(3); Geology 340: Stratigraphy and Sedimentation (3); Geology 346: Introduction to Oceanography (3); Geology 370: Structural Geology (4); Geology 380: Resource Crises-Minerals and Energy (3); Physics 131-132: Fundamentals of Physics (4,4) or Physics 141-142: Nature of the Physical World (3,3) or Physics 221-222: Elements of Physics (4,4).

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

Total: parts b and c 12 hours

(3) 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 323: 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 competencies 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 151-152-153.

Mathematics (12 hours): Mathematics 221: Discrete Mathematics (3);
Mathematics 323: Probability (3);
Mathematics 400: History of Mathematics (3);
Mathematics 401: Multi-Computing (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); or Zoology 230-240: Human Physiology, Human Anatomy (4,4).

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 101-110: General Geology I and II (4,4), or
Geography 131-132: Geography of the Natural Environment I and II (4,4) or Physics 141-142: Nature of the Physical World I and II (3,3).

Part II. (8-9 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); Geography 343: 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, 121-115, 141-142, or 151-152. If the Mathematics 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 246: Basic Costuming (3); Theatre 250: Introduction to Scene Technology (3); Theatre 260: Fundamentals of Light and Sound (3); Theatre 320: Advanced Acting (3); Theatre 347: Introduction to Costume Design (3); Theatre 355: Introduction to Scenic Design (3); Theatre 362: Introduction to Lighting Design (3); Theatre 409: 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 1350 (3); Art 372: Northern European Painting, 1350-1600 (3); Art 374: Art of Northern Europe, 1600-1785 (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 496: 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

(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, 121-115, 141-142, or 151-152. If the Mathematics 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 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
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: 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: (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); one of the following: Philosophy 380: The Concept of Woman (3); Philosophy 382: Philosophy of Feminism (3)

At least 9 hours at the 200 level or above from the following or from an option approved by petition: Classics 221: Early Greek Mythology (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 325: Nineteenth and Twentieth Century Philosophy (3); Philosophy 370: Philosophy of Religion (3); Philosophy 390: Philosophical Foundations of Democracy (3); Philosophy 393: Marxism (3); Philosophy 395: Existentialism (3); Philosophy 411: Modern Religious Philosophies (3); Philosophy 425: American Philosophy (3); Philosophy 479: Studies in Recent Continental Philosophy (3); Religious Studies 305: Contemporary Religious Thought (3); Religious Studies 316: Ancient Hebrew Religious Traditions (3); Religious Studies 315: Reformation Europe (3); Religious Studies 321: New Testament Origin (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: African-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: Buddhist Philosophy and Religion (3); Religious Studies 379: Religion and Philosophy in Ancient 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-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: (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 363: 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: African-American Anthropology (3); Anthropology 360: North American Prehistory (3); Art 471: History of North American Art (3); Art 472: History of 20th century American Art (3); Art 473: 19th Century American Painting (3); Economics 331: Government and Business (3); Economics 335: Economic History of the North Atlantic Community (3); English 322: Women in American Literature (3); English 334: Film and American Culture (3); Geography 361: Regional Geography of the US and Canada (3); Geography 383: Geography of the American South (3); Geography 385: 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 African-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 330: Law in American Society (3); Political Science 331: 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 (3); Religious Studies 351: Introduction to U.S. Religious History (3); Religious Studies 352: African-American Religion in the U.S. (3); Religious Studies 353: Topics in African-American Religion (3); Sociology 405: Sociology of Sport (3); Sociology 415: Sociology of Aging (3); Sociology 455: Society and Law (3); all 300 level courses except Sociology 321, 331, 336, 344, 351, and 370; Theatre 312-313: History of the American Theatre (3,3)

Total: 30 hours

(9.) 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, African-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)

(10.) Social Studies
This concentration should develop perceptions and 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: United States History (3,3); 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
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 Admission Committee of that College; admission to and successful completion of this program does not assure admission to the College of Veterinary Medicine.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
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<tbody>
<tr>
<td>English 101-102</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry 120-130</td>
<td>6</td>
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<tr>
<td>Biology 110-120 or Zoology 117-118</td>
<td>6</td>
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<tr>
<td>Basic Skills (B) Foreign Language (Intermediate Level Sequence)</td>
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</tr>
<tr>
<td>*Mathematics</td>
<td>6-3</td>
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</tbody>
</table>

Sophomore
- Biology 210, 220 | 8 |
- Chemistry 350, 360, 369 | 8 |
- Physics 221-222 | 8 |
- Divisional Distribution (A) Non-U.S. History | 6 |
- Divisional Distribution (C) Social Sciences | 3 |

Junior
- Biochemistry 410 | 4 |

Upper Level Distribution (A) Foreign Studies or (C) Capstone Experience | 6 |

Total: 124 Minimum hours

Or equivalent honors courses.

Students who have had considerable background in biology in high school (e.g., two years of biology or an unusually good one-year course) and have completed general chemistry may be eligible to go directly into Biology 210 or 220. Consult the coordinator of the biology program for more information. Such students must include at least eight hours in biological science in their electives to satisfy the requirement for any other pre-medical technology course of study.

This requirement assumes a student has had enough language background in high school to begin an intermediate language course at UT Knoxville.

Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements. Mathematics 130 or a calculus course is a prerequisite for Physics. A math placement handbook is available in the Liberal Arts Advising Center, 220 Ayres Hall. All students must complete the Math Basic Skills requirement as outlined in the Liberal Arts curriculum.

This requirement assumes a student has had enough language background in high school to begin an intermediate language course at UT Knoxville.

Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements. A math handbook is available in the Liberal Arts Advising Center, 220 Ayres Hall. All students must complete the Math Basic Skills requirement as outlined in the Liberal Arts curriculum. Mathematics 115-121 or Mathematics 122-121 are required for pre-medical technology students.

Chemistry 350, 369, and 365 may be substituted for Chemistry 110 and Biochemistry 310.

PREPARATION FOR OTHER PROFESSIONS

LIBRARY AND INFORMATION SCIENCE

Certain courses in the Graduate School of Library and Information Science are open to students in the College of Liberal Arts interested in preparation for graduate study in the profession of library and information science. For a list of recommended courses, contact the Graduate School of Library and Information Science.

PLANNING

Students who wish to consider a career in city and regional planning or a related field will find a brief description of a program of study for Planning in the College of Liberal Arts. Students interested in preparation for graduate study in the planning profession are recommended to begin preparation in one of the three areas and complete a minimum of 6 credits from at least two areas. B.S. students must complete a minimum of 6 credits in one of the three areas and 3 credits from one of the remaining two areas. B.A. 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.

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. After the course of study is completed, UTMC views the student as a Cataract Certificate of Laboratory Training. Students are eligible for examination by the Board of Registry of the American Society of Clinical Pathologists to earn certification as registered medical technologists.

Hours Credit

Freshman
- English 101, 102 | 6 |
- Biology 110, 120 or Zoology 117, 118 | 6 |
- Chemistry 120-130 | 8 |
- Basic Skills (B) Foreign Language (Intermediate Level Sequence) | 6 |
- *Mathematics | 6 |

Sophomore
- Chemistry 110 | 4 |
- Zoology 230 | 5 |
- Biology 210, 220 | 4 |
- Microbiology 310, 319 | 4 |
- Divisional Distribution (D) Humanities Part I-II | 3 |
- Divisional Distribution (A) Non-U.S. History | 3 |

Junior
- Microbiology 420, 429 | 5 |
- Chemistry 310, 319 and Biochemistry 310 | 7 |
- Microbiology 430 | 3 |
- Divisional Distribution Humanities Part I-II | 3 |
- Divisional Distribution Social Sciences | 6 |

Upper Level Distribution (A) U.S. Studies or (B) Foreign Studies or (C) Capstone Experience | 6 |

Total: 94 hours

Total: 124 Minimum hours

Or equivalent honors courses.

Students who have had considerable background in biology in high school (e.g., two years of biology or an unusually good one-year course) and have completed general chemistry may be eligible to go directly into Biology 210 or 220. Consult the coordinator of the biology program for more information. Such students must include at least eight hours in biological science in their electives to satisfy the requirement for any other pre-medical technology course of study.

This requirement assumes a student has had enough language background in high school to begin an intermediate language course at UT Knoxville.

Math placement depends on high school courses and grades, ACT scores, and BA/BS requirements. Mathematics 130 or a calculus course is a prerequisite for Physics. A math placement handbook is available in the Liberal Arts Advising Center, 220 Ayres Hall. All students must complete the Math Basic Skills requirement as outlined in the Liberal Arts curriculum. Mathematics 115-121 or Mathematics 122-121 are required for pre-medical technology students.

Chemistry 350, 369, and 365 may be substituted for Chemistry 110 and Biochemistry 310.

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 designated 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.
(3) A student who desires to take a course S/NC should indicate that intention at the time of registration. A change from S/NC grading to regular grading or from regular grading to S/NC will not be permitted beyond the add deadline in each semester. (Exception: Students who register for a course S/NC in a restricted area will be required to change to regular grading when the error is discovered.)
(4) A transfer student who has more than 20 S/NC or equivalent hours earned prior to admission to The University of Tennessee, Knoxville, may count all of these hours toward graduation but may not elect additional S/NC hours.
(5) A transfer student with S/NC or equivalent credit earned prior to admission to The University of Tennessee, Knoxville, in a course which satisfies a Basic Skills or distribution requirement may count it for that purpose. In the case of a course which satisfies a major or minor requirement, statement (1) applies.

The option of taking courses on a S/NC basis is provided to encourage the able student to venture beyond the limits of those courses in which the student does well and, motivated by intellectual curiosity, to explore subject matter in which performance is somewhat less outstanding that work in preferred subject fields.

Note: Students planning to seek admission to graduate or professional schools (especially in the health sciences) should discuss with their advisors possible limitations on exercise of the S/NC option before registering for courses on this basis.

OFF-CAMPUS STUDY
Recognizing that learning is not restricted to formal classroom situations, the college provides for students to earn credit toward graduation for approved off-campus study. Such study may be undertaken only with prior 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.

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 members and the departments concerned prior to embarking upon their study. 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-semesters 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 491. 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, exclusive of that earned in group programs offered by departments, could apply toward a degree in the college. Departments may in any of the above forms, however, limit the hours of credit which can be applied toward a given major.

STUDY ABROAD AND FOREIGN STUDY COURSES
See Interdisciplinary Programs.

AMERICAN STUDIES
See Interdisciplinary Programs.

ANTHROPOLOGY

Professors:
W.M. Bass (Alumni Distinguished Service Professor), Ph.D. Pennsylvania; C.H. Faukner, Ph.D. Indiana; W.E. Klippel, Ph.D. Missouri; R.L. Jantz, Ph.D. Kansas; P.W. Parmalee (Emeritus), Ph.D. Texas A&M; M.C. Wheeler (Emerita), Ph.D. Yale.

Associate Professors:
F.V. Harrison, Ph.D. Stanford; I. Harrison, Ph.D. Syracuse; B.J. Howell, Ph.D. Kentucky; M.H. Logan, Ph.D. Pennsylvania State; J.F. Simek (Head), Ph.D. SUNY-Binghamton; G.F. Schroedl, Ph.D. Washington State.

Assistant Professors:

Research Associate Professor:

Research Assistant Professors:
S. Frankenberg, Ph.D. Northwestern; D. Morey, Ph.D. Tennessee; S. Tardif, Ph.D. Michigan State.

PROGRESSION STANDARDS:
Progression into the Anthropology major is based on performance in the three prerequisite courses: 110, 120 and 130. Students must maintain a grade point average of at least 3.0 for the three introductory courses, with none of the three grades below a C. Upon satisfactory completion of the prerequisites, the student may apply for progression into the Anthropology major by: (1) completing a formal application for progression in the Anthropology Department and (2) including with that application an academic history demonstrating satisfactory completion of the progression requirements. The Undergraduate Committee of the Anthropology Department will meet regularly to determine the status of these applications. Upon progression to the major, a department advisor will be assigned in consultation with the student.

The anthropology major consists of 450 and 27 additional hours of upper-division coursework in Anthropology. This coursework shall be distributed as follows:
(1) one course from categories (a), (b), (c), and (d) and two courses from category (e).
(a) archaeological method and theory: 361, 362, 440, 464
(b) archaeological area: 360, 461, 462, 463
(c) cultural area: 310, 311, 312, 313, 314, 315, 319
(d) cultural method and theory: 410, 411, 412, 413, 414, 431
(e) biological anthropology: 480, 490, 494, 495, 496
(2) Remaining hours may be selected from any upper division Anthropology courses.

Students with senior standing are encouraged to substitute appropriate 500 level courses with permission of the instructor of the course and approval of the Department Head) for any portion of (1) or (2) above.

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

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

ART


Assistant Professors: T. W. Hiles, Ph.D. Pennsylvania State.

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. All students seeking studio degrees (BA Studio, BFA Studio and Art Education, BFA Graphic Design, Illustration) must present a portfolio of 10-15 credit hours, 300 level or above, 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.

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

Basic Requirements

<table>
<thead>
<tr>
<th>Core</th>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Art History 171, 172, 173</td>
<td>9</td>
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<tr>
<td>Additional hours</td>
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</tr>
<tr>
<td>Studio 101, 103</td>
<td>4</td>
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<tr>
<td>Studio 295</td>
<td>3</td>
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<tr>
<td>Studio 211 Drawing I, 213 Painting I (or 215</td>
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<tr>
<td>Watercolor I); Sculpture (241 or 243 or 244 or</td>
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<tr>
<td>245); Printmaking (161 or 262 or 263 or 264)</td>
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<tr>
<td>12 hours from the following: Fiber-Fabric</td>
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<tr>
<td>(231 or 232 or 203 or 204); 242 Life Modeling;</td>
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<tr>
<td>(231 Photography; 292 Film Design; 221 Ceramics</td>
<td></td>
</tr>
<tr>
<td>Total: 46</td>
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</tbody>
</table>

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

200 level:

Portfolio Review (Pre-requisite to 300 and 400 courses) (S/NC) 20

Approved Studio Electives for Concentration 9

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 must 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 Theatre. Students electing an additional major in Art Education and licensure to teach must take 14-15 hours in undergraduate Art Education courses.

Total: 15 hours

General Curriculum

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

Total: 34 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 graphic design in such fields 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.
Art 231 ......................................................... 3
Art 151 .......................................................... 2
Art 291, 292, 351/393/361, 354/355, 453, 454, 465 in sequence ........................................ 27
Total: 44

Studio Electives
A minimum of 12 hours from one of the following areas, 9 hours from a second area (A) Fiber-Fabrics, (B) Painting, (C) Printmaking, (D) Sculpture, (E) Watercolor ........................................ 21
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
Total: 127 hours

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
Prerequisite: Art 172, 173, 183 .................................. 9
Major:
Art History courses numbered 200 and above (May include Greek and Roman Art and Archeology, Department of Classics) ........................................ 21
Studio courses numbered 200 and above ........... 6
Art 481 ................................................................ 3
Total: 39 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
Prerequisite: Art 101, 125, 103 ................................ 7
Art 171 and 6 additional hours of Art History ...... 9
Major:
Studio courses numbered 200 and above, including a minimum of 15 hours in 300-400 level courses .................................................. 24
Total: 40 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
Prerequisite: Art 172, 173 ..................................... 6
Minor:
Art History courses numbered 200 and above ...... 15
Total: 21 hours

B.A. Minor in Studio
Prerequisites: Art 101, 125, 295 .......................... 7
Art 171, 172, 173 Art History (any two) ............... 6

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 1978. 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.

AUDIOLGY AND SPEECH PATHOLOGY

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

Associate Professors:
S.B. Burchfield, Ph.D. Michigan State; C.J. Ferrell, M.A. Tennessee; P. Gordon, Ph.D. Tennessee; E.I. Hamby, Ph.D. Iowa; A. Krishnan, Ph.D. Texas (Dallas); J. Thelin, Ph.D. Iowa; G. Wallace, Ph.D. Northwestern.

All three courses must be taken concurrently.

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

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 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, 371, 465 and 473.

The B.A. major in speech pathology consists of Audiology and Speech Pathology 304, 305, 320, 331, 371, 433, 461, 465 and 473. Applicants for enrollment in clinical practice must submit an application to the departmental Director of Clinical Services. Requirements for enrollment in practicum courses (434 in Speech Pathology or 445 in Audiology) include a minimum cumulative GPA of 2.7 (or 3.0 in the last 30 hours of enrollments), a minimum of "C" in all courses taken within the department, successful completion of 433, and a minimum GPA of 2.75 within the major.

Undergraduate degrees in speech pathology and in audioloogy are pre-professional degrees. That is, a minimum of a Master's degree is required for professional certification. Students who fail to satisfy the above prerequisites for clinical practicum experience may graduate with a degree from the department, but will not be recommended for graduate study at UTK. Requests for exceptions to this rule may be submitted to the departmental Admissions Committee.

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

BACTERIOLOGY
See Microbiology.

BIOCHEMISTRY

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

Associate Professors:
J. Koontz (Head), Ph.D. Kentucky; D. Roberts, Ph.D. California (Davis).
Biology/College of Liberal Arts

Assistant Professors:
B. Bruce, Ph.D. California (Berkeley); E. Howell, Ph.D. Lehman; M. Emeram, Ph.D. Louisiana State; E. Serpersu, Ph.D. Hacettepe (Turkey).

The B.S. major in Biochemistry consists of Biology 210-220, Chemistry 350-360-369, Physics 221-222, Biochemistry 410, 419, 420, 471, 481, and 5 hours. Chosen from: Biochemistry 452; Botany 321; Microbiology 310, 319, 410, 430, 439; Zoology 330, 350, 410, 430, 436, 440. Prerequisites to this major are Biology 110-120 or 115-121 or 121-122, Mathematics 115-121 or 110-120, or Chemistry 120, 131, 132. Mathematics 141, 142 and Computer Science 102. For a minor in Biochemistry, the following courses are required: Chemistry 350, 360, 369; Biochemistry 410, 419 plus a course for additional credit from Biochemistry 420, 471, 481, and 452.

BIOLOGY CONSORTIUM

Acting Director:
R.W. Holton, Ph.D. Botany.

Basic Faculty:

A B.S. major in Biology may be obtained by completing either Concentration A or Concentration B.

Concentration A is designed primarily for students whose career goals involve graduate school in a biological discipline or professional school, (medicine, dentistry, etc.). Prerequisites are Biology 110-120 or Botany 110-120 or Zoology 117-118; Chemistry 120-130; Mathematics 141-142 or 151-152; and Physics 221-222. Requirements in the major are Biology 210, 220, 320, 330, or 451, 1 hour of 400 or 441-442, 2 hours from 400 or 441-442; and 5 additional hours selected from Botany 305, 306, 309, 310, 321, 325, 330, 341, 344; Chemistry 350-360-369.

Concentration B is designed primarily for students whose career goals involve graduate school in a biological discipline or professional school, (medicine, dentistry, etc.). Prerequisites are Biology 110-120 or Botany 110-120 or Zoology 117-118; Chemistry 120-130; Mathematics 141-142 or 151-152; and Physics 221-222. Requirements in the major are Biology 210, 220, and 230; Chemistry 350, 360, 369; Biochemistry 410; and fourteen hours of additional coursework in biological science selected from any 300 or 400 level course offered in Biochemistry, Botany (except 305, 306, 309), Microbiology, and Zoology. No more than 8 hours from one department may count toward the major and only 3 hours of undergraduate research. One of the following capstone courses may count both toward the major and toward Upper Division Distribution requirements: Biochemistry 420, Microbiology 495, or Zoology 409.

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, no 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 Zoology 117-118) and Chemistry 120-130.

BOTANY

Professors:
E.E. Schilling (Head), Ph.D. Indiana; J.D. Caponetti (Undergraduate Coordinator), Ph.D. Harvard; E.E.C. Clebsch, Ph.D. Duke; M.B. Gruez, Ph.D. SYNY (Stony Brook); H.R. DeSelmd (retired), Ph.D. Ohio State; A.M. Evans (Emeritus), Ph.D. Michigan; W.R. Herron (Alumni Distinguished Service Professor), Ph.D. Vanderbuilt; L.G. Hickok, Ph.D. Massachusetts; R.W. Holton, Ph.D. Michigan; K.W. Hughes, Ph.D. Utah; L.W. Jones, Ph.D. Texas; J.F. McCormick, Ph.D. Emory; B.C. Mullin, Ph.D. North Carolina; F.H. Norris (Emeritus), Ph.D. Ohio State; R.H. Petersen (Distinguished Professor), Ph.D. Columbia; A.J. Sharp (Emeritus), Ph.D. Ohio State; W.O. Smith, Ph.D. Duke; P.L. Wane (Benwood Distinguished Professor), Ph.D. Texas.

