.D. Texas; H. Fransen, Ph.D. Illinois; T.G. Hallam, Ph.D. Missouri; D.B. Hinton, Ph.D. Tennessee, A.S. Householder (Emeritus), Ph.D. Chicago; L.S. Hutch, Ph.D. Florida State; K. Johannson, Ph.D. Bielefeld, West Germany; G.S. Jordan, Ph.D. Wisconsin; B.A. Kupershmidt (Space Institute, Tuliahoma), Ph.D. Massachusetts Institute Technology; H.T. Mathews, Ph.D. Tulane; R.M. McConnel, Ph.D. Duke; D.D. Miller (Emeritus), Ph.D. Michigan; B.S. Rajput, Ph.D. Illinois; K.C. Reddy (Space Institute, Tuliahoma), Ph.D. Indian Institute of Technology, P.W. Schaefer, Ph.D. Maryland; S.M. Serbin, Ph.D. Cornell; K. Soni, Ph.D. Oregon State; F.W. Stallmann (Emeritus), Ph.D. Giessen (Germany); K.R. Stephenson, Ph.D. Wisconsin, E. Wachspass, Ph.D. R. Reynolds (Emeritus), Ph.D. Wroclaw University; W. H. Row, Jr., Ph.D. Wisconsin, H. Simpson, Ph.D. California Institute of Technology; J. Smith, Ph.D. California (Berkeley); B.K. Soni (Space Institute, Tuliahoma), Ph.D. Texas, R.P. Soni, Ph.D. Oregon State; C. Sungberg, Ph.D. Wisconsin; M. Thistlethwaite, Ph.D. Universit of Technology; J. Smith, Ph.D. Tennessee; AS . Householder (Emeritus), Ph.D. Technology; J. Smith, Ph.D. Wisconsin, H. Simpson, Ph.D. California Institute of Technology; J. Smith, Ph.D. California (Berkeley); B.K. Soni (Space Institute, Tuliahoma), Ph.D. Texas, R.P. Soni, Ph.D. Oregon State; C. Sungberg, Ph.D. Wisconsin; M. Thistlethwaite, Ph.D. Univer

Associate Professors:
L.J. Gross, Ph.D. Cornell; O. Karakashian, Ph.D. Harvard; K.R. Kimble (Emeritus), Ph.D. Massachusetts Institute Technology; C.G. Doss, M.A. Tennessee.

Instructor:
C.G. Doss, M.A. Tennessee.

All entering freshman and all other students who have not completed a college level mathematics course, except students who have received AP credit, must take the UT, Knoxville 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 summer orientation and at designated times during the Fall, Spring, and Summer registration.

B.S. Major: Mathematics 141-142 (or the Honors version, 147-148) is prerequisite to a major in Mathematics. Majors must also have computer programming skills sufficient to take 371; students without other computing experience should take Computer Science 100, 101, or 102. The courses required for the major are: 221 Discrete Mathematics I (3); 231 Differential Equations I (3); 241 calculus II; or 247 Honors: Calculus III (4); 251 Matrix Algebra I; or 257 Honors: Matrix Algebra I (3); 323 Probability I (3); 341 Analysis I (3); 351 Algebra I (3); 371 Numerical Algorithms I (3); and nine additional hours selected from Mathematics 404, 499 and Mathematics courses numbered 421-472.

HONORS B.S. MAJOR: Candidates for an honors degree in Mathematics must fulfill all of the requirements for the B.S. major in Mathematics, but take 12 (rather than 9) hours in Mathematics 499 and Mathematics courses numbered 421 through 472. The grade point average computed on the 24 hours of Mathematics courses consisting of 323, 341, 351, and 371, plus the aforementioned 12 hours, 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 credit for more than 12 hours in Mathematics 499 and Mathematics courses numbered 421 through 472 may designate the 12 hours to be included in the above average.

MINOR: Mathematics 141-142 (or 147-148) is prerequisite to a minor in Mathematics. A minor in Mathematics consists of (1) 241 and 251; (2) 221 or 231; and (3) nine additional hours in Mathematics courses numbered 300 or higher. The grade in each of the above courses must be at least C.

MEDIEVAL STUDIES
See Interdisciplinary Programs.

MEDICAL BIOLOGY/MEMORIAL RESEARCH CENTER

The Department of Medical Biology of The University of Tennessee College of Medicine-Knoxville Unit was formed from the faculty of the University Memorial Research Center and Hospital in 1978. The Research Center was established in 1956. The faculty has research, education, and service interests in cancer, blood diseases, metabolism, neuroscience, birth defects, cytogenetics and clinical genetics. Courses in these areas are offered to students at the graduate and undergraduate levels. Elective courses are also available to students in the College of Medicine.

The faculty with the College of Veterinary Medicine participates in the graduate program leading to M.S. and Ph.D. degrees in Comparative and Experimental Medicine. Other advanced degree students can do thesis research in the department by arrangement with other life science departments at the University.

MICROBIOLOGY

Professors:
Dwayne Savage (Head), Ph.D. California (Berkeley); R.W. Beck (Emeritus), Ph.D. Wisconsin; J.M. Becker, Ph.D. Cincinnati; D.A.
Brian, Ph.D. D.V.M. Michigan State; T.C. Montie, Ph.D. M.D. R.W. Riggsby, Ph.D. Yale; B.T. Rouse; Ph.D. G.D. Guelph (Canada).

B.V.Sc., Bristol (England); G.S. Sayler, Ph.D. Idaho; D.C. White (Distinguished Scientist).

M.D. Tufts, Ph.D. Rockefeller; J.M. Woodward (Emeritus), Ph.D. Kansas; C.J. Wust, Ph.D. Indiana.