Associate Professors:
C.C. Amundsen, Ph.D. Colorado; A.S. Heilman, Ph.D. Ohio State; J.O. Schwarz, Ph.D. North Dakota; R.J. Swain, 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 Biology 110-120; and Chemistry 120-130. Co-requisite 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: 2 courses from Biology 210-220-230; Botany 310, 320, 321, 330, 1 hour of 371, 1 hour from 305, 306, 309, 414-422, 4 hours of additional Botany, and 3 hours of upper division Biochemistry, 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 321, 310, 320, 330, 309, 1 hour of 371; 2 hours from 400 or 441-442; and 7 additional hours selected from Botany 305, 306, 309 do not meet this requirement), Biology 220 is recommended for full participation of this requirement, or upper division Biochemistry, Microbiology, Zoology. A minimum of 40 hours completes this major's option (includes 6 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 441-442; Biochemistry 410; and 3 additional hours selected from Botany 305, 306, 309, 414-422, 4 hours of additional Botany, and 3 hours of upper division Biochemistry, Microbiology, Zoology. A minimum of 40 hours completes this major's option (includes 6 hours of Organic Chemistry).

Minor consists of 2 courses from Biology 210, 220, 230, 1 hour of Botany 371, and 6 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 Biology 110, 120.

CHEMISTRY

Professors:
G. Mamantov (Head and Alumni Distinguished Service Professor), Ph.D. Louisiana State; J.L. Adcock, Ph.D. Texas; S.D. Alexandratos, Ph.D. California (Berkeley); D.C. Baker, Ph.D. Ohio State; J.E. Bartmess, Ph.D. Northwestern; J.E. Bloor, Ph.D. Manchester (England); W.E. Bull, Ph.D. Illinois; J. Q. Chambers, Ph.D. Kansas; K.D. Cook, Ph.D. Wisconsin; J.A. Dean (Emeritus), Ph.D. Michigan; J.F. Eastham (Emeritus), Ph.D. California (Berkeley); W. Fitcher (Emeritus), Ph.D. Minnesota; F.A. Grimm, Ph.D. Cornell; G.A. Guichon (Distinguished Scientist, Science Alliance Center of Excellence), Ph.D. Universite de France (France); G.W. Kabalka (Alumni Distinguished Service Professor), Ph.D. Purdue; D.C. Klafter, Ph.D. Princeton; J.D. Kovac, Ph.D. Yale; M.H. Lietzke, Ph.D. Wisconsin; L.J. Magid, Ph.D. Tennessee; R.M. Magid, Ph.D. Yale; R.M. Pagni, Ph.D. Wisconsin; J.R. Peterson, Ph.D. California (Berkley); G.C. Schweitzer (Alumni Distinguished Service Professor), Ph.D. Illinois; M.J. Sepaniak, Ph.D. Iowa State; E.S. Serpersu, Ph.D. Hacettepe (Turkey).
Associate Professors:
C.E. Barnes, Ph.D. Stanford; C.A. Lane, Ph.D. California (Berkeley); C.S. Feigle, Ph.D. Colorado; F.M. Schell, Ph.D. Indiana.

Assistant Professor:
Z.B. Xue, Ph.D. UCLA.

Adjunct Assistant Professor:

Bachelor of Science in Chemistry

Students who wish 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 positions in research and college teaching. A student in the B.S. in Chemistry program should consult the Head of the Department of Chemistry, 575 Buehler Hall, for information concerning the Cooperative Program in chemistry, see description of the B.S. program below.

CURRICULUM REQUIREMENTS:  

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<th>Course Category</th>
<th>Hours Credit</th>
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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>
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<tr>
<td>Mathematics 141-142</td>
<td>6</td>
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<tr>
<td>Foreign Language (intermediate level sequence)</td>
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<tr>
<td><em>Distribution</em></td>
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<td>Chemistry 140</td>
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<td>Chemistry 350-360</td>
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<td>Chemistry 369</td>
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<td>Mathematics 241-251</td>
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<tr>
<td><em>Electives</em></td>
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</table>

| Total: 124 hours |

**Placement in General Chemistry Sequences**

The sequences which meet all requirements of a year of general chemistry and which serve as prerequisite for upper-division courses 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 biochemistry, and may be used as prerequisite 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 and may then take 130. 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 is already trained 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 128 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 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.

**Chinese**

See Interdisciplinary Programs (Asian Studies).

**Classics**

Professors:
G.C. Gesell, Ph.D. North Carolina (Chapel Hill); H.C. Rutledge, Ph.D. Ohio State.

Associate Professors:
C.P. Craig, Ph.D. North Carolina (Chapel Hill); S.D. Martin (Head), Ph.D. Michigan; J.E. Shelton, Ph.D. Vanderbilt; D.W. Tandy, Ph.D. Yale.

The B.A. major concentration in Greek consists of 27 hours including 21 hours of Greek language courses numbered above 200, and including 3 hours of Classics 422 (capstone); 6 hours chosen from Classics 221-222, 331, 334, 491. The student majoring in Greek...
is strongly encouraged to have as background History 310 before taking the capstone course. The student concentrating in Greek is encouraged to begin or take advanced work in Latin.

There are two intermediate options in the Greek program, both of which fulfill the Liberal Arts Language requirement and prepare students for advanced work in the third and fourth years. The Classical Option is 261 followed by Upper Division. The New Testament Option in second year Greek is 261-262.

The Greek minor consists of 18 hours including 12 hours of Greek language courses numbered above 200, and 6 hours chosen from Classics 221-222, 331, 334. The student minoring in Greek is encouraged to take Classics 422 (capstone).

The B.A. major concentration in Latin consists of 27 hours including 21 hours of Latin language courses numbered above 200, and including 3 hours of Classics 422 (capstone); 6 hours chosen from Classics 221-222, 331, 334, 491. The student majoring in Latin is strongly encouraged to have as background History 310 or 311 before taking the capstone course. The student concentrating in Latin is encouraged to begin or take advanced work in Greek.

The Latin minor consists of 18 hours including 12 hours of Latin language courses numbered above 200, and 6 hours chosen from Classics 221-222, 331, 334. The student minoring in Latin is encouraged to take Classics 422 (capstone).

Placement Examination. Students who transfer to UT Knoxville from other colleges and students who enter with high school units in Latin should register for the courses in which they would normally be placed on the basis of such credits. During freshman orientation a placement test will be given, and students will be advised if a change in registration is indicated by the results.

Proficiency Examinations. Students who have acquired a knowledge of Latin through private study or tutoring should request from the Department a proficiency test. A student who earns a grade of B or better in this examination is eligible for credit toward graduation. A student who omits any course in a sequence may receive credit for it by passing the appropriate proficiency examination.

COMPARATIVE LITERATURE
See Interdisciplinary Programs.

COMPUTER SCIENCE

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

Computer Science

Computer Science 102, 111, and 112 are prerequisites to a major in computer science which consists of 311, 320, 340, 360, 371, and 380, plus an additional 3 hours of CS Advanced Topics Courses. Mathematics 141-142, 221-222, 231, 241, and 261, Physics 151-152, and English 481 are also required. Students must select a two-semester lab science sequence in either Biology or Chemistry, or a sequence approved by the Computer Science Department.

An undergraduate minor in Computer Science consists of 111 and 112 plus fifteen hours of 300 or 400 level courses.

Progression Standards:
Progression into the Computer Science major is based on the availability of space in the laboratories and other resources. Progression requirements are adjusted periodically and current requirements can be determined by contacting either the Undergraduate Programs Office, or by contacting 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 attempting 10 hours in Computer Science.

In 1994 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 Science course.
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 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 attempted. 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.

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 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, 974-5056, or by contacting an advisor in that office.

ECOLOGY

Dewey L. Bunting, Director
J. Larry Wilson, Associate Director
Paul A. Delcourt, Associate Director

Shared Faculty:
Adams, Marshall, Ph.D., ORNL; Amundsen, C.C., Ph.D. Botany, Baylock, B.G., Ph.D. ORNL; Bell, Christina R., Ph.D. Botany; Buckner, E.R., Ph.D., Forestry, Wildlife and Fisheries; Bunting, Dewey, L., Ph.D. Zoology; Burghardt, G.M., Ph.D. Psychology; Clebsch, E.E.C., Ph.D., Botany; Cooper, Lee, Ph.D. ORNL; Coutant, C.C., Ph.D. ORNL; DeAngelis, D.L., Ph.D. ORNL; Dearden, B.L., Ph.D. Forestry, Wildlife and Fisheries; Delcourt, Hazel, Ph.D. Geology; Delcourt, Paul, A., Ph.D. Geology; Dimnick, Ralph, W., Ph.D. Forestry, Wildlife and Fisheries; Drake, James A., Ph.D. Zoology; Echternacht, Arthure C., Ph.D. Zoology; Elwood, J.W., Ph.D. ORNL; Emmanuel, William, Ph.D. ORNL; Emmer, D.A., Ph.D. Zoology; Farkas, Walter, Ph.D. Environmental Practice; Fribourg, Henry A., Ph.D. Plant and Soil Science; Gardner, R.H., Ph.D. ORNL; Gehrs, C.W., Ph.D. ORNL; Gist, C.S., Ph.D. ORAU; Gittleman, John L., Ph.D. Zoology; Goss, L. Barry, Ph.D. Science Ap.; Goyal, Neil, Ph.D. Zoology; Gross, L.J., Ph.D. Mathematics; Hallam, Thomas G., Ph.D. Mathematics; Harden, Carol P., Ph.D. Geography; Herbess, S.E., Ph.D. ORNL; Hildebrand, S.G., Ph.D. ORNL; Hilley, J.W., Ph.D. Entomology and Plant Pathology; Horn, Sally P., Ph.D. Geography; Houston, M., Ph.D. ORNL; Kelly, Jim, Ph.D. TVA; Kimmel, B.L., Ph.D. ORNL; McCarthy, J.F., Ph.D. ORNL; McCormick, J. Frank, Ph.D. Botany; McCracken, G.F., Ph.D. Zoology; McKinney, M.L., Ph.D. Geology; Mulholland, P.J., Ph.D. ORNL; Norby, Stephen C., Ph.D. CPSU; Norby, Richard, Ph.D. ORNL; O'Neill, R.V., Ph.D. ORNL; Pagni, R.M., Ph.D. Chemistry; Parker, Charles, Ph.D. ORNL; Pelton, Michael R., Ph.D. Forestry, Wildlife and Fisheries; Pimentel, S.L., Ph.D. Zoology; Pless, C.D., Ph.D. Entomology and Plant Pathology; Post, W., Ph.D. ORNL; Reed, R.M., Ph.D. ORNL; Rehder, J.B., Ph.D. Geography; Reichle, D.E., Ph.D. ORNL; Rennie, J.C., Ph.D. Forestry, Wildlife and Fisheries; Reynolds, John H., Ph.D. Plant and Soil Science; Riechert, Susan E., Ph.D. Zoology; Rose, K.A., Ph.D. ORNL; Sayler, Gary S., Ph.D. Microbiology; Schladerum, S.E., Ph.D. Forestry, Wildlife and Fisheries; Schneider, Gary, Ph.D. (Acting Dean), Agricultural Sciences and Natural Resources; Smith, W.O., Ph.D. Botany; Stacey, G., Ph.D. Microbiology, Stewart, A., Ph.D. ORNL; Strange, R.J., Ph.D. Forestry, Wildlife and Fisheries; Turner, Monica G., Ph.D. ORNL;
Van-Hook, R.L., Ph.D., ORNL; VanWinkle, W., Ph.D., ORNL; Vaughn, G., Ph.D., Zoology; Walton, B.T., Ph.D., ORNL; Wahry, E.L., Ph.D., Chemistry; Wang, W., Ph.D., ORNL; White, David C., Ph.D., Microbiology; Wilson, J.L., Ph.D., Forestry, Wildlife and Fisheries; Witherspoon, J.P., Ph.D., ORNL.

The Graduate Program in Ecology offers Master of Science and Doctor of Philosophy degrees. This interdisciplinary program provides advanced courses in contemporary ecology for students from undergraduate programs in basic and applied biology, social sciences, mathematics and engineering. Research opportunities in both fundamental and applied ecology are intended to prepare students for academic careers as well as professional positions in industry or government. The Environmental Sciences Division of the Oak Ridge National Laboratory, the National Park Service, and the Tennessee Valley Authority provide advisors and research facilities. The Great Smoky Mountains, Cumberland Plateau, valley and ridge topography, TVA reservoirs and wild rivers provide locally a spectrum of natural habitats and consequent biological diversity that is truly unique. In addition, faculty research programs provide opportunities for student research elsewhere on this continent and abroad.

Application forms for admission should be obtained from the Graduate School as well as the program. Inquiries concerning the admission requirements should be addressed to the Director, Graduate Program in Ecology, University of Tennessee, Knoxville, Tennessee, 37996-1610. Consult the Graduate Catalog for listing of graduate level courses.

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.

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

Professors:
D.A. Carroll (Head), Ph.D., North Carolina; PG. Adams (Young Professor Emeritus), Ph.D., Texas; E.W. Bratton, Ph.D., Illinois; D.R. Cox (Associate Head), Ph.D., Missouri; K. Curry (Emeritus), Ph.D., Yale; R.Y. Drake, Jr., Ph.D., Yale; W. Dykesman (Adjunct), B.A.-Northwestern; A.R. Ensor, Ph.D., Indiana; R.J. Finneran (John C. Hodges Professor), Ph.D., North Carolina; J. Fisher (John C. Hodges Professor Emeritus), Ph.D., Pennsylvania; N.M. Goelee (Alumni Distinguished Professor), Ph.D., Yale; T.J.A. Hoffinan, Ph.D., Cambridge; R.M. Kelly (Young Professor), Ph.D., Duke; B.J. Leggett (Humanities Professor), Ph.D., Florida; I. Leki, Ph.D., Illinois; M.A. Lofaro, Ph.D., Maryland; C. Maland, Ph.D., Michigan; F.D. Miller (Emeritus), Ph.D., Virginia; R.B. Miller, Ph.D., Brown; A.R. Penner, Ph.D., Colorado; J.E. Reese, Ph.D., Kentucky; N.J. Sanders (Young Professor), Shakespeare Institute, Stratford-on-Avon; D.J. Schneider (Douglas Bruce Professor Emeritus), Ph.D., Northwestern; D.M. Scra, Ph.D., North Carolina; W.R. Shurr (Humanities Professor), Ph.D., North Carolina; B.T. Stewen (Emeritus), Ph.D., Northwestern; J.C. Thomas, M.A. Stanford; J.B. Trahern, Jr., Ph.D., Princeton; R.H. Walker (Emeritus), M.A., Texas; T.V. Wheeler, Ph.D., North Carolina; J.M. White (Young Professor), Cambridge; N. Wright (Emeritus), Ph.D., Yale.

Associate Professors:
L.D. Bensel-Meyers, Ph.D., Oregon; B.K. Dumas, Ph.D., Arkansas; A.R. Dunn, Ph.D., Washington; S.B. Garner, Jr., Ph.D., Princeton; G. Geis, Ph.D., Washington; J.E. Gill, Ph.D., North Carolina; D.F. Goelee, Ph.D., York; D. Hutchinson, Ph.D., Indiana; M. Kallet, Ph.D., Rutgers; M.L. Keane, Ph.D., Texas; F.K. Robinson, Ph.D., Pennsylvania; A. Smith, Ph.D., Houston; R.E. Stillman, Ph.D., Texas; J.M. White (Emeritus), Cambridge; N. Wright (Emerita), Ph.D., Yale.

Assistant Professors:
J.M. Atwill, Ph.D., Purdue; Rakesh Bhat, Ph.D., Illinois; P.G. Hammond, M.A., Tennessee; R. Hirst, Ph.D., Rensselaer Polytechnic; L.L. Howes, Ph.D., Columbia; D. Hubbard, Ph.D., Illinois; L.D. Jennings, Ph.D., North Carolina; K. Morris, Ph.D., Texas; C. Nelson, Ph.D., Tennessee; M.A. Long, Ph.D., Iowa; D. McKinstry, Ph.D., Tennessee; E.D. Overbye, M.A., Virginia; C. Taft, M.A., Utah State; J. Torrielli, Ph.D., Iowa; P.A. Tschantz, M.A. New Mexico State; J. Vincent, M.A. Michigan State; J. Wohpplant, Ph.D., Tennessee.

Instructors:
G. Albrighton, Ph.D., North Dakota; L. Berry, M.A., Tennessee; G. Brewster, Ph.D., Duke; J. Burton, Ph.D. SUNY; M.J. Caflec, M.A., Tennessee; L. Faulks, Ph.D., Florida; A. Holmes, Ph.D., Alabama; G. Lee, Ph.D., Tennessee; A.A. Long, Ph.D., Iowa; D. McKinstry, Ph.D., Tennessee; E.D. Overbye, M.A., Virginia; C. Taft, M.A., Utah State; J. Torrielli, Ph.D., Iowa; P.A. Tschantz, M.A. New Mexico State; J. Vincent, M.A. Michigan State; J. Wohpplant, Ph.D., Tennessee.

Prerequisites and Corequisites: English 101 and 102, or the equivalents, are prerequisites to all English courses at the 200, 300, and 400 levels.

Major Requirements: At least 36 semester hours of course work in the English Depart-ment, 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 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) three 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 designed 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 scores, 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 and a B average in all other undergraduate courses. Students who lack 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.
GEOPHYSICALLY

Professors: S.R. Jumper (Head), Ph.D. Tennessee; C.S. Aiken, Ph.D. Georgia; T.L. Bell, Ph.D. Iowa; R.A. Ferretti, Ph.D. Indiana; 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; D.A. Raisin, Ph.D. Northwestern; T.H. Schmudder, Ph.D. Wisconsin; T.J. Wilbanks (Adjunct), Ph.D. Syracuse.

Associate Professors: T.J. Blasing (Adjunct), Ph.D. Wisconsin; L.W. Brehm (Ad) Ph.D. Wisconsin; M.A. Brown (Adjunct), Ph.D. Ohio State; C.P. Harden, Ph.D. Colorado (Boulder); S.P. Horn, Ph.D. California (Berkeley); L.M. Pulisphe, Ph.D. Southern Illinois; J.B. Rehder, Ph.D. Louisiana State.

Assistant Professors: Cheng Liu, Ph.D. Tennessee; R. McKeown-Ice (Adjunct), Ph.D. Oregon; 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, 381, 383, 335, 372, 373, 375, and 379, and at least nine hours must be at the 400 level.

Minor: The B.A. minor in Geography consists of 15 semester hours of Geography courses at the 300 level or above.

GEOL O GICAL SCIENCES

Professors: H.Y. McSween (Head), Ph.D. Harvard; T.W. Broadhead, Ph.D. Iowa; R.D. Hatfield (UT Knoxville/ORNL Distinguished Scientist), Ph.D. Tennessee; O.C. Kopp, Ph.D. Columbia; T.C. Labotka, Ph.D. Caltech; K.C. Misra, Ph.D. Western Ontario; R.E. McLaughlin (Emeritus), Ph.D. Tennessee; L.A. Taylor, Ph.D. Lehigh; K.R. Walker (Carden Professor), Ph.D. Yale; J.G. Walls (Emeritus), Ph.D. North Carolina.

Associate Professors: D.W. Byerly, Ph.D. Tennessee; G. M. Clark, Ph.D. Pennsylvania State; P.A. Dalcourt, Ph.D. Minnesota; S.G. Diene, Ph.D. Wisconsin; W.M. Dunne, Ph.D. British; M. L. McKinney, Ph.D. Yale; R.T. Williams, Ph.D. VPI.

Assistant Professors: D. McKay, Ph.D. Waterlow; C.I. Mora, Ph.D. Virginia.

Prerequisites to a B.S. major are: Geology 101-102; Chemistry 120-130; Mathematics 141-142 or 147-148; plus one two semester sequence and one additional course from Physics 151-152 (or 211-222) and Biology 110-120. The single course requirement may be satisfied by high school course work in that area.

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

Major requirements: Geology 310, 320, 330, 340, 370, and 440 (22 hours); plus 12 additional hours of geology courses at the 400 level. Geology majors must attend the UTK field camp or approved equivalent elsewhere. (For equivalent camps, prior approval by the Department on an individual-case basis is required.)

Minor requirement consists of: Prerequisites: Geology 101-102. 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, 455, 465, 470 and 485; Mathematics 141, 142, (or equivalent honors courses) and 231 (or substitution of Geology 401 for Math 231); Physics 231; Basic Engineering 101, 121, and e131; Civil Engineering 330, 435 and any one of the following: 390, 440, 450, 503, 532 or Environmental Engineering 535; Plant and Soil Science 210, English 481; and Speech 240. Courses from the College’s approved lists for satisfying the Social Sciences, 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. Geologists 491 includes 3 hours of enrollment, and also the first week of each semester.

Minor: The B.A. minor in Geography consists of 15 semester hours of Geography courses at the 300 level or above.

GERMANIC AND SLAVIC LANG UAGES

Professors: James E. Fagen, Ph.D. Pennsylvania; Donald M. Fiene, Ph.D. Indiana; Henry Kost (Emeritus), Ph.D. Ohio State; John C. Osborne, Ph.D. Northwestern; Ursula C. Ritenhoff (Emerita), Ph.D. Connecticut.