Associate Professor: D. Bemis, Ph.D. Cornell; R.N. Moore, Ph.D. Texas (Austin); G. Stacey, Ph.D. Texas (Austin).

Assistant Professors: Robert J. Villafane, Ph.D. New York.

B.S. Major: Prerequisites are Biology 150 or 110-120, 210-220, Chemistry 120-130, and Mathematics 151-152 or 141-142, and Physics 221-222 or 231-232. The major consists of Chemistry 350-360-369, Biochemistry 410, or 110-120, 210-220, Chemistry 120-130, and 12 additional hours of 400-level Microbiology courses.

Honors B.S. Major: An honors major is offered to selected students who have achieved junior standing and have completed the required 300-level Microbiology courses with a minimum grade point average of 3.5 for Microbiology courses and 3.2 for all courses. An honors major requires successful completion of Microbiology 401-402 with public presentation and defense before faculty committee of a written thesis. Microbiology 402 must be taken in addition to the major outlined above.

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 Liberal Arts curricular section of this catalog, and who have been approved by the Medical Technology Admissions Committee.

MUSIC


Assistant Professors: M. Boling, M.M. Tennessee; D. Brown, Memphis State; T.S. Dubberly, D.M.A. Yale; M.M. Ehrman, B.S. Northwestern; A.Y. Erwin, M.M. Southern California; W.W. Hawthorne, Ph.D. Cincinnati; C.F. Leach, M.M. New Mexico; P.M. Root, M.A. Washington State.

In June of 1991, the merger of the Departments of Music and Music Education into a single unit within the College of Liberal Arts was approved by the Board of Trustees. All inquiries regarding degrees in music and music education should be directed to the Department of Music.

Bachelor of Music Degree: The Department of Music offers curricula leading to the Bachelor of Music degree with concentrations in music theory, composition, electronic music, music history and literature, and applied music (voice; piano; organ; sacred music-organ or piano; sacred music-voice; piano pedagogy and literature; strings; woodwind, brass, and percussion instruments; multiple keyboard instruments; multiple woodwind instruments; studio music and jazz; string pedagogy). 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 of each of two languages chosen from French, German and Italian. Students majoring in music history and literature must complete two years of either French or German.

ENSEMBLES

Ensemble participation during each semester of residence is required of all students studying applied music. String, woodwind, brass, and percussion students must meet the following ensemble requirements: (1) string students must participate in orchestra each semester; (2) woodwind, brass, and percussion students must acquire a minimum of four credits in any of the following ensembles: marching band, concert band, campus band, symphony orchestra, jazz ensemble; (3) voice students must acquire a minimum of four credits in any of the following ensembles: Concert Choir, Chamber Singers, University Chorus, Women's Chorus.

A student's preference for musical organization will be honored whenever possible, but factors considered in making the assignment will include playing ability, specific needs of various organizations, and previous performance experience at the University.

APPLIED MUSIC

Applied study is classified as Principal or Secondary.

Students studying their principal (major) instrument register for credit appropriate to their program. 2-4 credit hours; students studying a secondary instrument register for 1 hour of credit. 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 department. 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 nor may students elect non-conventional grading.

Non-music students will be accepted at the secondary level if they meet audition requirements established by area faculty (piano, voice, violin, etc.) and instruction time is available.

Undergraduate students seeking entrance to applied music courses must be concurrently registered for no less than six credit hours in academic courses. Graduate students must be concurrently registered for no less than three credit hours in academic courses. Exceptions to these requirements may be made with the approval of the department head if applied music registration is necessary to completion of degree requirements.

Advancement in applied music is measured by proficiency (Jury) examination. Students who do not meet proficiency requirements at any level may be required additional study at that level. Course level and credit hours will be determined by the applied faculty.

All students studying applied music at the principal level are required to register for Music General 200 Solo Class. The requirements for this course are to attend scheduled concerts, recitals, master, repertoire, and solo classes, and to perform at least once each semester as partial fulfillment of applied music credit requirements.

Applied Music Fees: $45 per semester for half-hour lesson (1 credit hour) $50 per semester for hour lesson (2-4 credit hours).

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

Bachelor of Arts Degree: The Department of Music offers curricula leading to the Bachelor of Arts degree with a major and minor in Music, designed for those students who have a strong interest in music, but desire a comprehensive liberal studies program.

Bachelor of Arts Major in Music Degree Prerequisites to the major consists of: Music Theory 110, 120, 130 and Applied Study at the 100 level. Courses applying to the major consists of: Music Theory 210, 220, Music History 200, 210, 220, Applied Study 200 or above, and Music Ensemble, and one course from: Music History 460, Music General 301. Music Theory 493 or Music General 511. 3-6 hours of Music electives, Solo class and prerequisites for a total of 39-44 hours.

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 103-199
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 Composition

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<tr>
<th>Course</th>
<th>Hours</th>
<th>Credit</th>
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<tr>
<td>English Composition</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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<td>Music Keyboard 110, 120</td>
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<td>Music Ensemble</td>
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<tr>
<td>Foreign Language</td>
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<td>Music General 200</td>
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<tr>
<td>Liberal Arts Elective (not in Music)</td>
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<td><strong>Total: 128 hours</strong></td>
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### B.M. Curriculum in Multiple Keyboard Instruments (Piano, Organ, Harpsichord)

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<tr>
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<th>Hours</th>
<th>Credit</th>
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<td>English Composition</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Music Theory 110, 120</td>
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<tr>
<td>Music History 200</td>
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<td>Music Ensemble</td>
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<td>Music Theory 250</td>
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<td>Music General 200</td>
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<td><strong>Total: 130 hours</strong></td>
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1) Humanities-Arts (Non-music), Literature, Philosophical Perspectives or Interdisciplinary Studies.

### B.M. Curriculum in Electronic Music

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>Music Theory 110, 120</td>
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1) Humanities-Arts (Non-music), Literature, Philosophical Perspectives or Interdisciplinary Studies.

### B.M. Curriculum in Music History and Literature

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1) Humanities-Arts (Non-music), Literature, Philosophical Perspectives or Interdisciplinary Studies.

### B.M. Curriculum in Multiple Woodwind Instruments

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1) Humanities-Arts (Non-music), Literature, Philosophical Perspectives or Interdisciplinary Studies.

### B.M. Curriculum in Music History and Literature

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1) Humanities-Arts (Non-music), Literature, Philosophical Perspectives or Interdisciplinary Studies.

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1) Humanities-Arts (Non-music), Literature, Philosophical Perspectives or Interdisciplinary Studies.

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2) Must be two years in either French or German.
## B.M. Curriculum in Music Theory

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### Sophomore

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### Junior

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<td>Music Theory 390, 430, 440</td>
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### Total: 129 hours

## B.M. Curriculum in Organ

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### Sophomore

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<td>Music Theory 340</td>
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### Junior

<table>
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### Senior

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### Total: 130 hours

## B.M. Curriculum in Piano Pedagogy and Literature

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### Sophomore

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<td>Music Theory 340</td>
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<td>Music Ensemble</td>
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### Junior

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<td>Music Ensemble</td>
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### Total: 130 hours

## B.M. Curriculum in Sacred Music (Organ or Piano)

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### Sophomore

<table>
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### Total: 130 hours

## B.M. Curriculum in Strings

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### Junior

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### Senior

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### Total: 130 hours
### B.M. Curriculum in Studio Music and Jazz

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<tbody>
<tr>
<td>Music Theory 310, 320</td>
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<tr>
<td>Applied Music Principal (300 level)</td>
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<tr>
<td>Non-U.S. History or Social Studies</td>
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<tr>
<td>Mathematics, Natural Science</td>
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<td>Music Instrument 340, 350</td>
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<td>Electives</td>
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Total: 13 hours

1. Humanities-Arts (non-music), Literature, Philosophical Perspectives, Interdisciplinary Studies.

### B.M. Curriculum in Woodwind, Brass and Percussion Instruments

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Total: 131 hours

1. Humanities-Arts (non-music), Literature, Philosophical Perspectives, Interdisciplinary Studies.

### ORGANIZATIONAL PSYCHOLOGY PROGRAM

See Graduate School.

### PHILOSOPHY

**Professors:**
- G.G. Brenkert (Head), Ph.D. Michigan; R.E. Aquila, Ph.D. Northwestern; L.B. Cebik, Ph.D. Nebraska; R.B. Edwards, Ph.D. Emory; G.C. Graber, Ph.D. Michigan; B.C. Postow, Ph.D. Yale; D. Van de Vate, Ph.D. Yale.

**Associate Professors:**
- J.O. Bennett, Ph.D. Tulane; S.M. Cohen, Ph.D. Northwestern; K.A. Boastedt, Ph.D. Ohio State; M. Lavin, Ph.D. Stanford; J.E. Nott, Ph.D. Ohio State; M.L. Osborne, Ph.D. Tennessee.

**Assistant Professors:**
- H.P. Hamlin, Ph.D. Georgia; M. Lanz (Adjunct).

**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:**
- W.M. Bugg (Head), Ph.D. Tennessee; C.R. Bingham, Ph.D. Tennessee; W.E. Blass, Ph.D. Michigan State; M.A. Breazeale (on leave), Ph.D. Michigan State; M.J. Breining, Ph.D. Oregon; W.M. Bugg, Ph.D. Tennessee; J. Burgunder, Ph.D. Freie Universitat Berlin; T.A. Callcott, Ph.D. Purdue; R.W. Childers, Ph.D. Vanderbilt; L.G. Christophorou, Ph.D. Manchester (England); E.W. Colglazier, Ph.D. California Tech; G.T. Condo, Ph.D. Illinois; W.E. Deeds (Emeritus), Ph.D. Ohio State; K.E. Duckett, Ph.D. Tennessee; K. Fox, Ph.D. Michigan; N.M. Gallar (Emeritus), Ph.D. Ohio State; S. Georgiou, Ph.D. Manchester (England); M.W. Guidry, Ph.D. Tennessee; E.G. Harris (Distinguished Professor), Ph.D. Tennessee; E.L. Hart, Ph.D. Cornell; H.C. Jacobson, Ph.D. Yale; D.T. King (Emeritus), Ph.D. California Tech; J.W.L. Lewis (UTSI), Ph.D. Michigan State; M.J. Breinig, Ph.D. Pennsylvania; M.A. Breazeale (on leave).

**Associate Professors:**
- D.J. Pegg, Ph.D. New Hampshire; J.J. Quinn, Ph.D. Maryland; L.L. Riedinger, Ph.D. Minnesota; D.J. Pegg, Ph.D. New Hampshire; J.J. Quinn, Ph.D. Maryland; L.L. Riedinger, Ph.D. Minnesota; T.A. Callcott, Ph.D. Purdue; R.W. Childers, Ph.D. Vanderbilt; L.G. Christophorou, Ph.D. Manchester (England); E.W. Colglazier, Ph.D. California Tech; G.T. Condo, Ph.D. Illinois; W.E. Deeds (Emeritus), Ph.D. Ohio State; K.E. Duckett, Ph.D. Tennessee; K. Fox, Ph.D. Michigan; N.M. Gallar (Emeritus), Ph.D. Ohio State; S. Georgiou, Ph.D. Manchester (England); M.W. Guidry, Ph.D. Tennessee; E.G. Harris (Distinguished Professor), Ph.D. Tennessee; E.L. Hart, Ph.D. Cornell; H.C. Jacobson, Ph.D. Yale; D.T. King (Emeritus), Ph.D. California Tech; J.W.L. Lewis (UTSI), Ph.D. Michigan State; M.J. Breinig, Ph.D. Pennsylvania; M.A. Breazeale (on leave).