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

Assistant Professor: Beverly Moser, Ph.D. City University.

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 the first week of each semester.

Proficiency Examinations: Students who have acquired knowledge of German or Russian through private study, tutoring, residence in foreign countries, or for other reasons, should request a proficiency test. A student receiving 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, particularly through participation in the University’s International Student Exchange Program (ISSEP). The department is also prepared to recommend summer study programs and year abroad programs for students who are interested in foreign study. Credits from recognized foreign study programs can readily be transferred to UT Knoxville. For qualified students, the department also offers German 481 Foreign Study and Russian 481 Foreign Study. Students should contact the department before registering for the foreign study course.

B.A. Major in German: Majors 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 courses numbered above 300, including German 363 and usually including German 301-302. Courses in English translation or German 331-332 do not count toward the major. In order to graduate, majors will be required to take a proficiency test in German. It is recommended that German majors also take History 151-152 or 334-335 and 6 hours of 200 level English courses.

Minor in German: Minor in German consists of 15 semester hours of German courses numbered above 300, including German 301-302 and 12 additional hours of courses numbered above 300 (excluding 331-332 and courses in English translation).

Major in German or Russian with a Concentration in Language and World Business: Students who wish to prepare for careers in international business must complete (a) a special language major in either German or Russian, (b) 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) The Special Language Major:
(1) The German major consists of 29 hours. The following are required: German 199, 301-302, 311-312, 363, 485, 491 or 493, 323 or any approved 400 level course.
(2) The Russian major consists of 32 hours. The following are required: Russian 199, 301-302, 311-312, 401-402, 451-452, 490 or 491, and 323 or 326 from the following: Russian 491, 221, 222, 226, 321, 326, 371, 372, or any 400-level courses.

(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 311 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 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 German 400 or Russian 490, each Language and World Business student must undertake study abroad, an internship, or a relevant research project for a minimum of 3 hours (included in major requirements).

Additionally, Language and World Business students must consult an advisor in the Department of Romance and Asian Languages or in 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 careers. Students must have attempted 45 hours in order to be considered for progression to the Language and World Business major. The academic record presented will be assessed by the Director of Language and World Business Program. Minimum requirements for progression to the concentration are a 2.75 cumulative average in the Basic Skills and Distribution courses specifically required by the College of Liberal Arts 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 Language and World Business Director. For further information inquire in T-1208 McClung Tower.

B.A. Major in Russian: Russian 201-202 is a prerequisite to the major. Russian majors should prepare their programs in consultation with the departmental faculty advisor. The major in Russian should consist of at least 50 hours of Russian courses, including Russian 301-302; 311-312; 401-402; 451-452; and 6 hours from Russian 221, 222, 226, 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. Buhlte (Head); Ph.D. Michigan State; E.V. Chmielowski, Ph.D. Harvard; J.C. Cobb (Bernadette Schmidt Professor); Ph.D. Georgia; J.R. Finger, Ph.D. Washington; L.G. Fisch (Benwood 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:
S.D. Becker, Ph.D. Case Western Reserve; J.D. Bing, Ph.D. Indiana; J. Bohstedt, Ph.D. Harvard; W.W. Farris, Ph.D. Harvard; C.W. Johnson, Ph.D. Michigan; C.G. Flemming, Ph.D. Duke; J. Muldowney, Ph.D. Yale; P.J. Pickney, Ph.D. Vanderbilt; J.G. Ulity, Ph.D. Illinois.

Assistant Professors:
O. Bradley, Ph.D. Cornell; P. Brummett, Ph.D. Chicago; T.E. Burman, Ph.D. Toronto; T.A. Diacon, Ph.D. Wisconsin; A. Karras, Ph.D. Pennsylvania; B.E. 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 the 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. A student may not declare a history major until he/she has completed both semesters, with a grade of C or better in each course, of a survey chosen from the following: 151-152, 157-158, 161-162, 195-196, 251-252; or any two one semester courses from any of these sequences. AP or transfer credit is acceptable to fulfill this requirement. History 151-152 (or their honors equivalents) or 161-162 are prerequisites to a major which consists of 27 hours, including: (1) 6 hours of History 251-252 (or their honors equivalents); (2) 21 upper-division hours, distributed to include at least one course in each of the following areas: (a) Europe-Latin America, (b) United States, (c) Asia-Africa. One of these must deal predominantly with a period prior to 1750. 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) 5 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. A grade of C+ or less in any part of the freshman-sophomore honors sequence will render the student ineligible for further honors work in history. An honors major must include 307 and a senior thesis (407-408). Altogether the honors major consists of 30 hours, including 27 hours as outlined in the B.A. Major above, plus 307. Honors credit will be offered for 408 only if the student completes a senior honors thesis that is awarded a grade of B or above. 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: African-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 Professor: Dr. Asafa Jalata (Sociology), Ph.D. State University of New York (Binghamton).

The African-American Studies Program offers both a major concentration and a minor in African-American Studies. AAAS 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 AAAS courses enables the University to offer a particularly varied range of courses in the field of African-American Studies.

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

Minor: African-American Studies 201-202 are required in the minor which consists of 15 hours at least 9 of which must be upper division credits. A maximum of 3 hours in AAAS 492 and...
493 combined can be applied to a minor. In planning their programs minors must include courses from at least 2 other departments which crosslist courses with African-American Studies in addition to the AAAS 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; at least two approved American History courses; and six hours of approved courses chosen from the following disciplines: anthropology, economics, political science, or sociology. Courses in the major will be chosen in consultation with an American Studies advisor, from a list approved by the program, in such a way that at least 3 courses help the student achieve a focus within the field. One course in the student's curriculum must specifically focus upon one or more American ethnic minority cultures. An additional 3-6 hours of American Studies 493 (Independent Study) are recommended for majors in their senior year. A list of approved elective courses is published annually.

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

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

**ANCIENT MEDITERRANEAN CIVILIZATIONS**

**Chair:**
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 Cultures: Religious Studies 311, 312-326; (b) Greek Culture: Classics 221, 222, 232, 233, 253, 331, 334, 383; History 310; Philosophy 120, 320; Political Science 475; Religious Studies 321, 322, 326; and (c) Roman Culture: Classics 223, 225, 254, 383, 462; 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). No more than nine 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:**
Dr. Yen-p'ing Hao (History)

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

Six of the 26 hours must be taken from courses listed for other geographical-cultural areas. Prerequisite to the concentration is Asian Studies 101-102. Corequisite to the major concentration is competence in a major Asian language of the chosen geographical-cultural area. Competence is defined as the successful completion of the 200-level sequence of that language, or by demonstration of equivalent mastery.

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

**CINEMA STUDIES**

**Chair:**
Dr. Charles Maland (English)

The **Cinema Studies minor** consists of fifteen hours, including English 281 Introduction to the Film Studies, and Art 292 Film Design. It is strongly recommended that Introduction to Film Studies be taken before selection of electives provided for in the minor.

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

Approved Area Courses are: Art 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 489 Special Topics in Film (3); French 420 French Cinema (3); German 323 German Film (3); Italian 421 Topics in Italian Literature and Cinema (3); Political Science 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 Philosophy 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, and 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 Studies 401 and 402, three hours of either History 360 or 361, and three hours of an approved Spanish or Portuguese literature/culture course at either the 300 or 400 level. In addition to the core courses, the General Studies track will consist of fifteen hours selected from courses offered by three different participating departments. The Brazilian Studies track will consist of fifteen hours beyond the core courses including a minimum of six hours in UTK's Summer Study Program in Fortaleza, Brazil (or other programs in Brazil approved by the director of Latin American Studies) and up to nine hours of approved courses that focus on Brazil. Majors are strongly urged to take as a prerequisite Latin American Studies 251-252.

The **minor consists of 18 hours including Latin American Studies 251-252, three hours of an approved Spanish or Portuguese literature/culture course at either the 300 or 400 level, and nine additional hours selected from courses offered by three different participating departments. A practical working knowledge of Spanish or Portuguese is a prerequisite for majors and minors. All students are strongly encouraged to earn credit hours through UT Knoxville's Latin American Studies Abroad Program at the Federal University of Ceara in Fortaleza, Brazil. Other foreign study programs are also available for Brazil and Spanish-speaking Latin America.
LINGUISTICS
Chair: Dr. Chauncey J. Mellor (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 language and linguistics. The program of study provides the additional emphasis of studying the teaching of English as a second language for the student interested in language-related employment at the B.A. level.

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

Corequisites: (a) Completion of a third year of foreign language study (literature) which satisfies the Foreign Studies option to fulfill the upper-level distribution requirement (required); (b) A two-semester sequence of a non-indo-European language to be selected from the following: Asian Studies 121-122 (5,5) (Arabic); Spanish 131-132 (5,5) (Chinese); Asian Studies 141-142 (4,4) (Hebrew); Asian Studies 151-152 (6,5) (Japanese); Religious Studies 309-310 (3,3) (Hebrew); other non-indo-European language sequences approved by the Linguistics Committee (required).

The concentration shall consist of 30 hours distributed as follows: (a) 24 hours composed of Audiology and Speech Pathology 305 (3); English 371, 372, and 471 (3,3,3); French, German, Russian or Spanish 425-426 (3,3); and Linguistics 420-430 (3,3); and (b) 6 hours of the following, selected in consultation with the Linguistics Committee: Anthropology 411 (3); Audiology and Speech Pathology 320, 405, 457, 579, (3,3,3,3); Educational Curriculum and Instruction 457 (3); Special Education and Rehabilitation 522 (3), 532-533 (3,3); English 371, 372, 472, 475, 486, 508-509, 680 (3 hours each); French 421, 422, 521-522 (3 hours each); German 435-436 (3,3), 571-572 (3,3); Linguistics 400 (3); Philosophy 479 (3); Psychology 440 (3); Psychology 511-512 (3,3); Spanish 421, 422, 531-532 (2,3,3,3), Theatre 426 (4). Other hours may be substituted in (b) by approval of the Linguistics Committee.

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

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

MEDEIVAL STUDIES
Chair: Dr. Paul Barrette (French)
A major concentration in Medieval Studies consists of Medieval Studies 201 and 403 and 21 hours of upper-division courses. The concentration is 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 fall of the Roman Empire to the 17th century. Such a concentration offers the opportunity to deepen one's self-awareness and broaden one's view of the range of human possibilities by studying a very different and remote culture, its conditions of life, and social and political institutions, values and ideals, and modes of perception and expression.

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

A minor in Medieval Studies consists of Medieval Studies 201 and 403 and 12 additional hours distributed among the courses 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 (3); History 313 Medieval History (3); History 1100-1100 (3); History 313 Medieval History (3); History 1100-1100 (3); History 330 History of England to 1688 (3); History 534 History of Germany to 1815 (3); History 1100-1100 (3); History 474 Studies in Medieval and Early European History (3); History 322 Medieval Political Science (3); and Political Science 475 Ancient and Medieval Political Thought (3).

Category #2—Language and Literature: Classics 335 Medieval Latin (3); English 371 Foundations of the English Language (3); English 401 Medieval Literature (3); English 402 Chaucer (3); French 410 Medieval French Literature (3); Italian 401 Dante and Medieval Culture (3); and Italian 402 Petrarch and Boccaccio (3).

Category #3—The Arts: Architecture 415 Seminar in Medieval Architecture (3); Art 371 Early Christian and Byzantine Art to 1350 (3); Art 372 Northern European Painting, 1350-1600 (3); Art 381 Medieval Architecture, 600-1450 (3); Art 382 The Art of Italy, 1250-1400 (3); and Music History 210 History of Music to 1750 (3).

RUSSIAN AND EAST EUROPEAN STUDIES
Chair: Dr. Donald Finne (Germanic and Slavic Languages)

The major concentration consists of 30 hours from the following: Geography 375, six hours from History 340-341, Philosophy 393, 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 for 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 250 and 350 plus additional semester hours from the Urban Studies curriculum. Curricular planning should be done with the advisor in Urban Studies. For more information, contact the chairperson of the Urban Studies Committee.

Approved Courses in other departments: Geography 365 Geography of Appalachia; Rural Sociology 380 Rural Sociology; Sociology 363 The City, 462 Population; and Transportation 302 Transportation Principles and Policies.

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 (493), and at least one course from the following: 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, 466, 483), Contemporary Issues (375, 392, 410, 425, 434), and Literature and the Arts (330, 332, 422). As its content varies, 400 may be included in any of these areas. Students are encouraged to take at least nine hours in one of these areas.

The Women's Studies minor consists of one of the Images of Women in Literature courses (either 210 or 215), Women's Studies (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 minor or a 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; G.E. Albert (Emeritus), Ph.D. Wisconsin; N. Alkilokos, Ph.D. Brown; W. Alexiadis, Ph.D. Delaware; D.F. Anderson, Ph.D. Chicago; G.A. Baker, Ph.D. Cornell; J.S. Bradley (Emeritus), Ph.D. Iowa; J.H. Carruth, Ph.D. Louisiana State; C.E. Clark, Ph.D. Louisiana State; R.J. Daverman, Ph.D. Wisconsin; D.J. Dassart, Ph.D. Maryland; D.E. Dobbs, Ph.D. Cornell; G. Dydek, Ph.D. Warsaw (Poland); H. Frandsen, Ph.D. Illinois; L.H. Tress, Ph.D. Cornell; T.G. Hallam, Ph.D. Missouri; D.B. Hinton, Ph.D. Tennessee; L.S. Husch, Ph.D. Florida State; K. Johannson, Ph.D. Bielefeld, Germany; I. S. Jordan, Ph.D. Wisconsin; O. Karakashian, Ph.D. Harvard; S.S. Lenthart, Ph.D. Kentucky; H. Mathews, Ph.D. Tulane; Robert M. McConnell, Ph.D. Duke; B. Rajput, Ph.D. Illinois; K.C. Reddy (Space Institute, Tullahoma), Ph.D. Indian Institute of Technology; J. Rosinski, Ph.D. Wrocław University; P.W. Schaefer, Ph.D. Maryland; S.M. Serbin, Ph.D. Cornell; H. Simpson, Ph.D. California Institute of Technology; K. Soni, Ph.D. Oregon State; R. F. Stallmann (Emeritus), Ph.D. Wisconsin (Germany); K.R. St. Stephen, Ph.D. Wisconsin; C. Sundberg, Ph.D. Wisconsin; M. Thistlethwaite, Ph.D. University of Manchester (England); W.R. Wade, Ph.D. California (Riverside); C.G. Wagner, Ph.D. Duke.

Associate Professors:
K. R. Kimbíe (Space Institute, Tullahoma), Ph.D. Ohio State; Y. Kuo, Ph.D. Cincinnati; S. Mulyal, Ph.D. Purdue; S. Richter, Ph.D. Michigan; W. H. Row, Jr., Ph.D. Wisconsin; J. Smith, Ph.D. California (Berkeley); B. K. Soni (Space Institute, Tullahoma), Ph.D. Texas.

Assistants Professors:
Charles Collins, Ph.D. Minnesota; A. Freire, Ph.D. Princeton; C. P. Pflaut, Ph.D. Maryland; D.A. Polignone, Ph.D. Virginia; Feng Xiaobing, Ph.D. Purdue; J. Xiong, Ph.D. North Carolina, Chapel Hill.

Instructors:
Sybil Blalock, M.S. Tennessee; Kenneth Bonee, M.S. Tennessee; Tony Campbell, M.M. Tennessee; C.G. Doss, M.A. Tennessee; Richard Little, Ph.D. California (Los Angeles); Ritz Reagan, M.M. Tennessee; Jennifer Stevens, M.A. Kentucky.

All entering freshman and all other students who have not completed a college level mathematics course, except students who have received AP calculus credit, must take the UT 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 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 number 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, cytochemistry 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 C. Savage (Head), Ph.D. California (Berkeley); R.W. Beck (Emeritus), Ph.D. Wisconsin; J.M. Becker, Ph.D. Cincinnati; D. Bemis, Ph.D. Cornell; D.A. Brian, Ph.D. D.V.M. Michigan State; T.C. Montie, Ph.D. Maryland; W.S. Riggins, Ph.D. Yale; T.B. Roush; Ph.D. Guelph (Canada); B.S. Sayler, Ph.D. Idaho; Stacey, Ph.D. Texas (Austin); 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:
R.N. Moore, Ph.D. Texas (Austin).

Assistant Professors:

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, Microbiology 310, 319, 320, 329, 12 additional hours of 400-level Microbiology courses.

Honors B.S. Major: An honors major is offered to students who have achieved junior standing and have completed the required 300-level Microbiology courses with a minimum grade point average of 3.5 in Microbiology courses and 3.2 for all courses. In addition to these 300-level courses, an honors major
MUSIC

Professors:

Associate Professors:

Assistant Professors:
D. Brown, Memphis State; T. S. Dubberly, D.M.A. Yale; M. Ehrman, B.S. Northwestern; W. W. Hawthorne, Ph.D. Cincinnati; C. Smith, B.M. SUNY.

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 Chorale.

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 credits. Students studying a secondary instrument register for one credit per hour of study. At the principal level, students may participate in a one-hour private instruction per week or a one-half-hour class lesson plus a half-hour private lesson. Determination of the mode of instruction rests with the department. Study at the secondary level is on a one-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.

Students majoring in music are required to pass the Junior Music Examination, which must be taken concurrent with or subsequent to enrollment in Music History 220, 220 and Music History 220. The examination consists of three sections: ear training, music theory, and music history and is administered annually in April, on the second day of Fall registration, and in October. Students may retake the examination only after substantial review of the materials failed. Appeals for additional testing must be presented to the Undergraduate Committee of the Department.

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

The Bachelor of Arts Degree - Music Major

Music Course Requirements: Pre-requisites: Music Theory 110, 120 (6); Music Theory 130, 143 (6); Music Performance 100 level (2). Courses toward the major: Music Theory 210, 220 (6); Music History 200 (3); Music History 210, 220 (6); Music Performance 200 level or above (four semester minimum) (8); Music General 200 - 4 semester minimum (0); Music Ensemble (4); Music Theory 310 (3), 3 hours selected from: Music History 350, 380, 390. Music Electives (0-3 hours) selected from: Music History 460 (3); Music General 301 (0); Music Theory 493 or Music History 493 (3); Music General 411 (0), Total of 43-46 hours.

Music Minor: (a) Concentration in Applied Music consists of 12 hours in courses numbered 200 and above, distributed as follows: Music History 200, 8 hours in applied music, and 6 hours in music electives. Prerequisites are Music General 100 or equivalent and two semesters of applied music study (Music Performance) at the 103-190 levels. (b) Concentration in Music History and Literature consists of 17 hours in courses numbered 200 and above, distributed as follows: Music History 200, 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 at the 103-190 levels.
### B.M. Curriculum in Music Education-Instrumental Emphasis

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<th>Year</th>
<th>Course</th>
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<td>Freshman</td>
<td>English Composition 101, 102</td>
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<td>Music Theory 110, 120</td>
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<td>Music Theory 130, 140</td>
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<td>Music Performance (Major Instrument)</td>
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<td>Music Education 230</td>
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<td>Senior</td>
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<td>Music Performance (Minor woodwind Instrument)</td>
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<td>Educational &amp; Counseling Psychology 210</td>
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<td>Education 401</td>
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</tr>
<tr>
<td></td>
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Total: 127 hours

1. Must be chosen from French, German, or Italian.
2. Full Recital Optional with approval of major area.

### B.M. Curriculum in Organ

<table>
<thead>
<tr>
<th>Year</th>
<th>Course</th>
<th>Hours</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>English Composition 101, 102</td>
<td>6</td>
<td></td>
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<tr>
<td></td>
<td>Music Theory 110, 120</td>
<td>6</td>
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<tr>
<td></td>
<td>Music Theory 130, 140</td>
<td>6</td>
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<tr>
<td></td>
<td>Music History 200</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td>Music Perf. 190</td>
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<td>Music Ensemble</td>
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<tr>
<td></td>
<td>Music General 200</td>
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<tr>
<td></td>
<td>Music Education 330</td>
<td>3</td>
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<tr>
<td></td>
<td>Music History 380</td>
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<tr>
<td></td>
<td>Historical Studies</td>
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<td></td>
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<td>Music Theory 310</td>
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<td>Music History 380</td>
<td>3</td>
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<tr>
<td></td>
<td>Music Ensembles</td>
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</tr>
<tr>
<td></td>
<td>Music Performance (Voice)</td>
<td>4</td>
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<tr>
<td></td>
<td>Educational &amp; Counseling Psychology 210</td>
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<tr>
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<td></td>
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<td></td>
<td>Math 115</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Music Keyboard 110, 120</td>
<td>6</td>
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</tr>
<tr>
<td></td>
<td>Music Keyboard 210, 220</td>
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<td>Music Performance (Voice)</td>
<td>4</td>
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<tr>
<td></td>
<td>Music General 200</td>
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<tr>
<td></td>
<td>Music Ensemble</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Music General 301</td>
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<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Education 430</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Education 450</td>
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<td></td>
</tr>
</tbody>
</table>

Total: 129 hours

1. Must be chosen from French, German, or Italian.
2. Full Recital Optional with approval of major area.

### B.M. Curriculum in Piano

<table>
<thead>
<tr>
<th>Year</th>
<th>Course</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>English Composition 101, 102</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Theory 110, 120</td>
<td>6</td>
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</tr>
<tr>
<td></td>
<td>Music Theory 130, 140</td>
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<tr>
<td></td>
<td>Music History 200</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Perf. 190</td>
<td>3</td>
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<td>Music Ensemble</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music General 200</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Education 330</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music History 380</td>
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<td></td>
<td>Historical Studies</td>
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<td>Music Theory 310</td>
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<td></td>
<td>Music History 380</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Ensembles</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Performance (Voice)</td>
<td>4</td>
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<tr>
<td></td>
<td>Educational &amp; Counseling Psychology 210</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Math 115</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Keyboard 110, 120</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Keyboard 210, 220</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Performance (Voice)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music General 200</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music Ensemble</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Music General 301</td>
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<tr>
<td></td>
<td>Music Education 430</td>
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</tr>
<tr>
<td></td>
<td>Music Education 450</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total: 129 hours

1. Must be chosen from French, German, or Italian.
2. Full Recital Optional with approval of major area.
Music Performance 255 or 290 .............................................. 6
Music Theory 430, 440 ...................................................... 6
'Must be chosen from French, German, or Italian.

Music Theory 210, 220 ...................................................... 6
Electives ........................................................................... 6

Music General 200 .......................................................... 0

Music Performance I-II (Music Kbd 110-120, 210-220) or Organ Performance 190
'Organ majors take Keyboard Harmony (Music Kbd 230) 1, Church Service Playing (Music Kbd 240) 1; Voice majors take Functional Diction for Singers (Music Voice 425) 3.

Organ majors take Church Service Playing II-III (Music Kbd 310-330) 1.1 and The Organ and its Literature II-H (Music Kbd 460-470) 3.3, Voice majors take Vocal Pedagogy II-H (Music Kbd 450-560) 1.1 and Choral Literature (Music Kbd 560-585) 2.2.

B.M. Curriculum in Strings

<table>
<thead>
<tr>
<th>Hours Credit</th>
<th>Freshman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English Composition 101, 102</td>
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<tr>
<td></td>
<td>Music Theory 110, 120</td>
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<tr>
<td></td>
<td>Music Theory 130, 140</td>
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<tr>
<td></td>
<td>Music History 200</td>
</tr>
<tr>
<td></td>
<td>Music Performance 155 or 190</td>
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<tr>
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<td>Music Ensemble</td>
</tr>
<tr>
<td></td>
<td>&quot;Foreign Language&quot;</td>
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<tr>
<td></td>
<td>Music General 200</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
</tr>
<tr>
<td></td>
<td>Music Theory 210, 220</td>
</tr>
<tr>
<td></td>
<td>Music Theory 230, 240</td>
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<td>Music History 210, 220</td>
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<tr>
<td></td>
<td>Music Keyboard 210, 220</td>
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<td>Music Performance (200 level)</td>
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<td>Music General 200</td>
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<td>Music General 201</td>
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<td>Social Science</td>
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<tr>
<td></td>
<td>Natural Science</td>
</tr>
<tr>
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<td>Total: 130 hours</td>
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</table>

'Must be chosen from French, German, or Italian.

B.M. Curriculum in Studio Music and Jazz

<table>
<thead>
<tr>
<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>English Composition 101, 102</td>
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<tr>
<td></td>
<td>Music Theory 110, 120</td>
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<td></td>
<td>Music Theory 130, 140</td>
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<td></td>
<td>Music History 200</td>
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<td></td>
<td>Music History 350</td>
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<tr>
<td></td>
<td>Music Jazz 110</td>
</tr>
<tr>
<td></td>
<td>Music Jazz 130, 140</td>
</tr>
<tr>
<td></td>
<td>Music Performance (100 level)</td>
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<tr>
<td></td>
<td>Music Ensemble</td>
</tr>
<tr>
<td></td>
<td>Music General 200</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
</tr>
<tr>
<td></td>
<td>Music Theory 210, 220</td>
</tr>
<tr>
<td></td>
<td>Music History 210, 220</td>
</tr>
<tr>
<td></td>
<td>Music Jazz 120</td>
</tr>
<tr>
<td></td>
<td>Music Jazz 210, 220</td>
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<tr>
<td></td>
<td>Music Performance (200 level)</td>
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<td>Music Ensemble</td>
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<tr>
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<td>Music General 200</td>
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<td>Music General 201</td>
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<tr>
<td></td>
<td>History Studies</td>
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'Must be chosen from French, German, or Italian.
<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Music Performance</td>
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<tr>
<td>1Area Study</td>
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<tr>
<td>Music Ensemble</td>
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<tr>
<td>1Liberal Arts Electives</td>
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<td>Music General 200</td>
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<tr>
<td>Electives</td>
<td>6</td>
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<tr>
<td>Social Science</td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>12 hours</strong></td>
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</tbody>
</table>

*Must be chosen from French, German or Italian.  
1Area of Study  
Option A: Composition: Music Performance 394, Music Performance 494, Lecture Recital Music General 411  
Option B: Electronic Composition: Music Performance 395, Music Performance 495, Lecture Recital Music General 411  
Option C: Music Theory; Music Performance 394 or 395, Independent Study in Music Theory 483, Music History Elective (300 level and above).  
1Humanities-Arts (Non-music), Literature, Philosophical Perspectives, Interdisciplinary Studies.  

**B.M. Curriculum in Voice**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101, 102</td>
<td>6</td>
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<tr>
<td>Music Theory 110, 120</td>
<td>6</td>
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<tr>
<td>Music Theory 130, 140</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Music History 200</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Music Perf. 355</td>
<td>8</td>
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<tr>
<td>Music Ensemble</td>
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<tr>
<td>Music General 200</td>
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<td></td>
</tr>
<tr>
<td>Music Keyboard 110, 120</td>
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</tr>
<tr>
<td>Music Voc. 130, 140</td>
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<tr>
<td><strong>Sophomore</strong></td>
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<tr>
<td>Music Theory 210, 220</td>
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<td></td>
</tr>
<tr>
<td>Music Theory 230, 240</td>
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<td>Music History 210, 220</td>
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</tr>
<tr>
<td>Music Perf. 255</td>
<td>8</td>
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<tr>
<td>Music Ensemble</td>
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<td></td>
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<tr>
<td>Music Keyboard 210, 220</td>
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<td>Music General 200</td>
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<tr>
<td>Music Voc. 230</td>
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<td>Music History 380</td>
<td>3</td>
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<tr>
<td>1Foreign Language</td>
<td>3</td>
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<td>Social Science</td>
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<td>Music Theory 310</td>
<td>3</td>
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<td>Music Performance 400</td>
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<td>Music Ensemble</td>
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<td>Music General 200</td>
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<td>Music General 401</td>
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<td>Historical Studies</td>
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<tr>
<td>Electives</td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>127 hours</strong></td>
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</tr>
</tbody>
</table>

1Must be chosen from French, German or Italian.  

**ORGANIZATIONAL PROGRAM**

See Graduate School.

**PHILOSOPHY**

**Professors:**
- W.M. Bugg (Head), Ph.D. Tennessee; C.R. Bingham, Ph.D. Tennessee; W.E. Blass, Ph.D. Michigan State; M.A. Breazale (on leave), Ph.D. Michigan State; M.J. Breining, Ph.D. Oregon; W.M. Bugg, Ph.D. Tennessee; J. Burgunder, Ph.D. Freie Universität Berlin; T.A. Callcott, Ph.D. Purdue; R.W. Chidlaw, 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; S.B. Elston, Ph.D. University of Massachusetts; K. Fox, Ph.D. Michigan; N.M. Gailar (Emeritus), Ph.D. Ohio State; S. Georgiou, Ph.D. Manchester (England); M.W. Guidry, Ph.D. Tennessee; T.H. Handler, Ph.D. Rutgers; 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. Bristol (England); J.W.L. Lewis (UTSI), Ph.D. Mississipi; J. Macek (Distinguished Scientist), Ph.D. Rensselaer Polytechnic Institute; G.D. Mahan (Distinguished Scientist), Ph.D. University of California (Berkeley); A.A. Mason (UTSI), Ph.D. Tennessee; W.K. McGregor (UTSI), Ph.D. Tennessee; A.H. Nielsen (Emeritus), Ph.D. Michigan; F.E. O'Brien, Jr., Ph.D. Pittsburgh; J.R. Painter, Ph.D. Tennessee; D.J. Papp, Ph.D. New Hampshire; E.W. Plummer, Ph.D. Carroll; J.J. Quinn, Ph.D. Maryland; L.L. Riedinger, Ph.D. Vanderbilt; R.H. Ritchie, Ph.D. Tennessee; W.R. Rusk (Emeritus), M.S. Tennessee; W. Sandner, Ph.D. Freiburg, I.A. Sellin (Chancellor'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 (Emeritus), Ph.D. Duke, J.O. Thompson, Ph.D. Illinois; J.W. White (Emeritus), Ph.D. North Carolina.

**Associate Professors:**
- F.E. Barnes, Ph.D. Cal Tech; A.G. Eguluz, Ph.D. Brown; T. Ferrell, Ph.D. Claussen; R.W. Lide (Emeritus), Ph.D. Michigan; J.W. Muehlehauser (UTSI), Ph.D. Tennessee; S.Y. Nishi, Ph.D. Maryland; S.P. Sorensen, Ph.D. Copenhagen (Denmark).

**Research Professors:**
- J.L. Blankenship, Ph.D. Tennessee; I. Kamyshchak, Ph.D. ITEP (Russia); J. Zhang, Ph.D. Lanzhou.

**Research Associate Professor:**
- Yuan-Wei Du, Ph.D. Beijing; J.L. McCorrie, Ph.D. Tennessee; S. Saint, Ph.D. Bombay.

**Research Assistant Professors:**
- X. Chen, Ph.D. Purdue; L. Davis (UTSI), Ph.D. Auckland; H. Faidas, Ph.D. Tennessee; W.E. Orman, Ph.D. Michigan State.

Laboratory Director: J.E. Parks, Ph.D. Kentucky.

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 related specialties later in their careers. 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.

Prerequisites to the major are: Physics 137-138 and Mathematics 141-142.

The major consists of: 240, Mathematics 231 and 241, 311-312, 321, 361, 411-412, 431-432, and 461. Physics 401 is recommended, and 421 should be elected by students intending to pursue graduate studies in Physics. Total major hours: 41.

Minor: A minor in physics shall consist of Physics 137-138, 240, and twelve hours from Physics and Astronomy 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, 102 and 201 are prerequisites to the major which consists of 27 hours: 397-398, 487-488, and 15 additional hours, which must include at least one course in each of the four areas of the discipline described below 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, 102 and 201 and Economics 201 or 202 are prerequisites to the major in Political Science with a concentration in Public Administration. Corequisite courses are Economics 121 and Mathematics 115 or Statistics 201 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 coursework in Political Science and 12 hours of upper division coursework 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, 441 and 442. In Economics students must take Economics 311, 471, and 472. Students must also meet all eligibility requirements described above under the B.A. Major section.

PSYCHOLOGY

Professors: Warren H. Jones (Head), Ph.D. Oklahoma State University; G.M. Burghardt (Alumni Distinguished Professor), 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. Malone, Ph.D. Chicago; J.C. Malone, Ph.D. Duke; K.R. Newton (Emeritus), Ph.D. Tennessee; H.R. Pollio (Alumni Distinguished Service Professor), Ph.D. Michigan; F. Samjima, Ph.D. Keio (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. Wahler, 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; Deborah P. Walsh, Ph.D. Univ of Mass.

Major: The Department offers two concentrations, General and Academic. The General Concentration is a 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.

All students wishing to follow the General Concentration must satisfy pre-requirements of one year of a biological science (e.g. Biology 110-120), Psychology 110 with a grade of C or better, and a GPA of at least 2.00. Completion of this Concentration requires: (1) Psychology 210 or 220, (2) 375, 385, or 395, (3) Three courses from Psychology 300 (or Child and Family Studies 312), 310, 320, 330 (or Educational & Counseling Psychology 431), 360 (or Sociology 370), 370, (4) Two elective Psychology courses at the 300 level or higher, (5) Two elective Psychology courses at the 400 level. NOTE: Only 3 hours of 399, 489, 491, 492, 493 may be used in this major.

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, 102 and 201 and Economics 201 are prerequisites to the major in Political Science with a concentration in Public Administration. Corequisite courses are Economics 121 and Mathematics 115 or Statistics 201 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 coursework in Political Science and 12 hours of upper division coursework 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, 441 and 442. In Economics students must take Economics 311, 471, and 472. Students must also meet all eligibility requirements described above under the B.A. Major section.

Minor: Consists of 110 or equivalent; 210 or 220; and 12 additional upper-division hours. NOTE: 399, 489, 491, 492, 493 cannot be used in this minor.
RELIGIOUS STUDIES

Professors:
C.H. Reynolds (Head), Ph.D. Harvard; F.S. Lusby (Emeritus), 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. Washington; R.I.J. Hackett, Ph.D. Aberdeen;
J.O. Hodges, Ph.D. Chicago; Mark Hulsether, Ph.D. Minnesota; M.L. Levering, Ph.D. Harvard;
G. Schmidt, Ph.D. Pittsburgh.

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

Major: The basic concentration is designed to assure that students attain skills to analyze and interpret religious phenomena in different cultures and in different historical periods, including how sacred texts and traditions, and interpretations of critical reasoning, 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 graduate or professional school (seminary, law, medicine) which recommends a specific course of undergraduate study. A faculty member in Religious Studies will assist a student to formulate this major consisting of at least 27 hours of credit at the 300 level or above, including 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 minor in religious studies discuss their program with a member of the department faculty.

ROMANCE AND ASIAN LANGUAGES

Professors:
John B. Romelaar (Head), Ph.D. Vanderbilt; J.E. Barrette, Ph.D. Columbia (Berkeley); P. Brady, Ph.D. Universite de Paris (Sorbonne); C.W. Cobb, Ph.D. Tulane; B. Creel, Ph.D. California; J.C. Elliott (Emeritus), M.A. Illinois; W.H. Heflin, Jr., Ph.D. Florida; W.H. Heflin, Jr., Ph.D. Florida State; T.B. Irving (Emeritus), Ph.D. Princeton; F.D. Maurino (Emeritus), Ph.D. Columbia; C.R.M. Pinsky (Emeritus), Ph.D. California (Berkeley); M. Petrovska, Ph.D. California; J.O. Hodges, Ph.D. Chicago; Mark Hulsether, Ph.D. Minnesota; M.L. Levering, Ph.D. Harvard; G. Schmidt, Ph.D. Pittsburgh.

Associate Professors:
E.J. Campion, Ph.D. Yale; R.M.E. De Rycke, Ph.D. Illinois; S. Dmacuisine, Ph.D. Wisconsin; D. DiPuccio, Ph.D. Kansas; C.K. Duncan, Ph.D. Illinois; K.D. Levy, Ph.D. Kentucky.

Assistant Professors:
M. Beauvais, Ph.D. Texas; B. Brinco, Ph.D. Washington; O. Costance, Ph.D. English; D. Cox (Emeritus), M.A. Tennessee; J. Da Cruz, Ph.D. University of California; L. Ehrlich, Ph.D. Hawaii; C. Holmfield, Ph.D. Wisconsin; E. Johnson, Ph.D. Tennessee; J. Lacorte, Ph.D. Indiana; C. Nakama, Ph.D. Universite De Paris (Sorbonne); E. Sillavillo, Ph.D. North Carolina; D. Wilkerson, Ph.D. Yale; Wilson (Emeritus), M.A. Tufts; D. Young, Ph.D. Texas.

Instructors:
A. McKeely, M.A. Tulane; M.T. Rabot, Cert. de Lie. Poitiers.

French Major: Consists of 31 hours in courses numbered 311 and above. All majors must have the following courses (or their equivalent with consent of the department): 311-312, 313, 341 or 342 or 346, 421 or 422 or 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 3 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. Majors are encouraged to include among conversation and composition, 311-312, 313, 341 or 342; plus 3 hours at the 300 or 400 level.

Italian Major: Consists of 27 hours in courses numbered 311 and above. Additionally, Language and World Business students must consult an advisor to develop a concentration.

Italian Minor: Consists of 18 hours in courses numbered 311 and 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 323 or above. The following are required: 335, 336 or 421, 422, 459, Spanish must also have 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, 435, 436, 450, 451, 452, 461, 473, 474, 479. Majors are encouraged to take as many hours as possible, especially the surveys, 459, 453, and 473-474.

Spanish Minor: Consists of 18 hours in courses numbered 323 or above, including 335 and 336; 422; one course in conversation and composition from among the following: 323, 324, 423, 424; and the remaining courses to be chosen among conversation and composition, civilization, phonetics, or literature. Students pursuing a minor are strongly advised to consult with a departmental advisor.

Major in French, Italian, Japanese, Portuguese, 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 language major in either French, Italian, Japanese, Portuguese 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) The Special Language Major:
(1) The French major consists of 33 hours. The following are required: French 199, 311-12, 313, 341, 345, 400, 422, 432, 440, and 3 hours of 491 or 493.

(b) The Italian major consists of 29 hours. The following are required: Italian 199, 311-12, 341, 342, 401, or 491, and 9 hours of any 400-level literature courses.

(c) The Japanese major consists of 32 hours. The following are required: Japanese 199, 251-252, 351-352, 490 or 491, and 9 hours from the following: Art 386, Asian Studies 102 or 471 (if related to Japan), History 365, Japanese 313 or 314, Religious Studies 383.

(4) The Portuguese major consists of 32 hours. The following are required: Portuguese 199, 301-302, 309, 409, three hours of an approved Spanish or Portuguese literature course at the 300 or 400 level, six hours of 490 or 490 as approved by the director of the program, Latin American Studies 380, 361, 401, or 402.

(5) The Spanish major consists of 32 hours. The following are required: Spanish 199, 311-12, 323, 345, 422, 432, 451, 471, 459, three hours of 490 or 491 and any 400-level literature course.

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

(2) 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 441, and one elective from a related business area chosen in consultation with an advisor.

(c) Practical experience: Through French 490, Italian 490, Japanese 490, Portuguese 490, or Spanish 490, each Language and World Business student must undertake study abroad, an internship, or a relevant research project for a minimum of 3 hours (including in major requirements). Additionally, Language and World Business students must consult an advisor in the Department of Romance and Asian Languages for help in selecting relevant courses.
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 careers. Students must have attempted 45 hours in order to be considered for progression to the major. 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 Distributions and in the Language and World Business plan of study, 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 the Language and World Business Program. For further information, inquire in T-1208 McClung Tower.

Placement Examination: Students who have had two or more years of 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 (Porto Alegre), France (Lille), Italy (Urbino), and Mexico. Students can earn up to six credit hours by participating in these programs. In most cases, the courses will fulfill part or all of the foreign language requirement (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 and Asian Languages, 601 McClung Tower.

RUSSIAN
See Germanic and Slavic Languages.

RUSSIAN AND EAST EUROPEAN STUDIES
See Interdisciplinary Programs.

SOCIOLGY

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

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

Assistant Professor:
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, either 455, 459, or 492, and two courses 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 either Geology 101 and 103; or 202 plus Geology 101 or 103; or Botany 306 and 309. The Concentration in Environment and Society consists of 321 (Sociological Theory) and 331 (Sociological Research) and eighteen upper-division sociology courses as follows: 344 or 345, 350, 442, 446 and two courses selected in consultation with advisor.

Minor with Concentration in Environment and Society: Prerequisite to the minor is Sociology 101 or 110. The minor consists of 200, 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:

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; C.L. Arnold, Ph.D. Florida; J.W. Haas, Ph.D. Kentucky.

Major: Speech Communication 100 and one course in quantitative analysis (e.g., Speech Communication 245, Math 115, Statistics 201, or the equivalent) are prerequisites to a major 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 446, 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. The major is designed to prepare students for graduate studies in statistics or for professional work in various applications of statistical methods, including applications in the natural and social sciences, business and industry. Contact the Statistics Department for further information on careers in statistics and appropriate courses to take.

It is highly recommended that a student majoring in statistics have a minor in an area of application.

Major: (a) Required courses consist of 25 hours from Mathematics 241, 251; Statistics 251, 252, 261, Statistics 461, 462, Statistics 471 or Mathematics 326; (b) Statistics elective consists of 3 hours of 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; 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); A.J. Harris, Ed. D. Tennessee; R.R. Mashburn, Ph.D. Florida State; P.L. Soper (Emeritus), Ph.D. Cornell.