**Assistant Professors:**
- D.J. Pegg, Ph.D. New Hampshire; J.J. Quinn, Ph.D. Maryland; L.L. Riedinger, Ph.D. Minnesota; T.A. Callcott, Ph.D. Purdue; R.W. Childers, Ph.D. Vanderbilt; L.G. Christophorou, Ph.D. Manchester (England); E.W. Colglazier, Ph.D. California Tech; G.T. Condo, Ph.D. Illinois; W.E. Deeds (Emeritus), Ph.D. Ohio State; K.E. Duckett, Ph.D. Tennessee; K. Fox, Ph.D. Michigan; N.M. Gallar (Emeritus), Ph.D. Ohio State; S. Georgiou, Ph.D. Manchester (England); M.W. Guidry, Ph.D. Tennessee; E.G. Harris (Distinguished Professor), Ph.D. Tennessee; E.L. Hart, Ph.D. Cornell; H.C. Jacobson, Ph.D. Yale; D.T. King (Emeritus), Ph.D. California Tech; J.W.L. Lewis (UTSI), Ph.D. Michigan State; M.J. Breinig, Ph.D. Pennsylvania; M.A. Breazeale (on leave).
Selling (Chanszaur’s Research Scholar), Ph.D. Chicago; C.C. Shih, Ph.D. Cornell; P.H. Stelson, Ph.D. Massachusetts Institute of Technology; M.R. Strayer, Ph.D. Massachusetts Institute of Technology; J.R. Thompson, Ph.D. Duke; J.O. Thomson, Ph.D. Illinois; J.W. White (Emeritus), Ph.D. North Carolina.

Associate Professors: F.E. Barnes, Ph.D. Cal Tech; S.B. Elston, Ph.D. University of Massachusetts; T. Ferrell, Ph.D. Clemson; T.H. Handler, Ph.D. Rutgers; R.W. Lide (Emeritus), Ph.D. Michigan State; J.W. Mushlauser (UTSI), Ph.D. Tennessee; S.Y. Shieh, Ph.D. Maryland; S.P. Sorensen, Ph.D. Tokyo (Japan); R.B. Cunningham, Ph.D. Indiana; G.C. Evans, Ph.D. Johns Hopkins; T.D. Ungs (Emeritus), Ph.D. Iowa; D.M. Welborn, Ph.D. Texas.

Assistant Professors: G. Cangir, Ph.D. Tennessee; S.J. Daunt, Ph.D. Queens (Kingston, Ontario, Canada); R. Harmatz, Ph.D. Ohio State; R. Menzel (UTSI), Ph.D. Tennessee; K.F. Ready, Ph.D. Cornell; A.J. Sanders, Ph.D. Tufts.

Research Professors: I. Kamynchouk, Ph.D. ITEP (Russia); J. Zhang, Ph.D. Lanzhou.

Research Associate Professors: Yuan-Cai Du, Ph.D. Beijing; D.L. McCorkle, Ph.D. Tennessee.

Research Assistant Professors: L. Davis (UTSI), Ph.D. Auckland; H. Faibas, Ph.D. Tennessee; R. J. Warmack, Ph.D. Tennessee.

Instructors: R.C. Fairman, B.A. Earlham College; T. Riedinger, M.S. Vanderbilt.

Lecturer: R. DeSerio, Ph.D. Chicago.

PHYSICS

B.S. Major: The undergraduate physics major provides a thorough introduction to all of the core disciplines of physics so that students are prepared to pursue specialized fields at a later point in their career. Students with special interests are encouraged to pursue those interests through research projects and/or independent study under the direction of members of the physics faculty through Physics 493.

Prerequisites to the major are: Physics 131-132 or 137-138; Mathematics 141-142.

The major consists of: Physics 231-232 or 237-238; Mathematics 231 and 241; Physics 311 (students intending to pursue graduate studies in Physics should also take 312 and 421 as electives); Physics 321, Physics 431-432, Physics 411-412 (340 and 341 or 342 may be substituted for students who do not intend to pursue graduate study); 361-362 or 461-462-463. Physics 401-402 are recommended. Total major hours: 42-43.

Minor: A minor in physics shall consist of Physics 231-232 or 237-238 and 10 hours from physics and astronomy courses numbered 300 and above. Substitution provisions in the major statement also apply to the minor.

POLITICAL SCIENCE


Associate Professors: R.B. Cunningham, Ph.D. Indiana; G.C. Evans, Ph.D. Columbia; P.K. Freeland, Ph.D. Wisconsin; M.M. Gart (Head), Ph.D. Michigan State; R.L. Peterson, Ph.D. Yale; J.M. Scheb, Ph.D. Florida; T. Mcn. simpson, III, Ph.D. Johns Hopkins.

Assistant Professors: D.H. Folz, Ph.D. Tennessee; D.J. Houston, Ph.D. SUNY - Binghamton; L. Davis, Ph.D. Kentucky.

B.A. Major: Political Science 101 or 107 and 102 are prerequisites to the major which consists of 24 hours of courses numbered 300 and above. These 24 hours must include at least one course in each of the four areas of the discipline: United States Government and Politics; Public Administration: 311, 312, 315, 320, 321, 322, 330, 331, 340, 410, 411, 412, 420, 421, 422, 430, 431, 440, 441 and 442; Comparative Government and Politics: 350, 355, 451, 452, 454, 455, 459, 460, 461, 463, 464; International Relations: 365, 366, 370, 469 and 470; Political Theory and Methodology: 301, 374, 475 and 476; Majors must earn a "C" or better in prerequisite courses.

Minor: Prerequisites to the minor are Political Science 101 or 107 and 102. 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 which consists of thirty hours: Political Science 301, 387-388, 487-488, and 15 additional hours, which must include at least one course in each of the four areas of the discipline described under the B.A. major. 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 Political Science. Political Science 101 or 107 and 102 and Economics 201 are prerequisites to a major in Political Science with a concentration in Public Administration. Corequisite courses are Mathematics 121 and 122 and Accounting 201 and 202. Majors must earn a "C" or better in prerequisite and corequisite courses. The concentration consists of 24 hours of upper division course work in Political Science and 12 hours of upper division course work in Economics. In Political Science, students must include one course in each of the four fields of Political Science: American Government and Politics/Public Administration, Comparative Government and Politics, International Relations, and Political Theory. Students must also take Political Science 340, 440, and 442. In Economics students must take Economics 311, 471, and 472.

PSYCHOLOGY

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

Associate Professors: M.G. Johnson, Ph.D. Johns Hopkins; A. McIntyre, Ph.D. Yale; W.G. Morgan, Jr., Ph.D. Tennessee; M.R. Nash, Ph.D. Ohio.

Assistant Professors: D. Baldwin, Ph.D. Kent State; R.E. Hopson, Ph.D. Michigan State.

Major: The Department offers two concentrations, General and Academic. The General Concentration is broad major with many options. The Academic Concentration is intended for those students planning post-graduate study in psychology or a related field and has fewer options. The Concentration in General Psychology requires completion of Psychology 210 or 220, 375, or 395; three courses from Psychology 300 (or Child and Family Studies 312), 310, 320, 330 (or Educational & Counseling Psychology 431), 360 (or Sociology 370); and two elective courses from the 300 level or options include Anthropology 302, 306, Audiology & Speech Pathology 320, Child & Family Studies 312, Geography 323, Nursing 317, Religious Studies 355, and Management 321 and 431. All students wishing to follow the Academic Concentration must satisfy pre-requisites of Mathematics 121 and 115 or Statistics 201, one year of a biological science (e.g. Biology 110-120), Psychology 110 with a grade of C or better, and have a GPA of at least 2.25. Completion of this Concentration requires (1) Psychology 395 and one semester of 396; (2) Two courses from Psychology 300, 310, 320, 330, 360 and 370; (3) One course from
Psychology 410, 450, and 461; (x) One course from Psychology 400, 420, and 480; (x) One course from Psychology 440, 445, and 470; (x) Psychology 496; (7) One seminar of 459, 469, and 498; and (8) One elective course at the 300 and 400 level.

Major and Non-major Lower and Upper-Division Course Prerequisites: Psychology 110 or equivalent, and 210 or 220 are the minimum prerequisites for upper-division courses for both majors and non-majors unless otherwise specified or open to students who obtain instructor consent.

At least 6 credit hours in 300 level courses are ordinarily prerequisite for 400 level courses. Consult the catalog description of each course for specific prerequisites or exceptions.

For students who plan to seek graduate training in Psychology: Applicants to most graduate programs in Psychology are expected to have taken the Graduate Record Examination in Psychology by December of the year preceding the year they plan to graduate. The Psychology Department recommends that a prospective graduate student complete as many of the requirements for the major as possible before taking the examination. In addition to the minimum requirements for the major, the following courses are strongly recommended for prospective graduate students in psychology: one year of Calculus; one course in Computer Science; Philosophy 110-111; two or three additional Psychology courses chosen from 400, 410, 420, 430, 440, 445, 450, 461, 470, 480, 496.

Minor: Consists of 110 or equivalent; 210 or 220; and 12 additional upper-division hours.

RELIGIOUS STUDIES

Professors:
C.H. Reynolds (Head), Ph.D. Harvard; F.S. Lushby, M.Div. Colgate (Rochester); D.L. Dungan, Th.D. Harvard; W.L. Humphreys, Ph.D. Union; D.E. Linge, Ph.D. Vanderbilt; R.V. Norman, Jr. (Associate Vice Chancellor), Ph.D. Yale.

Associate Professors:
J.L. Fitzgerald, Ph.D. Chicago; R.W. Gwynne, Ph.D. Yale; D.M. DiPuccio, Ph.D. Kansas; C.K. Duncan, Ph.D. Harvard.

Adjunct:
L.M. Tober, Ph.D. Vanderbilt.

Major: The basic concentration is designed to assure that students attain skills to think about religion, inform and are informed by religion.

The basic concentration consists of at least 24 hours of religious studies courses at the 300 level or above, including 300, one course from five of the first six categories listed below, and two courses from category seven: (1) critical thinking about religion, 301, 305, 342, or 371; (2) religion and culture in South Asia, 374 or 376; (3) religion and culture in East Asia, 379 or 383; (4) the roots of western religion, 311, 321 or 322; (5) religions of traditional societies, 302 or 373; (6) religion and culture in the United States, 351 or 352; (7) two 400 level seminars on methods of interpreting religious phenomena, at least one of which must be 499. The remaining 3 hours which complete this major shall not include related language courses.

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 requires 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, including 300 and 499. Up to 9 hours in this major may be taken in approved courses from other programs or departments in the College of Liberal Arts. 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 available in the department 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 minoring in religious studies discuss their program with a member of the department faculty.