**Associate Professors:**

**Assistant Professors:**

**Major:** Theatre 100 is a prerequisite to a major which consists of 220, 245, 250, 260, 310, 311, 312 and 430; and 12 additional hours of Theatre courses numbered 200 and above, 3 of which may be in cognate areas approved by the Department. At least one half of the hours in the major must be at the 300 level or above. No more than 6 hours of Theatre 481, 482, 483, 484, or 485 may apply to the major. Students majoring in Theatre should elect a literature package which includes English 252 to satisfy the College's Humanities Part 1 Divisional Distribution requirement.

**Minor:** Theatre 100 is a prerequisite to a minor which consists of: 220, 430, 6 hours in Theatre history and criticism and 6 additional hours of Theatre courses.

**URBAN STUDIES**

See Interdisciplinary Programs.

**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; T.T. Chen, Ph.D. Florida; D.A. Etnier, Ph.D. Minnesota; M.A. Handel, Ph.D. Kansas State; B. Hochman (Emeritus), Ph.D. California (Berkeley); K.W. Jenoi, 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 (Emeritus), 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. Whislon, Ph.D. Iowa.

**Associate Professors:**
K.D. Burnham (Emeritus), Ph.D. Iowa; J. Drake, Ph.D. Purdue; D.J. Fox, Ph.D. Johns Hopkins; R. Ganguly, Ph.D. Nebraska; 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.L. Gittleman, Ph.D. Sussex (Brighton, England); J.C. Hall, Ph.D. Illinois.

**Research Associate Professor:**
R. Tindall, Ph.D. Pennsylvania State.

**Prerequisites to upper division courses:**
Biology 110-120 or Zoology 117-118 are prerequisites for all upper division courses (with the exception of 480). Additional prerequisites are included with course descriptions.

**Major:**
Prerequisites to the major are Biology 110-120 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 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.

Hons in Zoology: An Honors major in Zoology must fulfill all of the requirements for the B.S. degree in Zoology, and take 302 and 401 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.
The College of Nursing

Joan E. Uhl, Dean
Sandra L. McGuire, Director of Undergraduate Programs
Beth Barret, Director of Student Services

Professors:
J.E. Uhl (Dean), Ph.D. Utah; M.A. Alligood, Ph.D. New York; D.H. Goodfellow, Ph.D.; Peabody; J.N. Mozingo, Ph.D. Walden; S.P. Thomas, Ph.D. Tennessee.

Associate Professors:

Assistant Professors:
J. Branson, M.S.N. Vanderbilt; A.J. Brown, M.S. Alabama-Birmingham; K.P. Conlon, M.S. SUNY Buffalo; G.W. Evans, M.S.N. Tennessee; M. Evans, MSN Tennessee; S.M. Helton, M.S.N. Texas Woman’s; S.M. Hodson-Fitzgerald, M.S. Tennessee; M. Kollar, Ph.D. Tennessee; M.A. Pierce, M.S.N. Tennessee; L. Pullen, Ph.D. Mississippi State.

Instructors:
L.S. Blackburn, M.S.N. Vanderbilt; B. Fields, M.S.M. Tennessee; N. Gaylord, M.S.N. Colorado; P.J. Grace, M.S.N West Virginia; P.A. Miller, M.S.N. Tennessee-Memphis; M.A. Nalle, M.S.N. Texas-San Antonio; P. Trimble, M.S.N. Tennessee.

The program is accredited by the National League for Nursing and has full approval status from the Tennessee Board of Nursing. The baccalaureate nursing program has as its central focus and frame of reference human beings, society, and health. It is based on the belief that nursing has equal concern for the prevention of illness, the promotion of health, and the care of the sick. General education courses, nursing courses, and electives are organized in a manner designed to promote and develop creative thinking and other cognitive, affective, and psychomotor processes that are essential for effective nursing practice and for full and meaningful involvement as a contributing member of society.

A broad base of general education, a thorough study of human behavior, emphasis on health maintenance, health promotion, and health restoration and a strong family and community orientation are essential components of baccalaureate education in nursing. By maintaining a high quality, relevant program that is responsive to the increasing complexity of health care delivery, the ever changing health needs of society, and the changing and expanding role of the nurse, graduates of the program are able to: (1) assume beginning leadership positions in nursing in a variety of settings; (2) work collaboratively with other health professionals; (3) function as socially conscious and contributing citizens; and (4) pursue advanced education on either a formal or an informal basis.

GENERAL REQUIREMENTS

In order to obtain a Bachelor of Science in Nursing degree students are required to successfully complete eight semesters of full-time study or the equivalent in part-time study. One-hundred twenty-two semester hours are required for graduation. The program also accommodates registered nurses who hold associate degrees in nursing or who are graduates of diploma nursing programs. All upper division courses, with the exception of N301 and N314, are restricted to students who have progressed into the major (see PROGRESSION POLICIES AND PROCEDURES).

PROGRESSION POLICIES AND PROCEDURES

Current standards are available from the Director of Student Services, College of Nursing, room 203.

(1) During the spring semester of the year the student expects to meet all lower division course requirements, she/he must complete a Petition for Progression form and submit it to the college’s Student Services Office no later than the second Friday of UT Knoxville’s spring semester. If the number of petitions exceeds the number of students that can be accommodated students will be selected on the basis of:
(a) cumulative GPA for courses completed;
(b) a minimum 2.75 cumulative GPA in required courses;
(c) number of course withdrawals and repetitions;
(d) grade improvement over time;
(e) probability of completing all lower division requirements prior to the following fall; and
(f) preference will be given to those students who have completed all lower division courses.

(2) If a student is selected for progression to upper division nursing courses but fails to successfully complete all lower division requirements (except for humanities electives and multicultural or integrative studies electives) prior to the fall semester, the student will not be permitted to enroll in nursing major courses and must submit another petition for the progression the following year.

(3) Registered nurses must also complete all lower division courses but, at the discretion of the faculty RN advisor, they may enroll in Nursing 305 once they are within 12 semester hours of meeting these requirements. Nursing 305 must be completed before RN’s may challenge or take 325. Nursing 325 is pre- or co-requisite to 315. All junior level courses are pre-requisite to the senior year.

GRADING AND CONTINUATION POLICIES

(1) The minimum acceptable grade for all courses in the curriculum is a "C". The satisfactory/no credit grading option is not available for courses required in the nursing curriculum.

(2) No nursing course may be repeated more than once. If a "D" or "F" grade is earned
on the second attempt the student will be required to withdraw from the program.

(3) Any student who receives a grade of “D” or “F” for more than one nursing course will be required to withdraw from the program even if the previous course for which “D” or “F” was awarded has been repeated with a grade of “C” or higher.

(4) If a student receives an Incomplete “I” in a nursing course, the “I” must be removed prior to enrolling in any course for which the uncompleted course is a prerequisite.

(5) If a student’s clinical performance for any nursing course is found to be unsatisfactory, the grade for that course will be an “F” regardless of any other grades earned in other components of the course. If the unsatisfactory clinical performance is characterized by unethical, unprofessional, or unsafe behavior, behavior that actually or potentially places the client in jeopardy, the student will be required to withdraw from the program.

(6) Requirements for competence or certification in cardio-pulmonary resuscitation are included in the Undergraduate Student Handbook.

HEALTH AND INSURANCE REQUIREMENTS

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

COURSE LOAD

The maximum credit hours per semester for which a nursing student may register without special permission is 18.

THE BACHELOR OF SCIENCE IN NURSING CURRICULUM

<table>
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<tr>
<th>Hours</th>
<th>Credit</th>
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<tbody>
<tr>
<td>Freshmen</td>
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<tr>
<td>English 101, 102</td>
<td>6</td>
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<td>Mathematics 110 or higher</td>
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<td>Mathematics 115 or any Statistics course</td>
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<td>Chemistry 100-110 or 120-130</td>
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<td>Humanities</td>
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<td>Zoology 240</td>
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<tr>
<td>Zoology 230</td>
<td>5</td>
</tr>
<tr>
<td>Microbiology 210</td>
<td>3</td>
</tr>
<tr>
<td>Nutrition 300</td>
<td>3</td>
</tr>
<tr>
<td>Child and Family Studies 210</td>
<td>3</td>
</tr>
<tr>
<td>Sociology or Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
</tr>
<tr>
<td>Multicultural or Integrative Studies</td>
<td>3</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Philosophy 345</td>
<td>3</td>
</tr>
<tr>
<td>Nursing 301, 302, 304, 306, 313, 316, 324</td>
<td>29</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Multicultural or Integrative Studies</td>
<td>3</td>
</tr>
<tr>
<td>Nursing 401, 403, 405, 409, 411</td>
<td>26</td>
</tr>
</tbody>
</table>

Total: 122 hours

RN TRACK FOR BACHELOR OF SCIENCE IN NURSING

Registered nurses must successfully complete all of the non-nursing courses listed above as well as the nursing courses listed below. Courses with an asterisk may be challenged.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>*301 Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>*304 Nursing Assessment and Wellness Promotion</td>
<td>4</td>
</tr>
<tr>
<td>305 Transitions to Professional Nursing</td>
<td>3</td>
</tr>
<tr>
<td>*306 Health Deviation Concepts I</td>
<td>4</td>
</tr>
<tr>
<td>*316 Health Deviation Concepts II</td>
<td>4</td>
</tr>
<tr>
<td>*325 Nursing of Children and Adults Theory</td>
<td>2</td>
</tr>
<tr>
<td>313 Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>315 Clinical Nursing Practicum</td>
<td>1</td>
</tr>
<tr>
<td>*402 Family Health Nursing Theory</td>
<td>3</td>
</tr>
<tr>
<td>403 Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>405 Professional Nursing Seminar</td>
<td>2</td>
</tr>
<tr>
<td>409 Nursing Management and Strategies</td>
<td>6</td>
</tr>
<tr>
<td>*412 Psychosocial Long Term Nursing Theory</td>
<td>3</td>
</tr>
<tr>
<td>Validation Examinations or Nursing Electives</td>
<td>11</td>
</tr>
</tbody>
</table>

Total: 55 hours

Registered nurses may earn up to eleven semester hours of upper-division nursing credits by means of validation examinations that are designed to measure prior learning. More information about the examinations may be obtained from the Student Services Office or from the faculty advisor for registered nurses.

The following courses are open to all university students: 202, 301 and 314.

GRADUATE

General requirements for the Master of Science in Nursing degree are given in the Graduate Catalog.
College of Social Work

Eunice O. Shatz, Dean and Professor of Social Work, Ph.D. Brandeis University, The Florence Heller School for Advanced Studies in Social Welfare

Professors:
Catherine Faver, Ph.D. University of Michigan; Gideon W. Fryer (Emeritus), Ed.D. Columbia University; Charles A. Glisson, Ph.D. Washington University; Ben P. Granger (Dean Emeritus), Ph.D. Brandeis University; Roger M. Noe, DSW Tulane University; James D. Orten, DSW University of Alabama.

Associate Professors:
Reginald Avery, Ph.D. Brandeis University; Thomas Cruthirds, DSW Tulane University; Judith I. Fiene, Ph.D. University of Tennessee; Jeanette Jennings, Ph.D. University of Michigan; Ellie Moses, Ph.D. University of California (Berkeley); William Nugent, Ph.D. Florida State University; John Orme, Ph.D. Washington State; Frank J. Spicuzza, MSSW University of Tennessee.

Assistant Professors:
Paul M. Campbell, DSW University of Alabama; David A. Patterson, Ph.D. University of Utah.

Field Coordinator:
Phyllis Betz, MSSW, University of Tennessee.

Social work is a helping profession which focuses on providing skilled intervention in the prevention and amelioration of individual and societal problems. It is a challenging and rewarding career involving the application of knowledge, skills, and professional values to assist individuals, families, groups, and communities in reaching their potentials. The primary objective of the undergraduate social work program is to prepare students for beginning social work practice. It is the purpose of the College to provide an education which fosters growth in both individual and career development.

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

GRADING POLICY

The satisfactory/no credit option is not permitted in the major. The minimum acceptable grade for all social work courses is a C. Courses, other than field, in which a D or F is achieved may be repeated once. Field courses must be completed with a C or better, and may not be repeated.

A student receiving an incomplete (I) in any social work course must remove the incomplete before enrollment in subsequent field practice.

COURSE LOAD

The maximum credit hours per semester allowed for any student is 18. Special permission must be obtained for any overload.

PROGRESSION REQUIREMENTS

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

INITIAL PROGRESSION*

1. Successful completion of Social Work

*Initial and full progression is also determined by the number of available field practice slots in social service agencies and classroom space. If the number of students who fulfill the above criteria exceeds the number of students that can be accommodated, students will be selected on the basis of cumulative GPA for courses completed. In a case of students having similar grade point averages at the cut off point, the grades in the sophomore level social work classes will be used.
200 and 250 with a grade of C or better.
2. Cumulative grade point average of 2.0 or above.
3. Successful completion of a minimum of 60 semester hours. Initial progression must be completed prior to enrollment in any 300-level social work courses.
4. Favorable review of the student's application for entry into the junior level social work courses by the faculty admissions committee. The application requires an essay discussing the student's interest in and preliminary understanding of the profession.

FULL PROGRESSION*
1. Successful completion of junior level social work courses with a grade of C or better.
2. Cumulative grade point average of 2.0 or above.
3. Successful completion of a minimum of 90 semester hours. Full progression must be completed prior to enrollment in 400-level social work courses.
4. Favorable approval by the BSW Faculty prior to entry into senior level courses. This process will include a review of the student's performance in junior field practice.
Full progression is based on the recognition that social work has an intensive field component in which students demonstrate aptitude and ability to work with other people. While review is ongoing, full progression provides an additional opportunity to review the students' potential for entry-level practice.

*Initial and full progression is also determined by the number of available field practice slots in social service agencies and classroom space. If the number of students who fulfill the above criteria exceeds the number of students that can be accommodated, students will be selected on the basis of cumulative GPA for courses completed. In a case of students having similar grade point averages at the cut off point, the grades in the sophomore-level social work classes will be used.

CURRICULUM

<table>
<thead>
<tr>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>36</td>
</tr>
<tr>
<td>English 101, 102</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language (Intermediate Level)</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics 110</td>
<td>3</td>
</tr>
<tr>
<td>History 151-162 or 161-162</td>
<td>6</td>
</tr>
<tr>
<td>Psychology or Biology Sequence with lab</td>
<td>8</td>
</tr>
<tr>
<td>Women's Studies 200</td>
<td>3</td>
</tr>
<tr>
<td>Sophomore</td>
<td>36</td>
</tr>
<tr>
<td>Zoology 210, 220</td>
<td>6</td>
</tr>
<tr>
<td>Anthropology 130</td>
<td>3</td>
</tr>
<tr>
<td>Humanities (Literature Package)</td>
<td>6</td>
</tr>
<tr>
<td>Humanities (Philosophy)</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 220</td>
<td>3</td>
</tr>
<tr>
<td>Social Work 200, 250</td>
<td>6</td>
</tr>
<tr>
<td>Economics 201</td>
<td>4</td>
</tr>
<tr>
<td>Junior</td>
<td>39</td>
</tr>
<tr>
<td>Social Work 312, 313, 314</td>
<td>9</td>
</tr>
<tr>
<td>United States Studies</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Studies</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 101</td>
<td>3</td>
</tr>
<tr>
<td>Math 115 or Psychology 385</td>
<td>3</td>
</tr>
<tr>
<td>Social Work 310, 380</td>
<td>6</td>
</tr>
<tr>
<td>Child and Family Studies 220</td>
<td>3</td>
</tr>
<tr>
<td>Senior</td>
<td>39</td>
</tr>
<tr>
<td>Social Work 412, 416</td>
<td>6</td>
</tr>
<tr>
<td>Social Work 460</td>
<td>4</td>
</tr>
<tr>
<td>Social Work 460</td>
<td>2</td>
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<tr>
<td>Anthropology 312</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>8</td>
</tr>
<tr>
<td>Total: 124 hours</td>
<td></td>
</tr>
</tbody>
</table>

Courses 423 - Communication Processes for the Hearing Impaired (3), and 525 - Manual Communication (5) will fulfill the foreign language requirement.

*The following sequences may be selected:
- The following literature packages may be selected:
  - One course selected from: Classics 221; Classics 222; Philosophy 110; Philosophy 111; Philosophy 120; Philosophy 121; Philosophy 240; Philosophy 344; Philosophy 380; Philosophy 382.
• One course selected from: Anthropology 310; Anthropology 315; Geography 363; History 380; History 440; Philosophy 390; Political Science 311; Political Science 374; Religious Studies 352; Sociology 343; Sociology 340; Speech 466.

*One course selected from: Anthropology 314; Classics 361; Classics 382; English 302; Geography 372; Geography 373; Geography 374; Geography 375; German 363; History 320; History 374; Philosophy 326; Political Science 350; Political Science 361; Religious Studies 332; French 432; Spanish 431; Spanish 471; Sociology 448.
Jose-Marie Griffiths, Director
Glenn E. Estes, Assistant Director

**Professors:**
- Glenn E. Estes, M.L.S., Kent State; Jose-Marie Griffiths (Director), Ph.D., London (UK); Gary R Purcell, Ph.D., Case Western; Carol Tenopir, Ph.D., Illinois; P.C. Wilson (Emeritus), Ph.D., Michigan.

**Associate Professors:**
- J. Michael Pemberton, Ph.D., Tennessee; Richard Pollard, Ph.D., Brunel (UK); William C. Robinson, Ph.D., Illinois; George M. Sinkankas, Ph.D., Pittsburgh.

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

**Undergraduate Program**

The Graduate School of Library and Information Science offers undergraduate courses that reflect the overall mission of the school: to educate people to live, work and flourish in an information society through excellence in teaching, research, and public service in library and information science.

The undergraduate courses support a heightened awareness of today's information-rich environment. Increasingly, college graduates must understand the nature of information: sources, value, creation, organizing principles, transfer, and uses in society. Those who thrive in the information society must know how to identify and respond to their information needs. First as students, and then as professionals and citizens, graduates need to apply techniques and technologies in the search, retrieval, and evaluation of relevant information to meet their information needs. They must prepare to use a rapidly increasing array of information systems and technologies to seek and to manage information resources. These abilities constitute information survival skills in the twenty-first century. Graduates need to know when they can help themselves and when they should seek assistance from various information professionals.

Certain courses are open to students in the College of Liberal Arts who are interested in preparation for graduate study in the profession of library and information science. For a list of recommended courses, contact the Graduate School of Library and Information Science.

The undergraduate courses are planned for the following groups of people:
1. Students who wish to develop a better understanding of the role of information in society.
2. Students whose academic major stresses understanding and use of information in society.
3. Students whose academic major and/or minor requires significant use of research libraries.
4. Students who are prospective candidates for the graduate program in library and information science.

For information about undergraduate courses, contact the Graduate School of Library and Information Science.

**Graduate Program**

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

**Computer Facilities**

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

The advanced laboratory is designed to serve the research and curriculum needs of the school. Equipment includes high-end Macintosh Quadra, Sun SPARStation, and IBM UltraSparc computers. The advanced laboratory activities provide a gopher server, high-level database and information retrieval software, and multimedia authoring and display tools.
University Honors

Thomas W. Broadhead, Director
Dorothy Hendricks, Associate Director

University Honors programs have been carefully designed to give academically outstanding students a special undergraduate honors experience comprising special courses, seminars, mentoring programs, senior research projects, and other features. Students are invited to become University Honors students prior to enrolling at the University. Already-registered students are ineligible. Prospective University Honors students are selected on the bases of previous academic performance, demonstration of an eagerness to be active learners and leaders, and extracurricular activities. The University Honors Office administers three separate programs: the Tennessee Scholars Program, the Whittle Scholars Program, and the Chancellor’s Scholars Program. The Tennessee Scholars and Chancellor’s Scholars programs are administered by the University Honors Committee which includes faculty representatives from each of the ten baccalaureate colleges and schools and students selected by the Tennessee Scholars and Chancellor’s Scholars. The Whittle Scholars Program is administered by the Whittle Scholars Committee which includes faculty appointed by the Chancellor, representatives of the University Administration, alumni, and representatives of Whittle Communications.

TENNESSEE SCHOLARS PROGRAM

Each year, twenty-five outstanding high school students will be selected by the University Honors Committee for a four-year program of honors work. These students may have any major in any college offering the Bachelor’s degree. In addition to required work in their respective colleges, Tennessee Scholars are required to complete a minimum of four lower division honors courses; complete a one credit hour Tennessee Scholars seminar each term in residence; have an extensive conference with a member of the University Honors staff each term in residence; and complete a senior honors research project of merit and originality. In order to graduate in the program, students must enroll in and successfully complete at least 3 credit hours of University Honors 493 while doing their senior projects. Failure to meet the above requirements can result in removal from the program and loss of scholarship assistance.

Whittle Scholars may have to supplement the scholarship during their year abroad.

CHANCELLOR’S SCHOLARS PROGRAM

Each year the University awards Roddy, Bonham, Neyland, Holt, and Reeder-Siler scholarships to outstanding high school students. Roddy, Bonham, Neyland, and Reeder-Siler Scholars are selected by a committee of alumni. Criteria for selection include academic performance and professional promise.