ROMANCE LANGUAGES

Professors:
John B. Romeiser (Head), Ph.D. Vanderbilt; P.E. Barrette, Ph.D. California (Berkeley); P. Brady, Ph.D. Université de Paris (Sorbonne); C.W. Cobb, Ph.D. Tulane; J.C. Elliott (Emeritus), M.A. Illinois; M.H. Handelsman, Ph.D. Stanford; F.D. Maurino (Emeritus), Ph.D. Columbia; C.R.M. Pinsky (Emeritus), Ph.D. Columbia; J.C. Elliott, Ph.D. Stanford; M. Petrovska (Emeritus), Ph.D. Kentucky; A.H. Wallace (Emeritus), Ph.D. North Carolina; Y.M. Washburn, Ph.D. North Carolina.

Associate Professors:
E.J. Campon, Ph.D. Yale; R.M.E. DePycke, Ph.D. Illinois; S. DiMaria, Ph.D. Wisconsin; D.M. Dipuccio, Ph.D. Kansas; C.K. Duncan, Ph.D. Illinois; K.D. Levy, Ph.D. Kentucky.

Assistant Professors:
F. Brizio, Ph.D. Washington; O. Cazenave, Ph.D. Penn State; C. Cox (Emeritus), M.A. Tennessee; B. Creel, Ph.D. California; Jose Da Cruz, Ph.D. University of California; L. Ehrlich, Ph.D. Hawaii; C. Holmblad, Ph.D. Wisconsin; E. Johnson, Ph.D. Kansas; J. Lacure, Ph.D. Indiana; M. Miller, Ph.D. Texas (Austin); H. Sachs, Ph.D. Cornell University; Wilson (Emeritus), M.A. Tufts; D. Young, Ph.D. Texas.

Instructors:
A. McKeever, M.A. Tulane; M.T. Rabot, Cart. de Lic. Poliers.

French Major: Consists of 31 hours in courses numbered 311 and above. All majors must have the following courses (or their equivalents with consent of the department): 311-312, 313, 341 or 342 or 345; 421; 422; 440. Literature concentration students must also have 6 hours of literature at the 400 level, 3 hours of which must be either 410, 411, 412, 413, 414, or 415; 3 hours of language-oriented or civilization courses at the 300 or 400 levels. Language concentration students must also have 9 hours of language-oriented or civilization courses at the 300 or 400 levels.

French Minor: The minor consists of 18 hours in courses numbered 311 and above distributed accordingly: 311-312; 313; 341 or 342; 421; plus 3 hours of electives at the 300 or 400 levels.

Italian Major: Consists of 27 hours in courses numbered 311 and above. All majors must take 311, 312, 341, 342, and 401.

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

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

Spanish Major: Consists of 30 hours in courses numbered 311 or above. The following are required: 311; 312; 421; 422; 459-460. Students must also have a minimum of 3 hours of civilization, either 431 or 471; a minimum of 6 hours of conversation and composition from 323, 324, 423, or 424; and a minimum of 6 hours of literature from 432, 433, 435, 436, 450, 472, 473, 474, 479. Majors are encouraged to take as many hours as possible, especially the surveys, 435-436 and 473-474. Students must also take 459 and 460.

Spanish Minor: Consists of 18 hours in courses numbered 311 or above, including 311 and 312; 422; one course in conversation and composition from 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.

Courses which are the equivalents of the foregoing may be substituted with the consent of the department. Courses in graduate, literature in English translation, however, may not be counted toward either a major or minor.

Major in French or Spanish with a Concentration in Language and World Business: Students who wish to prepare for careers in international business may complete (a) a special major in either French or Spanish, (b) a professional emphasis in either International Business or International Logistics and Transportation, and (c) some form of practical experience related to the concentration. Admission is by permission of the program director.

(a) Language Major: (1) French major consists of 32 hours. The following are required: French 199, 311-12, 313, 341, 345, 400, 422, 432, 440, and 3 hours of 491 or 483. (b) Spanish major consists of 32 hours. The following are required: Spanish 199, 311-12, 323, 345, 422, 423, 431 or 471, 459-60, 3 hours of 491 and any 400-level literature course.

(b) Professional Emphasis: (1) Internatio
The following are required: Accounting 201, Economics 201 or 207 and 321, Business Administration 311 and 495, Management 471, Logistics and Transportation 441, and an elective from a related business area chosen in consultation with an advisor. International Logistics and Transportation students will take 25 hours. The following are required: Accounting 201, Economics 201 or 207, Business Administration 311 and 495, Management 471, and Logistics and Transportation 301, 302, and 441.

(c) Practical experience: Through French 491 or 493, or Spanish 491, each L&W student must undertake study abroad, an internship, or a relevant research project for a minimum of 3 hours (included in major requirements). Additionally, L&W students must consult an advisor in the Department of Romance Languages for help in selecting relevant courses under the Basic Skills and Distribution requirements of the College.

Students interested in the Language and World Business program should contact the Director for advising as early as possible in their college career. Students must have attempted 45 hours in order to be considered for progression to the L&W major. The academic record presented will be assessed by the Director of Language and World Business. Minimum requirements progression to the concentration are a 2.75 cumulative average in the courses specifically required by the College of Liberal Arts in Basic Skills and Distribution and in the Language and World Business plan of studies, and 3.0 average in language courses. Progression is based on availability of space in the program. Progression standards are adjusted periodically, and current requirements are available from the Director of L&W.

For further information, inquire in 601 McClung Tower.

Placement Examination: Students who have had two or more year's work in French, Italian, or Spanish in high school or one year's work in another college should register in French, Italian, or Spanish 211. During the first week of the semester a placement test will be given, and students will be advised if a change in registration is indicated.

Proficiency Examinations: Students who have acquired a knowledge of French, Italian, or Spanish through private study, tutoring, residence in foreign countries, or the like should initiate a request for a proficiency test in the Office of the Dean of Admissions and Records. A student earning a grade of C or better on such a test will receive credit for a limited number of courses. Superior students are encouraged to proceed as rapidly as their achievement permits.

Study Abroad: Four summer study abroad opportunities are available to students through the Department of Romance Languages. The department sponsors programs in Brazil (Fortaleza), France (Lille), Italy (Urbino), and Spain (Madrid). Students can earn up to six credit hours by participating in these programs. In most cases students will fulfill part or all of the foreign language requirement (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, group excursions to cultural and historical sites are an integral part of the programs. For more information concerning prerequisites, lodging arrangements, costs, and dates of an individual program, contact the Department of Romance Languages, 601 McClung Tower.

RUSSIAN
See Germanic and Slavic Languages.

RUSSIAN AND EAST EUROPEAN STUDIES
See Interdisciplinary Programs.

SOCIOLOGY
Professors:
D.M. Betz, Ph.D. Michigan State; J.A. Black, Ph.D. Iowa; D.J. Champion, Ph.D. Purdue; D. Clelland, Ph.D. Michigan State; D.W. Hastings, Ph.D. Massachusetts; T.C. Hood, Ph.D. Duke; D.R. Ploch, Ph.D. North Carolina; N.E. Shover, Ph.D. Illinois (Urbana); S.E. Wallace, Ph.D. Minnesota.

Associate Professors:
M.L. Benson (Head) Ph.D. Illinois; J.P. Gaventa, Ph.D. Oxford (England); S. Kurth, Ph.D. Illinois (Chicago); R.G. Perrin, Ph.D. British Columbia.

Assistant Professors:
S. Cable, Ph.D. Pennsylvania State; A. Jalata, Ph.D. SUNY-Binghamton.

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

Major: Prerequisites to the major are six lower-division hours in sociology which must include either 100 or 110, followed by 200. The major consists of 24 upper-division hours in sociology and must include 321 and 331. Students should complete these two courses by the end of their junior year.

Minor: The minor consists of 12 upper-division hours in sociology and must include 321 and 331. Prerequisites to the minor are six lower-division hours in sociology which must include 200.

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 as follows: 350, 351, 451, 459, 492 (3), and one course selected in consultation with advisor.

Concentration in Environment and Society: All prerequisites required for the major are required for this concentration. An additional prerequisite is Biology 230 (or a science background package approved by the Sociology Department). The Concentration in Environment and Society consists of 321 (Sociological Theory) and 331 (Sociological Research) and eighteen hours of upper-division sociology courses as follows: 336, 345, 360, 442, 446 and either 344 or 446.

Minor with Concentration in Environment and Society: Prerequisites to the minor are six lower division hours in sociology which must include 200. The minor consists of 321, 331, 360 and a choice from 347, 345, 442, 446 and 464.

COLLEGE SCHOLARS HONORS

Director:
Dr. Harry C. Jacobson

College Scholars is a major with selective admission. For details contact the director. All Scholars must enroll in one of the College Scholars Seminars 317-318 each term. They are encouraged to complete work in College Scholars Honors 491-492-493. Each student must complete a substantial piece of research, scholarship or creative imagination. College Scholars 498 is the appropriate course to use to receive credit for this work.

SPANISH
See Romance Languages.

SPEECH COMMUNICATION

Professors:
F.D. Julian (Head), Ph.D. Tennessee; L.W. Lester, Ed.D. Tennessee; G.A. Yeomans (Emeritus), Ph.D. Louisiana State.

Associate Professors:
M.L. Ambrester, Ph.D. Ohio; J.E. Buckley, Ph.D. Northwestern; N.C. Cook, M.A. Alabama; R.W. Glenn, Ph.D. Northwestern.

Assistant Professors:
R. S. Ambler, Ph.D. Ohio State; J.W. Haas, Ph.D. Kentucky.

Major: Speech Communication 100 and one course in quantitative analysis (e.g., Speech Communication 295, Math 115, Statistics 201, or the equivalent) are prerequisites to a minor which consists of 310, 350, 390, 499, and one course from each of the following two categories: (1) 210, 270, or 280; (2) 300, 320, or 330. An additional 12 hours in Speech Communication courses are required, six of which must be at the 400 level, and not more than three at the 200 level. No more than three hours from Speech Communication 445, 491, 492, 493 may be counted toward the major. Students should inquire in the Department Office for information and recommended advisors.

Minor: Speech Communication 100 is prerequisite to a minor which consists of 18 additional hours of Speech Communication courses at least 12 of which must be at the 300 level and above. No more than 3 hours from Speech Communication 445, 491, 492, 493 may be counted toward the minor.

STATISTICS
See faculty list in the College of Business Administration.

Liberal Arts students may major or minor in statistics under the supervision of the faculty of the Statistics Department in the College of Business Administration. This 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:** (a) Required courses consist of 25 hours from Mathematics 241, 251; Statistics 251, 252, 261, Statistics 461, 462, Statistics 471 or Mathematics 323; (b) Statistics elective consists of 3 hours from upper-division statistics courses not listed in part (a); and (c) Electives consist of 6 hours to be selected from two of the following groups: Computer Science 111, 112, 401, 402, 403, 404; Industrial Engineering 301, 402, 406; Management 481; Mathematics 371, 421, 423, 425, 453 (other quantitative courses may be substituted as Electives with the faculty advisor's approval).