Retention in Tennessee Scholars Program, Chancellor’s Scholars Program, and Whittle Scholars Program

Tennessee Scholars are selected on the bases of past academic performance and potential for academic excellence. As Tennessee Scholars, they are expected to adhere to the written policies and requirements of the Tennessee Scholars Program and are encouraged to enroll in courses that will stimulate and challenge them as well as broaden their horizons. As a result, the University Honors Committee will not be concerned if grades in occasional courses fall below superior range. However, all Tennessee Scholars are expected to maintain a cumulative grade point average of 3.25. Whittle Scholars are selected on the bases of leadership experience and skills, academic
performance and promise, and extracurricular activities. As Whittle Scholars, they are expected to adhere to the written policies and requirements of the Whittle Scholars Program and are encouraged to enroll in courses that will stimulate and challenge them as well as broaden their horizons. All Whittle Scholars are reviewed annually by the Whittle Scholars Committee as to their academic performance and progress, the planning and execution of their international experiences and their senior projects. Whittle Scholars are expected to maintain a cumulative grade point average of 3.25.

A student in the Tennessee Scholars Program or Whittle Scholars Program whose cumulative GPA falls below 3.25 will be allowed to continue in the Program and receive its benefits so long as he or she earns a 3.25 GPA or better every semester, thus eventually raising the cumulative GPA to the required 3.25. If, while the cumulative GPA is less than 3.25, a student fails to earn a 3.25 or better in any semester, he or she will be removed from the program and lose all its benefits, unless the student can demonstrate extenuating circumstances to the University Honors Committee or the Whittle Scholars Committee.

Senior Project Deadlines in Tennessee Scholars Program, Chancellor's Scholars Program, and Whittle Scholars Program

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

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

2. No later than the end of the third year in residence, a student, together with the faculty mentor, will choose two other faculty members who, together with the faculty mentor, will serve as the student's research project committee. The purpose of the committee is to aid students in formulating, designing and executing their projects and to evaluate the projects when completed. Similarly, by the end of the third year in residence, a student must submit a written abstract or proposal for the senior research project to his/her faculty committee for suggestions and approval.

3. No later than the end of the first semester of a student's senior year, a first draft of the senior research project must be submitted to the faculty mentor, and the faculty mentor must report that fact to the University Honors Director.

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

Failure to meet these guidelines will result in the delay of a student's graduation.

UNIVERSITY HONORS COURSES

Seminars and colloquia focused on various topics, issues, and problems, and limited in size to 25 students. These are taught by faculty from all ten undergraduate colleges and schools, and may be repeated. University Honors courses are open to all undergraduate students on the basis of high school GPA, ACT/SAT scores, UT Knoxville GPA of 3.25 or better, or by strong professorial recommendation.

April 10 for students graduating in the Spring semester, and November 15 for students graduating in the Fall semester. Students graduating in August (at the end of summer school) are urged to complete their projects by the April 10 deadline, although, in special cases and with the written consent of the faculty mentor, exceptions to this rule may be made.

There may be types of projects that do not lend themselves to a formal (public) defense. Hence the decision whether or not to have a public defense should be decided by the research committee and the Director of the University Honors Program.
University Libraries

Paula T. Kaufman, Dean
Aubrey H. Mitchell, Associate Dean for Access Services
Diane E. Perushek, Associate Dean for Collection Services

Professors:
Bayne, Pauline S., M.S.L.S., North Carolina; Crawford, Mary Frances, M.S., M.S.L.S.
Kentucky; Felder-Hoehne, Felicia H., M.S.L.S., Atlanta; Kaufman, Paula T., M.B.A., M.S.
Columbia; LeClercq, Anne W., J.D., M.L.S., Emory; Phillips, Linda L., M.L.S., Rutgers;
Rader, Joe C., M.S.L.S., Tennessee.

Associate Professors:
Baker, D. Gayle, M.S., M.L.S., Alabama; Bridges, Anne E., M.A., M.S., Rhode Island;
Britten, William A., M.S.L.S., Clarion; Courtois, Martin, M.A.L.S., Wisconsin; Crowther, Karnem
N.T., M.A., M.Ln., Emory; Dixon, Lana, M.S.L.S., Tennessee; Goetsch, Lori, M.A.
M.S.L.S., Rosary; Grady, Agnes M., M.A., M.Ln., Washington; Kim, Sook-Hyun, M.A.L.S.,
Indiana; Leach, Sandra S., M.A., M.Ln., Emory; Lloyd, James B., M.A., M.L.S., Ph.D.
Mississippi; Miller, Tamara J., M.S.L.S., Kentucky; Mitchell, Aubrey H., M.S.L.S.,
Tennessee; Perushek, Diane E., M.A., M.A.L.S., Michigan; Sammataro, Linda, M.L.S.,
Southern Connecticut State; Smith, Rita H., M.S.L.S., Illinois; Thompson-Wise, Deborah A.,
M.Ln., South Carolina; Webster, Judith D., M.L.S., Tennessee; Young, Lorna, M.L.S.,
Toronto.

Assistant Professors:
Carver, Carolyn S., M.L.S., Vanderbilt; Cobb, Flora, M.L.I.S., Texas; Figg, Milton, M.S., M.L.S.
Southern Mississippi; Garrett, Marie A., M.A., M.S.L.S., Vanderbilt; Fogglin, Carol M., M.Ln.,
Emory; Keally, Jillian M., M.S.L.S., Tennessee; Lahmon, JoAnn, M.S.L.S., Tennessee; Mack,
Thura, M.S.L.S., Tennessee; Minton, James O., M.S., M.S.L.S., Tennessee; Ponnappa,
Biddanda P., M.S.L.S., Tennessee; Prescod, Jane, M.S.L.S., Michigan; Kentuckya;
Row, Jane S., M.L.S., Tennessee; Smith, Earl C., M.S.L.S., Tennessee; Thomas, Steve,

The University of Tennessee, Knoxville Libraries' own approximately 2 million volumes,
more than 3.5 million manuscripts, 2 million microforms, 30,000 audio and video recordings,
plus United States and United Nations documents. The UT Knoxville Libraries currently
subscribe to more than 14,000 periodicals and other serial titles. The Libraries' membership in
the Association of Research Libraries reflects the University's emphasis on graduate instruc-
tion and research and the support of large, comprehensive collections of library materials
on a permanent basis.

The UT Knoxville Libraries consists of the main library (the John C. Hodges Library), five
branches on the Knoxville campus (the Agriculture-Veterinary Medicine Library, the Carto-
graphic Information Center, the Music Library, Special Collections, and the University Archives),

The John C. Hodges Main Library (1015 Volunteer Blvd.) is a 350,000 square-foot facility
housing collections in all subject areas. The Hodges Library has comfortable study space for
more than 2,000 people, 308 graduate student carrels, and 192 faculty studies.

The Hodges Library's research holdings are augmented by Reference Services and by Inter-
library Services. Reference Services provides research assistance and access to commercially
available databases. Within the library, users may also search a number of CD-ROM data-
bases at no charge. Interlibrary Services borrows monographs and obtains copies of other
materials from libraries around the world. Library holdings are accessible via a sophis-
ticated on-line catalog which can be searched in the Hodges Library, the branch libraries, and
from home and office computers. The Online Library Information System (OLIS) also provides
access to a wide range of information resources available over the Internet.

The services and facilities of the University Libraries are available to persons with disabili-
ties. Adaptive equipment such as a Kurzwelt

*Data excludes Law Library faculty and statistics.
University Studies

Alvin G. Burstein, Chair

The University Studies Program has three general objectives: (1) to foster interdisciplinary teaching and scholarship, especially across college boundaries; (2) to promote active, integrative, and personal learning; and (3) to nurture the personal and intellectual development of faculty and students.

In pursuit of these objectives, University Studies sponsors several main types of activities: FACULTY COLLOQUIES, which are on-going, structured, interdisciplinary conversations on a topic or nexus of topics; INTERDISCIPLINARY COURSES, often team-taught, many stemming from the colloquy discussions, and CENTRIPITALS, a series of eight faculty luncheons held over the academic year designed to encourage substantive conversation among faculty about their scholarship and creative work.

Faculty Colloquies explore important contemporary issues which are sufficiently fundamental to involve the attention of faculty and students from all colleges. Current colloquies are: Technology, Society and the Common Good; Aging and Society; Land and People (Tennessee Appalachian Forum); Interdisciplinary Rhetoric Group; Psychoanalysis and the Humanities; Critical Theory Group; Forum on International Development; and Appalachian Studies.

For further information, contact: Dr. Alvin G. Burstein, Chair 312C Austin Peay PHONE: 974-3348.
Reserve Officers Training

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

ARMY ROTC

LTC David A. Jones, Professor of Military Science and Tactics; M.E. North Georgia College

The military program at The University of Tennessee predates that of any other state university in the country, having been introduced in 1844. In that year, Professor Albert Miller Lea, a West Point graduate, organized an infantry company. With the outbreak of the Mexican War, the entire company, as well as thousands of other Tennesseans, volunteered for service in the war. Thus, Tennessee became known as the "Volunteer State". When The University of Tennessee reopened after the War Between the States, a system of military discipline was adapted. A Code of Military Regulations was drawn up and a copy was provided each student when he matriculated. The whole institution was put under regular West Point discipline. The student body was organized into a battalion of cadets, which consisted of four companies fully officered, armed and equipped under the command of the commandant and his staff of cadet officers. The University of Tennessee remained as a Military Garrison for a period of six years, until 1877. Military Science continued to be taught, since the University of Tennessee was a Land Grant Institution and instruction in Military Science was required by the 1862 Act of Congress. The National Defense Act of 1916 changed the old military organization into a ROTC unit. For the first time, the Federal Government began to pay a part of the uniform cost for basic course students; uniforms and other equipment were provided by the Government for Juniors and Seniors, and a monthly subsistence allowance was given to advanced course students.

From 1928-1930, Major (later Brigadier General) Robert R. Neyland was the Professor of Military Science and football coach at The University of Tennessee. Today, Neyland Stadium stands in tribute to his great accomplishments.

The purpose of Army ROTC is to provide professional education and training for commissioned officers in the Regular Army or the United States Army Reserve components.

Objectives of the program are to provide students with an understanding of the fundamental concepts and principles of military art and science; to develop a basic understanding of associated professional knowledge, a strong sense of personal integrity, honor, and individual responsibility, and an appreciation of the requirements for national security; and to establish a sound basis for the students' future professional development.

ROTC draws young men and women for training from all geographical, economic, and social strata of our society as well as from the many educational disciplines required for the modern Army. The program ensures that men and women educated in a liberal and broad spectrum of American institutions of higher learning are commissioned annually into the officer corps.

Satisfactory/No Credit Courses

Since Military Science is not a major course of study that leads to a degree in a specific academic discipline, the number of satisfactory/no credit courses is decided by the college of the student's academic major. All ROTC courses are offered on a letter grade basis only.

COURSE LOAD

No more than one Military Science course may be taken during any given semester, unless an exception to policy is approved by the Professor of Military Science and Tactics on a case-by-case basis. Students enrolled in the advanced program (upper division Military Science 300 and 400 level courses) and ROTC scholarship cadets are required to be full-time students, taking at least 12 hours each semester.

COURSE SUBSTITUTION

On the basis of previous honorable active military service in any branch of the Armed Services, or participation in a Junior ROTC Program at a Secondary School, a student may request exemption from portions of the Basic Course (Military Science 100 and 200 level courses). Placement credit may also be authorized for completion of basic training and advanced individual training. Exemption allowed will be determined by the Professor of Military Science and Tactics. Military Science courses taken at other colleges or universities are transferable as approved by the Professor of Military Science and Tactics.

REQUIREMENTS FOR ENROLLMENT AND CONTINUANCE

The general requirements for enrollment and continuance in the Army ROTC program are:

1. Basic Military Studies
   a. Be a citizen of the United States.
   b. Be physically qualified.
   c. Freshman and Sophomore standing.
   d. Be physically qualified.
   e. Freshman and Sophomore standing.

2. Advanced Military Studies Cadets applying for enrollment in the Advanced ROTC program who seek a Commission must:
   a. Have successfully completed Military Science 110, 120, 210, 220 or have accomplished one of the following: Prior Military Service, ROTC Basic Military Studies - Practicum (MS 200), 3-Year High School ROTC Basic Course.
   b. Have a minimum of 42 semester hours.
   c. Have completed a minimum of 55 semester hours.
   d. Be under 30 years old at time of commissioning (waiverable).
   e. Be enrolled as a full-time student, either at The University of Tennessee or at a nearby institution in a cooperative program.
   f. Meet military screening and physical requirements.
g. Maintain a 2.0 G.P.A.
h. Maintain B average in Military Science Courses as a scholarship student.

NOTE: Regularly enrolled students who meet the academic prerequisites may take individual courses as electives with the permission of the department head and academic advisor.

REQUIREMENTS FOR ALL MILITARY SCIENCE COMMISSIONEES

The following Military Sciences (MS) Advanced Course Curriculum must be successfully completed:

Military Science 310 (4) - Advanced Military Studies I
Military Science 320 (4) - Advanced Military Studies II
Military Science 400 (4) - Advanced Camp-Practicum
Military Science 410 (4) - Command and Staff Functions
Military Science 420 (4) - Military Ethics and Law

In addition to a baccalaureate degree, there are required and recommended courses in designated fields of study that students must complete prior to commissioning. Students meet these prerequisites by successful completion of required and elective courses taken from the university curriculum in the required areas of concentration.

Courses in the following designated fields of study are required of students seeking a commission in the United States Army.

a. One course in written communications.
b. One course in human behavior.
c. One course in military history.
d. One course in a foreign language (scholarship students only).
e. One course in Math Reasoning.
f. One course in Computer Literacy.

Courses in management and national security studies are strongly recommended but are not required.

SPECIAL PROGRAMS

Pay and Entitlements All students enrolled in the Army ROTC program are furnished textbooks by the Army through the Military Property Office. Students enrolled in the ROTC Advanced Course receive uniforms and equipment plus an allowance of $100 per month during the academic year. While attending the ROTC summer studies each cadet receives approximately $650 for Advanced Summer Studies, $600 for Basic Summer Studies, plus meals and lodging are provided.

Army ROTC Scholarship Program The Army ROTC scholarship program offers financial assistance to outstanding young men and women in the Army ROTC program who are interested in the Army as a career. Each scholarship provides for free tuition, textbooks subsidy, and laboratory fees in addition to a subsistence allowance of $100 per month for the period that the scholarship is in effect. Scholarships may be awarded for either two, three or four years. High school seniors should contact the Professor of Military Science for further information. Certain other privately financed scholarships and grants are available to ROTC cadets.

Simultaneous Membership Program The "SMP" option combines the Army ROTC living allowance ($100/month) with membership in the Army Reserve or Army National Guard and allows the student to receive pay from both programs. ROTC cadets serve as "officer-trainees" in direct leadership/management positions. SMP cadet participation with the reserve forces is one weekend per month and two weeks each summer.

Branch Selection The curriculum of the Army ROTC Program is designed to qualify the cadet for appointment as an officer. Selection for assignment to the various branches of the Army is based upon: the personal interests of the cadet; the major course of study; academic accomplishments; leadership potential; and the needs of the Service. Under this system a cadet may be commissioned in any branch for which he or she is qualified and in which a need for officers exists. After graduation and commissioning, the officer will attend a service school for further specialized military training which will qualify him or her for the branch to which he or she is assigned.

Extra Curricular Activities Numerous military-related activities are available to cadets throughout the school year. These include the Tennessee Rangers, Scabbard and Blade, UT Color Guard, and Drill Team. These organizations provide both student to student contact and a valuable opportunity to acquire military skills. Additionally, each term, a number of Field Training Exercises are conducted allowing such military skills as Small Unit Tactics.

Physical Fitness Training The Cadet Battalion conducts physical fitness training Monday-Wednesday-Friday from 6:15 a.m. to 7:15 a.m. The program is optional for noncontracted cadets. The exercises focus on flexibility, muscular strength, and cardiorespiratory endurance. Any UT student may take the course by registering for Army Conditioning Program 130.

MILITARY SCIENCE CURRICULUM

<table>
<thead>
<tr>
<th>Normal Course</th>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Military Science 110, 120</td>
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<tr>
<td>sophomore Military Science 210, 220</td>
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<tr>
<td>Junior Military Science 310, 320</td>
<td>8</td>
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<tr>
<td>Summer Military Science 400</td>
<td>4</td>
</tr>
<tr>
<td>Senior Military Science 410, 420</td>
<td>8</td>
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Total: 32 hours

Advanced Placement

<table>
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<tr>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Military Science 310, 320</td>
</tr>
<tr>
<td>Summer Military Science 400</td>
</tr>
<tr>
<td>Senior Military Science 410, 420</td>
</tr>
</tbody>
</table>

Total: 20 hours

Variations to these sequences of study may be approved by the Professor of Military Science on a case-by-case basis. Total Military Science hours offered is 34. Maximum total Military Science hours applicable for commission is 30. Minimum total Military Science hours applicable for commission is 20. Lower division credit hours granted by the University for military service are dependent upon time spent in service and service schools attended.

PROGRESSION REQUIREMENTS

1. Minimum semester hours/GPA for entrance into Basic Military Studies - Practicum (Military Science 200): 30 semester hours/2.00 GPA.
2. Minimum overall GPA for entrance into the advance course (Military Science 310, 320, 400, 410, 420): 2.00.
3. Minimum GPA in Military Science Courses: 2.00.
4. Minimum overall GPA for commissioning: 2.00.
5. Semester counseling sessions with military advisor required for Advance Course and scholarship students only.
6. Officer Selection Battery test.

DEPARTMENT OF AIR FORCE

AIR FORCE ROTC PROGRAM

Professor of Air Force Aerospace Studies: Captain Joseph Sutter (Head), M.S., University of Southern California.

Assistant Professors:

Captain Thomas Thomson, M.A.S., Embry Riddle University; Captain Matt Woolen, M.A.S., Embry Riddle University.

PURPOSE

The Air Force Reserve Officers Training Corps (AFROTTC) is an educational program designed to provide the college student an opportunity to earn an Air Force commission as a Second Lieutenant while completing the University requirements for a bachelor's degree. The program provides education that will develop the skills and attitudes vital to the professional Air Force officer. Upon successful completion of the program and graduation from the University, students are commissioned as Second Lieutenants and enter active duty.

THE PROGRAMS

The Four-Year Program: Students entering the Four-Year Program may register for the program at the same time and in the same manner as they enroll in their other college courses and there is NO MILITARY OBLIGA-

TION. During their freshman and sophomore
years, students enroll in the General Military Course (GMC). They then may compete for entry into the Professional Officer Course (POC) which is normally taken during the last two years of college. Selection into the POC is highly competitive and is based on being medically qualified; physically fit; term and cumulative grade point averages; scores achieved on the Air Force Officer Qualifying Test (AFOQT); successful completion of a four-week field training course at an Air Force base; and the recommendation of the Professor of Aerospace Studies.

The Two-Year Program: The Two-Year Program consists of the Professional Officer Course (POC), the last two years of the Four-Year Program. It is designed to provide greater flexibility to meet the needs of students desiring Air Force opportunities. The basic requirement is that applicants have two academic years remaining at either the undergraduate or graduate levels, or a combination of both. After being nominated by the Professor of Aerospace Studies, applicants seeking enrollment in the Two-Year Program are evaluated using the same criteria used for the four-year program except the length of the field training course is six weeks. Additionally, every POC applicant must agree to take and successfully complete a course in mathematical reasoning or its equivalent before graduation and commissioning. Courses previously completed may be used to satisfy this requirement.

Since the processing procedure must be completed several months in advance of intended enrollment, interested students must apply early in the FALL SEMESTER of the academic year PRECEDING the fall term in which they intend to enter the program. Application should be made in person to the Department of Aerospace Studies.

AFROTC develops students under the “whole person” concept. Cadets must maintain academic standards while taking on the additional responsibilities of AFROTC. These responsibilities include being physically fit, of good moral character, acting responsibly and with integrity. Cadets normally organize about two hours per week of physical activity outside of class requirements.

WOMEN IN AFROTC
AFROTC at The University of Tennessee has been coeducational since 1970. Women complete the same courses as men and have the same opportunities. Upon successful completion of the AFROTC program and degree requirements, women are commissioned in the Air Force as Second Lieutenants. Pay and job opportunities are equal for women and men. Virtually all career fields in the Air Force are open to women, including pilot and navigator positions.

SCHOLARSHIP PROGRAM
Air Force ROTC Scholarships are available to qualified applicants in both the Four- and Two-Year Programs. Each scholarship provides full tuition, laboratory and incidental fees, and book fee. In addition, scholarship cadets receive a non-taxable $100 stipend each month during the school year while on scholarship status.

High School Students: Competitive four-year scholarships are available to high school male and female students who enroll in certain scientific and engineering career fields. Some scholarships are also available to male and female students who enroll in certain non-technical majors. Four-year scholarship applications are contained in the Air Force ROTC Four-Year College Scholarship Program Application Booklet. Booklets may be obtained directly from Air Force ROTC Public Affairs, Maxwell, AFB, AL 36112.

College students: Other scholarship opportunities exist for students already in college. Three- and two-year scholarships are available on a competitive basis and the student must have at least four, three, or two undergraduate or graduate years of study remaining in order to compete. Applications for these scholarships should be made directly to the Department of Aerospace Studies.

PAY AND ENTITLEMENTS
All cadets enrolled in AFROTC are furnished texts and uniforms. Professional Officer Course cadets receive a subsistence allowance of $100 per month during the academic year. In addition they are paid mileage to and from field training, plus pay commensurate with active duty rates while at field training.

ACTIVE DUTY COMMITMENTS
Commissioned graduates going into non-flying duties will be required to serve four years of active duty. Those graduates going into pilot assignments will be required to serve eight years active duty after completion of pilot training. Those graduates going into navigator assignments will be required to serve six years active duty after completion of navigator training.

This information is subject to change: for the most up-to-date information regarding AFROTC, contact AFROTC Detachment 800 (615/974-3041).
Advanced Studies

THE COLLEGE OF LAW
Richard S. Wirtz, Dean
Mary Jo Hoover, Associate Dean
R. Lawrence Dessem, Associate Dean

The College of Law has, since 1890, continuously sought to provide high quality legal education in a University community. The college offers a professional curriculum leading to the degree of Doctor of Jurisprudence. Two dual degree programs are available in conjunction with the College of Law: the J.D.-MBA program with the College of Business Administration and J.D.-M.P.A. program with the Department of Political Science. Information regarding admission, financial aid, academic policies, extracurricular activities, and student services is available in the "College of Law Bulletin." A copy may be obtained from the Admissions Office, The University of Tennessee, College of Law, 1505 W. Cumberland Avenue, Knoxville, Tennessee 37996-1800. Completed application should be received before February 1 of the year of requested admission.

THE GRADUATE SCHOOL
C.W. Minkel, Associate Vice Chancellor and Dean of The Graduate School
Linda R. Painter, Associate Dean of The Graduate School
Michael W. Singletary, Assistant Dean of The Graduate School
Diana Lopez, Director, Graduate Admissions and Records
S. Kay Reed, Assistant to the Dean
Ann L. Lacava, Thesis/Dissertation Coordinator
Rose Ann Trantham, Assistant Director
Graduate Admissions and Records
Irene Kaplan, Assistant Director, Graduate Admissions and Records
Jeannette Bouchard, Staff Assistant

The University of Tennessee is the official land-grant institution for the State of Tennessee with its main campus in Knoxville. UT Knoxville is the state's largest and most comprehensive institution, and is the only state-supported "Research University I" (Carnegie Classification) in Tennessee. A wide range of graduate programs leading to the Master's and doctoral degrees is available. The University offers Master's programs in 85 fields of specialization and doctoral work in 52. Approximately 6,800 graduate students are enrolled, both on and off campus. The Graduate School administration develops procedures to implement the policies formulated by the Graduate Council, and has primary responsibility for Graduate School admissions and records. Much of the day-to-day administration of graduate study is conducted by department heads or faculty advisors and committees responsible for particular programs. In addition to departmental units, numerous interdisciplinary programs, institutes and centers have been developed on campus and in locations throughout the state. The Graduate School brings together faculty and graduate students as a community of scholars with a common interest in creative work and advanced study. Graduate programs are available to students desiring full-time study toward the Master's and doctoral degrees or professional certification, those interested in continuing education for updating and broadening knowledge, and those pursuing postdoctoral research. Traditionally, universities have provided graduate programs primarily for full-time, degree-oriented students. Serving the needs of students engaged full-time in intensive study and pursuit of a degree continues to be a major emphasis of UT Knoxville's graduate effort. At the same time, the University employs a variety of modes, traditional and non-traditional, in offering quality programs designed to serve students.

Complete information concerning graduate study at The University of Tennessee, Knoxville is available in the Graduate Catalog published annually. For a copy, write or visit the Office of Graduate Admissions and Records, 218 Student Services Building, The University of Tennessee, Knoxville, Tennessee 37996-0220 or call (615) 974-3251.

GRADUATE SCHOOL OF BIOMEDICAL SCIENCES
Raymond A. Popp, Director

FULL-TIME FACULTY
Professor:
D.E. Olins, Ph.D. Rockefeller.
Research Professor:
Research Assistant Professors:

The Graduate School of Biomedical Sciences offers programs leading to the Master of Science and Doctor of Philosophy degrees. The School publishes supplementary information in addition to the regular Graduate Catalog. All inquiries concerning admission should be addressed to:
Director, The University of Tennessee-Oak Ridge Graduate School of Biomedical Sciences,
The programs leading to the M.S. and Ph.D. degrees in Life Sciences are interdepartmental and intercollegiate programs which augment the programs of individual departments.

The graduate program in Life Sciences supports studies and research in the following concentrations: physiology; biotechnology (M.S. only); cellular, molecular and developmental biology; ethnology; environmental toxicology; and plant physiology and genetics. Students interested in any of these areas should contact either the chair of Life Sciences or the Director of the area of interest. For complete information, refer to the Graduate Catalog.

COMPARATIVE AND EXPERIMENTAL MEDICINE JOINT GRADUATE PROGRAM

L.N.D. Potgieter, Director

Coordinating Committee:
J.E. Fuhr; J.E. Lawler; J.L. Lozio; L.N.D. Potgieter; D.O. Slauson.

The Comparative and Experimental Medicine degree program (M.S. and Ph.D.) is jointly administered by the College of Veterinary Medicine, the College of Medicine/Knoxville Unit, and the University of Tennessee, Knoxville Graduate School. The graduate program is intended to prepare students for teaching and/or research careers in the health sciences, emphasizing the comparative approach to the study of pathology, immunopathology, hematology, infectious diseases; aberrant metabolism, oncology, and genetic disorders. For complete information, refer to the Graduate Catalog.

ENERGY, ENVIRONMENT, AND RESOURCES CENTER

Jack N. Barkenbus, Acting Director

The Energy, Environment, and Resources Center, 329 South Stadium Hall, was created in 1973 to encourage interdisciplinary research directed at solutions to problems related to energy and the environment. The Center involves faculty and students in research and public service projects, manages research and development projects that involve several disciplines, and assists governmental and industry in specific problems related to energy, environmental, resource, and technology policy issues. The Center has a close working relationship with Oak Ridge National Laboratory and the Tennessee Valley Authority. Sponsors include federal and state agencies, industries, and foundations.

LIFE SCIENCES

Coordinating Council:
H.I. Adler (Chair); Physiology; G. Vaughan; Biotechnology; D.K. Dougall; Cellular, Molecular and Developmental Biology; J.M. Becker; Environmental Toxicology; W.R. Farkas; Ethology; R.S. Saudargas; Plant Pathology and Genetics; O.J. Schwarz.

The programs leading to the M.S. and Ph.D. degrees in Life Sciences are interdepartmental and intercollegiate programs which augment the programs of individual departments.

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SPACE INSTITUTE

T. Dwayne McCay, Vice President
K.C. Reddy, Dean for Academic Affairs

The Space Institute is a graduate education and research institution established in 1964 on a 365 acre lakeshore campus in Middle Tennessee. UT Space Institute has evolved into an internationally recognized institution for graduate study and research in engineering, physics, mathematics, and computer science. The accredited academic programs and educational policies of the Space Institute have therapeutic impact in appropriate departments of The University of Tennessee, Knoxville. The more than 45 faculty members of the Institute carry out these accredited academic programs through classroom teaching, informal seminars, active research, and directing the research of their students in an environment of creative work and advanced study.

Programs are available to students devoting full-time effort toward M.S. and Ph.D. degrees, those interested in continuing education for updating and broadening knowledge, and those who wish to pursue post-doctoral research.

Graduate degree programs are available with majors in Aerospace Engineering, Aviation Systems, Chemical Engineering, Computer Science, Electrical Engineering, Engineering Science, Industrial Engineering (engineering management concentration), Mathematics, Mechanical Engineering, and Physics. In addition to the fundamental studies characteristic of each discipline, research opportunities are available in many areas including aerodynamics, atmospheric science, fluid mechanics, advanced space propulsion, neural networks, energy conversion processes, thermal sciences, coal combustion, magneto hydrodynamics, plasma physics, space systems, propulsion, computational fluid dynamics, and other aspects of atmospheric and space flight.

The Institute has an established Center of Excellence in Laser Applications and offers graduate studies and research opportunities in laser diagnostics, laser materials interactions, picosecond processes, and coherent and non-linear optics.

The Institute was established in part to increase the research and engineering resources of Tennessee through education and practice in relevant scientific and technical areas and in part to interface University faculty and student research with the Air Force Arnold Engineering Development Center. The faculty, research activities, and facilities of the Institute and those available at Arnold are oriented toward the development of appropriate contractual arrangements provide students an unusual opportunity for significant research in these areas. Students who enroll at UT Space Institute are admitted to The Graduate School, The University of Tennessee, Knoxville. Graduate Research Assistantships are available for qualified students. Further information may be obtained from the Dean, The University of Tennessee Space Institute, Tullahoma, Tennessee 37388.

TRANSPORTATION CENTER

Stephen H. Richards, Director

The Transportation Center was created in 1970 to foster and facilitate interdisciplinary research and public service in the field of transportation at The University of Tennessee. It began operating full-time in 1972 and since then has contributed greatly to the overall research program of The University.

The Center, 357 South Stadium Hall, is a University-level organization administratively positioned within the College of Engineering and University of Tennessee Space Institute. The Center's staff is presently organized into four research divisions: Infrastructure and Environment; Safety and Traffic Operations; and Mobility Services and Policy.

The Center has three goals. The first is to conduct a program of research in transportation that is recognized for its excellence, comprehensiveness, innovation, productivity, and national leadership. The second is to develop and sustain the technical expertise for high quality transportation research by the faculty and students within the various departments and colleges of UT. The third goal is to serve the transportation research, services, and training needs of state and local government, business, and industry in Tennessee, the southeast region, and the nation.

WATER RESOURCES RESEARCH CENTER

Bruce A. Tschantz, Acting Director

The Water Resources Research Center, 422 South Stadium Hall, is a federally designated institute for the conduct of water research for the state. The purposes of the Center are: (1) to assist and support all the academic institutions of the state, public and private, in pursuing water resources research which addresses a wide range of problems of interest to the state, region, and nation; (2) to provide information, dissemination and technology transfer services to state and local government bodies, academic institutions, professional groups, environmental organizations, and others, including the general public, who have an interest in water resources matters; and (3) to promote education in fields relating to water resources and to encourage the entry of promising students into careers in these fields. The center maintains a technical library which includes numerous water resources-related databases on CD-ROM.
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<th>College of Agriculture</th>
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<tr>
<td>Agricultural and Extension Education</td>
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<td>Agricultural Economics</td>
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<td>Agricultural Engineering Technology</td>
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<td>Animal Science</td>
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<td>Food Science and Technology</td>
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<td>Forestry</td>
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<td>Ornamental Horticulture and Landscape Design</td>
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<td>Wildlife and Fisheries Science</td>
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<td>Planning</td>
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<td>Business Administration</td>
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<td>Economics</td>
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<td>Management Science</td>
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<td>Statistics</td>
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<td>College Student Personnel</td>
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<td>Curriculum and Instruction</td>
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<td>Education</td>
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<td>Polymer Engineering</td>
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<td>Interior Design</td>
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<td>Textiles, Retailing and Consumer Sciences</td>
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<td>Ecology</td>
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Continuing Education and Public Service

DEPARTMENT OF CONFERENCES

Director:
Norvel Burkett, Ed.D. Mississippi State University

Assistant Director:
Robert Gibbs, B.S. Tennessee

Program Managers:
Elaine Keener, B.A. Temple University
Glenn Trantham, B.S. Tennessee

Conference Specialists:
Susan Davis, B.A. Tennessee
Margaret Harris
Barry Neal

UT Conferences, housed in the Conference Center in downtown Knoxville, provides management services to individuals or groups who desire to hold a high quality convention, conference or meeting anywhere in the state of Tennessee or across the United States. Utilizing the new Conference Center, state-wide University system facilities, major hotels and convention centers across Tennessee and the U.S., the department assists University organizations and outside groups in designing programs to meet the needs of clients. The staff provides professional guidance and management for small group meetings as well as for major conventions of several thousand delegates. Consulting and support services range from planning and budgeting to lodging, food services, speakers, promotional material, meeting rooms and all details to assure a successful event. Programs which meet appropriate criteria qualify for Continuing Education Credits, which become a permanent record maintained by the Division. Transcripts are available upon written request.

The department cooperates with UT CTV to provide teleconferencing services for the University and community. Professional groups and interested individuals may arrange interactive videoconferencing to locations worldwide. Arrangements may also be made to receive (downlink) and to transmit (uplink) programing via satellite capabilities.

Additional information may be obtained from UT Conferences, P.O. Box 2648, Knoxville, TN 37901, or by calling (615) 974-0250, FAX (615) 974-0264.

ENGLISH LANGUAGE INSTITUTE

Director:
Dale A. Myers, Ph.D., Florida

Assistant Director:
Jan G. Hitt, M.S., Tennessee

Instructors:
Anwar F. Accawi M.Ed., Tennessee
Mostafa Rahbar, M.Ed., Tennessee

The English Language Institute (ELI) is a non-credit language-study program of The University of Tennessee, Knoxville. It is designed to assist students in their pursuit of career goals or educational objectives in the United States.

The ELI offers intensive courses for the improvement of student skills in the English language. International students, visitors, and professionals have successfully learned English through study in the ELI.

The courses emphasize the development of communicative ability in listening, speaking, reading, and writing. Faculty members are trained in teaching English to speakers of other languages with differing national backgrounds and varying proficiency in English.

The curriculum consists of eight proficiency levels: 101-108, Introductory through Pre-Academic.

Each level meets 4-5 periods each day with classes from the following:
- English Structure (Grammar)
- Listening Comprehension
- Writing/Composition (Rhetoric)
- Conversation Practice for Communicative Purposes
- Reading and Vocabulary

In addition, classes also assist students in pronunciation, test-taking strategies, U.S.,
NON-CREDIT COMMUNITY PROGRAMS

Director:
Cheryl LeBerge, M.A. Memorial University, Newfoundland, Canada

Coordinator:
N. Dahlin-Brown, M.S. Tennessee
J. Stiles, M.A. Tennessee

Non-Credit Community Programs provides a comprehensive array of courses and seminars designed to serve the needs of individuals and businesses in Knoxville and surrounding communities. Courses are offered on the University campus and at selected off-campus locations. Courses are taught by University faculty and citizens of the community who have gained a reputation for certain competencies or technical skills. Courses also are delivered "on-site" for business or industrial clients, with instructional services tailored to the needs of each individual group.

Courses range from computer literacy and management development to gardening, exercise, and music. There are also courses which meet requirements of the state or other agencies for certification in fields such as real estate, aviation, CEBs (Certified Employee Benefit Specialist), and CCA (Certified Credit Administrator). The department co-sponsors the Smoky Mountain Field School with the Great Smoky Mountains National Park.

Continuing Education Units (CEU's) are awarded to students satisfactorily completing selected courses and seminars offered by the department.

For further information or to register, contact Non-Credit Community Programs, 600 Henley Street, Suite 105, Knoxville, TN 37902 or telephone (615) 974-0150.

UNIVERSITY EVENING SCHOOL

Director:
S.C. Bills, Ed.D. Tennessee

Associate Directors:
J.C. Sekula, Ph.D. Tennessee
M.K. Warden, Ed.D. Tennessee

Assistant Directors:
L.U. Jurand, M.S. Tennessee
D.J. VonWiesenste, M.S. Tennessee

Assistant Professor:
C.B. Mamantov, Ed.D. Tennessee

Director, Oak Ridge Graduate Program:
S.C. Bills, Ed.D. Tennessee

Assistant Director, Oak Ridge Graduate Program:
J. Howell, M.S. Tennessee

The University Evening School, in conjunction with academic colleges and departments, administers credit programs for those students attending classes on and off campus in a variety of nontraditional formats. Support services are provided to assist students in their educational pursuits.

On Campus Evening Program. Classes are offered during late afternoon and evening hours for those students who work or have other commitments during the day. The following undergraduate degrees are available:
- College of Business Administration - Bachelor of Science in Business with majors in Accounting, General Business, Economics, Finance, Public Administration, Management, and Marketing.
- College of Liberal Arts - Bachelor of Arts with majors in American Studies, Economics, Political Science, Psychology, Public Administration or Sociology.
- College of Education - Bachelor of Science with majors in Human Services and Technological and Adult Education with a concentration in Industrial Training.


Mini-Term. The University Evening School offers a Mini-Term during May. Students may enroll in one concentrated credit course during the Mini-Term period.

Courses and instructors listed for the Mini-Term are carefully selected to reflect a broad academic base of individualized offerings suited to an intensive program of study.

Off-Campus Programs. The Evening School conducts undergraduate and graduate courses in many locations away from the Knoxville campus. The courses are scheduled in response to requests and identifiable needs of adult part-time students who live some distance from the UT Knoxville location. All course offerings and instructors are approved by the appropriate academic departments, and the credit awarded is resident credit.

The College of Education (Off-Campus) offers a Bachelor of Science in Education with a major in Industrial Education (Industrial Training) and the following graduate degree programs are available: Doctor of Education with a major in Educational Administration and Supervision (Chattanooga); Master of Science in Education with a major in Technological and Adult Education (Statewide); Master of Science in Library and Information Science (Memphis).

The Evening School administers an off-campus center at Oak Ridge where courses leading to advanced degrees in science and engineering are offered. At Oak Ridge, Graduate Study Programs lead to a Master's in Chemical, Electrical and Industrial Engineering with a concentration in: Chemical Engineering, Electrical Engineering, and Industrial Engineering.

In addition to the evening program, the Evening School offers noncredit Workshops. Creditworkshops are coordinated through various academic departments of the University and provide students the opportunity to participate in short periods of intensive study. As a result, students may earn college credit within a shorter time frame than the traditional semester system. Workshops offer flexibility of timing, location, and content. Summer workshops are particularly popular with teachers and school administrators. Although most workshops are held on the UT Knoxville campus, geography is not a limiting factor.

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

Registration. Registration by mail, phone or fax is offered as a convenience to former Evening School students. Secondary registration at both on- and off-campus locations is also available. Advising. An advising/counseling program is available for the benefit of all evening students who need assistance with academic or related matters. The program can accommodate students during regular daytime hours and in the evenings by appointment, as well as at various centralized off campus locations. The College of Liberal Arts, Business, Education, and Engineering also cooperate with the Evening School by providing extended hours at select times to advise students.

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

SENIOR OR DISABLED CITIZENS

Legislation gives Tennessee citizens who are 60 years of age or older, or who are totally disabled, the opportunity to attend courses at the University at no charge on an audit, space available basis. Legal verification of either of these conditions is required for enrollment. Students who are 65 or older, or who are totally disabled, and who desire to receive UT credit for their courses, may pay a reduced charge of $7 per credit hour up to a maximum of $75 for a full-time load. Registration for day and evening classes is handled by the Evening School.

The University Evening School office is located at 451 Communications and University Extension Building on the UT Knoxville campus and may be reached by calling (615) 974-5361 or 1-800-676-8657. All inquiries concerning these programs are welcome.

DEPARTMENT OF INDEPENDENT STUDY

Director:
David F. Holden, Ph.D. Kansas

Assistant Director:
Samuel A. Cain, M.S. State University of New York (Stony Brook)
The UT Knoxville Department of Independent Study administers the program of independent study by correspondence for all campuses of the University. The program includes college credit courses, high school courses (for credit or for college entrance requirements), and non-credit courses. College credit correspondence courses are based on regular UT campus courses, and the credit is recorded on the student's UT transcript. High school courses are based on the curriculum frameworks of the Tennessee Department of Education. Non-credit courses can be taken to meet personal or professional education goals. The courses utilize videotapes and audiotapes as well as traditional print materials. Through this program, The University of Tennessee is able to overcome geographic limitations in performing its services as Tennessee's land-grant institution of higher education. The program is open to UT students and to anyone who has the educational preparation required for a particular course. UT students must have the approval of their college advising center before they enroll in college credit courses. With the cooperation of a UT instructor, independent study through directed readings may also be arranged through this department for courses not listed in the Independent Study catalog.

For information and enrollment forms for correspondence courses, contact: Department of Independent Study, 420 Communications Bldg., The University of Tennessee, Knoxville, TN 37996, Telephone: (615) 974-5134.