**Minor:** (a) Required courses consist of 16 hours from Mathematics 241, 251; Statistics 251, 252, 261; and (b) Statistics electives consist of 3 hours from upper-division statistics courses not in part (a) of the minor.

### THEATRE

**Professors:**
- T.P. Cooke, Ph.D. Florida State; R.M. Cothran, Jr.; M. Custer, M.F.A. Wisconsin; R.C. Field, M.A. Miami (Ohio); P. Garvie, M.A. Cambridge; Jr.; M. Custer, M.F.A. Wisconsin; R.C. Field, T.P. Cooke, Ph.D. Florida State; R.M. Cothran, Professors:

**Associate Professor:**
- W.R. Black, M.F.A. Illinois

**Assistant Professors:**
- L.J. DeCuir, M.F.A. Tulane; B.K. Gould, M.F.A. Catholic; C. Boake, Ph.D. Cornell; J. Drake, Ph.D. Purdue; J.L. Gittema, Ph.D. Sussex (Brighton, England); J.C. Hall, Ph.D. Illinois; R. Ganguly, Ph.D. Nebraska.

**Research Associate Professors**
- T. Ashley, Ph.D. Florida State; R. Tindall, Ph.D. Pennsylvania.

**Minor:** Theatre 100 and 220 are prerequisites to a minor which consists of 430 and 15 additional hours of Theatre courses numbered 300 or above, 6 of which must be in history and criticism.

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

### WOMEN'S STUDIES

See Interdisciplinary Programs.

### ZOOLOGY

**Professors:**
- A.C. Echternacht (Head), Ph.D. Kansas; R.M. Bagby, Ph.D. Illinois; D.L. Bunting, II, Ph.D. Oklahoma State; J.G. Carlson (Emeritus), Ph.D. Pennsylvania; D.A. Ehler, Ph.D. Minnesota; M.A. Handel, Ph.D. Kansas State; B. Hochman (Emeritus), Ph.D. California (Berkeley); K.W. Jeon, Ph.D. London (England); D.C. Joy (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Oxford (England); J.R. Kennedy, Ph.D. Iowa; J.N. Liles, Ph.D. Ohio State; J.A. MacCabe, Ph.D. California (Davis); G.F. McCracken, Ph.D. Cornell; S.L. Pimm, Ph.D. New Mexico State; S.E. Riechert, Ph.D. Wisconsin; L.E. Roth, Ph.D. Chicago; C.A. Shivers, Ph.D. Michigan State; G.L. Vaughan, Ph.D. Duke; H.G. Welch (Emeritus), Ph.D. Florida; G.L. Whitson, Ph.D. Iowa.

**Associate Professors:**
- K.D. Burnham (Emeritus), Ph.D. Iowa; T.T. Chen, Ph.D. Florida; D.J. Fox, Ph.D. Johns Hopkins; N.B. Greenberg, Ph.D. Rutgers; B.D. McKee, Ph.D. Michigan State; M.L. Pan, Ph.D. Pennsylvania.

**Assistant Professors:**
- C. Boake, Ph.D. Cornell; J. Drake, Ph.D. Purdue; J.L. Gittema, Ph.D. Sussex (Brighton, England); J.C. Hall, Ph.D. Illinois; R. Ganguly, Ph.D. Nebraska.

**Research Associate Professors**
- T. Ashley, Ph.D. Florida State; R. Tindall, Ph.D. Pennsylvania.

**Minor:** Theatre 100 and 220 are prerequisites to a minor which consists of 430 and 15 additional hours of Theatre courses numbered 300 or above, 6 of which must be in history and criticism.

**Major:** Prerequisites to the major are Biology 110-120 or 150 or Zoology 117-118 and Chemistry 120-130. Corequisites are Mathematics 121-122 or 151-152 or 141-142 and a year sequence in physics (except 141-142). Physics 221-222 are recommended and are required for admission to some professional schools.

The major consists of Biology 210-220-230, 18 hours of upper division Zoology courses and two semesters of chemistry or biochemistry at the 200 level or above. (Acceptable second year chemistry sequences include: Chemistry 350-360-369; Chemistry 350 and 310-319; Chemistry 350 and Nutrition 200; Chemistry 350, 431 and Biochemistry 310; Chemistry 310-319 and Biochemistry 310). All Zoology majors are required to take at least 4 hours at the 400 level, including at least one laboratory or field course. The upper division Zoology courses must include at least one course from three of the following four areas: (1) Cellular and Developmental Biology (330, 420); (2) Physiology (440, 445); (3) Animal Diversity (350, 360); and (4) Evolution and Behavior (450, 460).

**Minor:** Prerequisites to the minor are Biology 110-120 or 150 or Zoology 117-118 and Chemistry 120-130 or 100-110. The minor consists of Biology 210-220-230 and 9 hours of upper division Zoology.

Honors in Zoology: An Honors major in Zoology must fulfill all of the requirements for the B.S. degree in Zoology, and take 302 and 409 during the junior year, four hours of 400 during the junior and senior years, and a senior thesis (Zoology 401) the last semester of the senior year. All prospective juniors who are declared Zoology majors with a minimum overall GPA of 3.2 in the major and prerequisite and corequisite courses are invited to apply. To remain in the program, the student must maintain a GPA of 3.2 in the major. Students interested in the Honors degree should consult with the department's Honors Coordinator.

**Note:** Certain Zoology courses require organic chemistry or other prerequisites; consult the catalog description for each course.

Many courses in this department are offered only in specific semesters. Students should plan in advance the proper sequence. Information on the semesters a course is to be offered is available in the departmental office.