The following correspondence courses are offered through the Department of Independent Study. For full course descriptions refer to the listings in this Undergraduate Catalog.

| Accounting 201 Principles of Financial Accounting; 202 Principles of Managerial Accounting; 311 Intermediate Financial Accounting; 312 Intermediate Financial Accounting; 321 Cost and Managerial Accounting; Agricultural Economics 210 Introduction to Agricultural Economics; 470 Natural Resource Economics; Anthropology 110 Human Origins; 130 Cultural Anthropology; Child and Family Studies 110 Introduction to Early Childhood Education; 240 Human Sexuality; 312 Adulthood and Aging; Electrical and Computer Engineering 201K Circuits I; English 101 English Composition I; 102 English Composition II; 201 British Literature I; Beowulf through Johnson; 202 British Literature II: Wordsworth to the Present; 231 American Literature I: Colonial Era to the Civil War; 232 American Literature II: Civil War to Present; 306 Introduction to Shakespeare; Forestry, Wildlife and Fisheries 211K Introduction to Forestry, Wildlife and Fisheries; French 111 Elementary French, First Semester; 112 Elementary French, Second Semester; 211 Intermediate French, First Semester; 212 Intermediate French, Second Semester; 301 Elements of French for Upper Division and Graduate Students, First Semester; 302 Elements of French for Upper Division and Graduate Students, Second Semester; Geography 101 World Geography, First Semester; German 101 Elementary German, First Semester; 102 Elementary German, Second Semester; Health 110 Personal Health and Wellness; 400 Consumer Health; 406 Death, Dying, and Bereavement; History 151 Development of Western Civilization; 152 Development of Western Civilization; History 251 History of the United States; 252 History of the United States; 449 History of Tennessee; Mathematics 115 Statistical Reasoning; 119 Precalculus A; 121 Calculus A; 122 Calculus B; 130 Precalculus I; 141K Calculus I; 142K Calculus II; 201 Structure of the Number System; 202 Probability, Statistics and Euclidean Geometry; 231 Differential Equations I; 241 Calculus III; Philosophy 345 Medical Ethics; Political Science 101 United States Government and Politics; Psychology 110 General Psychology; 210 Biological Basis of Behavior; 220 Behavior and Experience: Humanistic Psychology; 300 Child Psychology; 310 Learning and Thinking; 330 Abnormal Psychology; 360 Social Psychology; 365 Statistics in Psychology; 395 Research Methods in Psychology; Religious Studies 326 Images of Jesus; 345 Medical Ethics; Safety 452 General Safety; Sociology 110 Social Problems and Social Change; 120 General Sociology; 350 Criminology; 351 Juvenile Delinquency; 363 The City; 415 Sociology of Aging; 451 Criminal Justice; Spanish 111 Elementary Spanish, First Semester; 112 Elementary Spanish, Second Semester; 211 Intermediate Spanish, First Semester; 212 Intermediate Spanish, Second Semester; |
ACCOUNTING (009)

201 Principles of Financial Accounting (3) Introduction to financial accounting theory and practice with emphasis on preparation and reporting of financial information. Prerequisites: all other courses in accounting. Prereq: Mathematics 110 or 121. E

202 Principles of Managerial Accounting (3) Introduction to managerial and cost accounting concepts with emphasis on use of accounting data by managers in planning operations, controlling activities, and decision making. Prereq: 201. E

311-312 Intermediate Financial Accounting (3,3) Theory, principles, and procedures related to valuation of assets, liabilities, and equities; measurement of periodic income; and preparation of financial statements. Prereq: 202 for 311; and 311 with a grade of C or better and Management 303 for 312. E

321 Cost and Managerial Accounting (3) Analysis of costs for products, projects, and management control. Topics include cost behavior, cost prediction, budgeting, and responsibility accounting. Prereq: 202 or Coreq: Management 303. E

341 Accounting Information Systems (3) Development and use of accounting information systems for collection, organization, and distribution of economic information about organizations for internal and external decision making. Prereq: 321, Management 303, junior standing. Major exam may be given during the last class meetings. F, Sp

411 Auditing (3) Role of auditing in society, operational auditing, professional auditing standards, auditor's legal responsibilities, audit evidence and reporting, role of internal control and statistical sampling in auditing, applications to specific transaction cycles. Prereq: 312 with a C or better, 341. F, Sp

414 Advanced Accounting (3) Issues and alternatives in advanced accounting theory and problem areas including financial accounting theory, partnership accounting, business combinations, consolidated financial statements, and not-for-profit accounting. Major writing requirement. Prereq: 312 with a C or better. E

431 Federal Income Taxation (3) Fundamentals of gross income, deductions, credits, and tax determination. Introduction to taxation of corporations and partnerships. Prereq: 311 with a C or better, or consent of instructor. F, Sp

ADVERTISING (012)

250 Advertising Principles (3) Survey of the role of advertising in American business and society. Relationship between advertising and marketing; functional components of the advertising process: research, media, creative, and management.

340 Advertising Research Methods (3) Secondary data and primary research techniques for advertising decision making. Prereq: 250 with a grade of C or better and Statistics 201.

350 Advertising Creative Strategy (3) Basic concepts of creative strategy with intensive practice in developing creative platforms, writing and designing advertisements, and judging creative work. Prereq: 250 with a grade of C or better.

360 Advertising Media Strategy (3) Assessment of markets, vehicle audiences and mathematical techniques for advertising planning, instruction in media planning, buying, and evaluation. Prereq: 340 with a grade of C or better.


AFRICAN AND AFRICAN-AMERICAN STUDIES (022)

201 Introduction to African-American Studies (3) Multidisciplinary approach to the African-American experience through the Civil War period which examines such issues as traditional African societies, the development of African-American culture, the beginnings of African-American protest tradition, and the Civil War and Reconstruction.

202 Introduction to African-American Studies (3) Multidisciplinary study of Africa and its incorporation into the world economy between the sixteenth and the twentieth century. Includes the role of colonialism, post-colonial dependencies, and current liberation struggles in various areas of the continent.

310 Introduction to African-American Music (3) (Same as Music History 310.)

314 Peoples and Cultures of Africa (3) (Same as Anthropology 314.)

315 African-American Anthropology (3) (Same as Anthropology 315.)

319 Caribbean Cultures and Societies (3) (Same as Anthropology 319 and Latin American Studies 319.)

322 Minority Group Politics in the United States (3) (Same as Political Science 322.)

343 Race and Ethnicity (3) (Same as Sociology 343.)

350 History of Jazz (3) (Same as Music History 350.)

352 African-American Religion in United States (3) (Same as Religious Studies 352.)

353 Topics in African-American Religion (3) (Same as Religious Studies 353.)

364 Contemporary Issues in African-American Education (3) 1954 to the present. Examines issues relevant to the current dilemma of providing quality education for the African-American student including professional school quotas, intelligence testing, homogeneous grouping, African-American college survival, busing, Black English/Standard English controversy. Writing emphasis if course. (Same as Curriculum and Instruction 364.)

371-372 African History (3,3) (Same as History 371-372.)

373 African Religions (3) (Same as Religious Studies 373 and Anthropology 373.)

COURSES OF INSTRUCTION
379 Geography of Africa (3) (Same as Geography 379.)
420 Families: Race, Class and Culture (3) (Same as Child and Family Studies 420.)
421 Comparative Studies in African and African-American Societies (3) (Same as Sociology 442.)
422 Comparative Poverty and Development (3) (Same as Sociology 442.)
445 The African-American Experience From the Colonial Period to the Present (3) (Same as History 445.)
450 Issues and Topics in African-American Studies (3) Topics vary, but include a variety of problems, issues, and individual studies. May be repeated. Maximum 6 hours.
452 African-American Politics (3) (Same as Political Science 452.)
451 African Prehistory (3) (Same as Anthropology 451.)
473 Black Male in American Society (3) Examines historical images, myths, and stereotypes which have been employed in society for centuries concerning African-American males in American society. Includes the effect of such critical factors as Black feminism, violence, concepts of masculinity, the family, white males, white females, homophobia, nationalism, and athletics on African-American males in America.
480 African-American Communities in Urban America (3) Evaluates the benevolent and historical influence of three major institutions: the church, the family, and the school upon the African-American struggle to survive. Includes political, economic, and social factors utilized by Black people in developing coping strategies and mechanisms. Writing-emphasis course.
482 African-American Women in American Society (3) Focuses on historical social, economic and political factors in American society as they relate to the Black woman. (Same as Women's Studies 482.) Writing-emphasis course.
493 Independent Study (1-3) Individualized study of a special project or problem in Agricultural and Extension Education. Must be selected in consultation with the instructor. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.
492 Agricultural and Extension Education Internship (2-8) Supervised work experience in approved county extension offices, agricultural businesses, or agriculture related agencies. Requires living off-campus for a specified time. Prereq: 411 and consent of instructor. Sp
490 Independent Study (1-3) Directed individual or team research and report writing. Special courses in specific topics. Student must arrange with instructor before registering. May be repeated. Maximum 6 hours. E

AGRICULTURE AND EXTENSION EDUCATION (042)

201 Field Experience in Agricultural Education (1) Field experience in public school programs in agricultural and education. Satisfactory/No Credit grading only. Prereq: Consent of instructor. May be repeated. F, Sp
345 Agricultural Experience, Leadership, and Adult Programs (3) Developing supervised agricultural experience programs, conducting leadership development activities through the Future Farmers of America, Police and military education in agriculture. F
346 Strategies for Teaching and Program Planning in Agriculture (3) Methods and techniques for teaching agriculture, preparing teaching plans and courses of study, and developing programs of activities for agriculture.
411 Fundamentals of Agricultural Extension (3) History; philosophy; organizational structure; clientele served; major areas of program emphasis - teaching methods, and relationships with other educational agencies. Sp
420 Methods of Teaching Agricultural Mechanics (2) Methods for teaching agricultural students. Special competencies for planning, conducting, and evaluating agricultural mechanics. Prereq: Agricultural Engineering Technology 201 or consent of instructor. F
432 Agricultural and Extension Education Internship (2-8) Supervised work experience in approved county extension offices, agricultural businesses, or agriculture related agencies. Requires living off-campus for a specified time. Prereq: 411 and consent of instructor. Sp
450 Agricultural Policy (3) Values, goals and policy process. Economic rationale and effects of policy. Historical development and current characteristics of commodity, credit; food, and trade policy. Prereq: 320 or consent of instructor. Sp
440 Agricultural Production Economics (3) Application of microeconomic theory to problem of resource allocation, enterprise selection, scale of operation of agricultural firms; economic interpretation of historical, agricultural production relationships. Prereq: 320 or consent of instructor. Sp
442 Agribusiness Management (3) Advanced decision analysis techniques. Planning and organizational functions, analyzing investment alternatives, evaluating budgets and financial statements, and government intervention and solvency, using computers in business decisions. Prereq: 342. Agriculture 290, Statistics 302, and Accounting 202 or consent of instructor. F
450 Agricultural Price Analysis (3) Demand and supply mechanisms in agriculture; price determination; spatial equilibrium; temporal price patterns; pricing institutions. Prereq: 320, 350 and Statistics 302. F
460 Rural Economic and Community Development (3) Historical and theoretical perspective on problems facing rural communities. Focus on public and private farm and nonfarm sectors; models and tools for analyzing rural development. Prereq: 210 or consent of instructor. F
470 Natural Resource Economics (3) Nature of natural resources; economic efficiency as a basis for natural resource use; externalities; valuation of natural resource use factors influencing environmental quality; alternative public policy tools for influencing natural resource use or improving environmental quality. Prereq: 210 or consent of instructor. Sp
492 Off-Campus Internship (1-3) Supervised experience at department-approved internship site. May be repeated up to a maximum of 3 hours. Prereq: Junior standing. S/N/C. E
493 Independent Study (1-3) Directed individual or team research and report writing. Special courses in specific topics. Student must arrange with instructor before registering. May be repeated. Maximum 6 hours. Prereq: Junior standing. E

AGRICULTURAL ENGINEERING (066)

201 Career Opportunities (1) Activities and opportunities in the fields of specialization; required training for each area; projected career activities. 1 hour.
303 Transport Processes in Biological Systems (3) Analysis of biophysical systems with emphasis on the migration of materials in biological systems. Prereq: Basic Engineering 131. F
311 Processing Food and Biological Materials (3) Application of basic engineering principles to processing and handling of biological materials: physical properties, thermal processing, drying, evaporation, refrigeration and freezing, and mechanical processes and extraction. Prereq: Engineering Science and Mechanics 341, Agricultural Engineering 303, 2 hours and 1 lab. F
320 Structures and Environment (2) Environmental control systems; ventilation, heat and moisture balances, design and construction heat transfer, and mass transfer. Prereq: Mechanical Engineering 331. Sp
331 Power Units and Machinery (3) Internal combustion engines and off-road vehicle power transmission systems. Prereq: Engineering and operator environment, Functional and structural analysis and performance characteristics of machinery. Prereq: Mechanical Engineering 331 and Engineering Science and Mechanics 321. 2 hours and 1 lab. F
340 Soil and Water Conservation (2) Hydrologic, agronomic, and engineering principles applied to re-


400 Professional Development (1) Engineering ethics; professional responsibilities of professionals in professional development and continuing education. 1 hour. F

403 Engineering Design Fundamentals (3) Nature of design, functional analysis, creativity, analyses and synthesis; geometric and kinematic requirements; plane, mechanism, kinematics, dynamics, time analyses applied to design project. Prereq: Senior standing. Design content: 3 hours. 1 hour and 2 labs. F

413 Component Design and Machine Synthesis (3) Synthesis of design; structural, kinematic, power, control system development; preparation of design drawings, specifications, model of device; written and oral report on project. Design content 3 hours. Prereq: 403. 1 hour and 2 labs. Sp

423 Irrigation and Waste Management System Design (3) Design, irrigation and agricultural waste management systems with consideration given to live-stock waste characteristics, and impact on crop yield and water quality. Prereq: Design content: 3 hours. Prereq: 340, 341. 1 hour and 2 labs. F

430 Mobile Hydraulic Power System Design (2) Functional and operational characteristics of mobile hydraulic systems including pumps, valves, and actuators; analysis and synthesis of power transmission and control circuits. Prereq: Engineering Science and Mechanics 341. 1 hour and 1 lab. Sp, AO

433 Food and Bioprocessing System Design (3) System design for processing, handling, and storage of food and biological materials. Mass and energy balances, product characteristics, equipment specifications, economic analysis, safety and human factors considerations. Design content: 3 hours. Prereq: 311. 1 hour and 2 labs. Sp

451 Electronic Systems (4) Basic electronics with biological applications. Analog and digital electronics, sensing and controlling physical and environmental parameters; sensor selection and interfacing; signal conditioning; process control. Includes laboratory experiments and design projects. Design content. 1 hour. Prereq: Electrical and Computer Engineering 301. 3 hours and 1 lab. Sp

470 Special Problems in Agricultural Engineering (1-3) Selection, analysis solution and report of problem. May be repeated. E

480 Selected Topics in Agricultural Engineering (1-3) Current trends and problems in agricultural engineering. May be repeated. E

AGRICULTURAL ENGINEERING TECHNOLOGY (067)

202 Materials and Fabrication (3) Properties of materials including wood, metals, concrete, plastics and lubricants; drafting and planning, fabrication techniques and processes involving hand tools, power equipment, and arc and gas welding. 1 hour and 2 labs. Sp

212 Surveying (3) Measurement of distances, angles, and areas; differential and precision leveling; topographic surveying and map making; computer applications. Prereq: Math 119 or consent of instructor. 1 hour and 1 lab. F

422 Food and Process Engineering Technology (3) Application of basic engineering principles to agricultural and food processes. Fluid handling, drying, evaporation, conveying, heating and cooling, refrigeration, systems and materials handling. Prereq: Physics 121, Mathematics 121, 2 hours and 1 lab. F

432 Agricultural Machinery and Tractors (3) Agricultural machinery; identification, usage, forces and adaptations to agricultural practices; management considerations; field efficiencies; capabilities; adjustment and servicing. Prereq: Mathematics 121. 2 hours and 1 lab. Sp

424 Agricultural Waste Management and Pollution Control (3) Waste characterization; techniques for collecting, transporting, storing, and utilizing livestock waste. Prereq: Mathematics 121. 2 hours and 1 lab. F

452 Small Internal Combustion Engines (3) Theory, concepts, and mechanical design of small internal combustion engines; theoretical cycles, selection, operation, adjustment; troubleshooting and repair of single cylinder engines. Prereq: Physics 121 or consent of instructor. 2 hours and 1 lab. Sp

462 Agricultural Chemical Application Technology (3) Equipment for application of liquid, solid, and gaseous agricultural chemicals; system components; operational characteristics; calibration; selection and management; safety considerations; materials handling and disposal methods. Prereq: Physics 121 or consent of instructor. 2 hours and 1 lab. Sp
ment-substance patterns, and evaluating explanations of cultural change. Prereq: 120 or consent of instructor.

373 African Religions (3) (Same as Religious Studies 373 and African-American Studies 373.)

400 Readings in Anthropology (1-6) Problem-oriented directed readings in anthropology. Prereq: Anthropology major or consent of instructor. May be repeated. Maximum 6 hours.

410 Principles of Cultural Anthropology (3) Exploration and illustration of major concepts, theories, and methods in cultural anthropology. Introduction to analysis of specific ethnographies. Prereq: 120. (Same as Linguistics 411.)

411 Linguistic Anthropology (3) Basic linguistic concepts applied to research in cultural anthropology, particularly investigation of relationships between language and culture. Prereq: 130 or Linguistics 200. (Same as Linguistics 411.)

412 Folklore in Anthropology (3) Introduction to anthropological study of folklore, using folklore and folkloric materials from various tribal, peasant, and complex societies. Prereq: 130 or consent of instructor.

413 Dynamics of Culture (3) Definition and in-depth study of major forms of culture change, ranging from evolution and diffusion to religious revitalization and political revolt. Continuity and change in diverse cultural settings examined in anthropological, ethnohistoric, and contemporary cases. Prereq: 130.

414 Political Anthropology (3) Examination of the organization and dynamics of power and politics in both stateless and state-level societies. The role of symbols, rituals, and ideology in producing and reproducing power relations. The relationship between actors (individuals) and structures. The enculturation of traditional political forms and systems within modern states. Prereq: 130 or consent of instructor. Writing-emphasis course.

430 Fieldwork in Archaeology (3-9) Practicum work in archaeological data recovery and analytical techniques. Prereq: Consent of instructor. May be repeated. Maximum 9 hours.

431 Ethnographic Research (3) Conceptual and practical exploration of methods and techniques cultural anthropologists use in fieldwork. Prereq: 130 or consent of instructor.

435 Historical Archaeology Laboratory (3) Laboratory procedures for the processing, identification, and interpretation of artifacts from historical sites. Antiquity material from historic Eastern Tennessee sites will be used for class projects. Prereq: 361 recommended.

440 Cultural Ecology (3) Concepts and methods in studying dynamic interaction between prehistoric and present day cultures and their environments. Topics include ecological theory, methods of analysis, and survey of selected case studies. Prereq: 120, 130, 410, or consent of instructor.

450 Current Trends in Anthropology (3) Theoretical issues in anthropology for undergraduate students. Topics may include practical experience or laboratory study of anthropological materials. May be repeated. Maximum 6 hours. Prereq: Either 110, 120, 130 or consent of instructor.

459 Selected Topics in Anthropology (3) Theoretical issues in anthropology for undergraduate students. Topics may include practical experience or laboratory study of anthropological materials. May be repeated. Maximum 6 hours. Prereq: Either 110, 120, 130 or consent of instructor.

461 African Prehistory (3) African cultural history from the earliest evidence of human activity to the time of the European contact. Emphasis on the stone age of Africa south of the Sahara. Prereq: 120 or consent of instructor. (Same as African-American Studies 461.) Writing-emphasis course.

462 Early European Prehistory (3) Origins and evolution of human culture in Europe through the beginnings of settled life. Primary focus on Paleolithic/Mesolithic chronology and subsistence. Prereq: 120 or consent of instructor. Writing-emphasis course.

463 Rise of Complex Civilizations (3) Development of complex societies in Old World from origins of agricultural economies to rise of States. Focus on Mesolithic, Neolithic, and Metal Age lifeways in Africa, Europe, and Asia. Prereq: 120 or consent of instructor. Writing-emphasis course.

464 Principles of Zoarchaeology (3) Basic zoological issues and methods in the study of vertebrate groups, with emphasis on the ancient and modern uses of animals in subsistence and culture. Identification and interpretation of archaeological evidence. Prereq: 120 or consent of instructor.

465 Urban Archaeology (3) Field archaeology and interpretation of archaeological remains on historic urban sites in the United States. Course content will include lectures and field and laboratory research on urban sites in East Tennessee. Prereq: 361 recommended.

480 Human Osteology (4) Intensive examination of the human skeleton. Prereq: 110 or consent of instructor, 3 hours and 1 hour lab.

481 Museology I: Museums, Purpose and Function (3) (Same as Art 481.)

482 Museology II: Exhibition Planning and Installation (3) (Same as Art 482.)

484 Museology III: Field Projects (1-12) (Same as Art 484.)

491 Primate Evolution (3) Living and fossil primate taxonomy, ecology, and comparative anatomy. Survey of primate fossil record with emphasis on the origin or major primate lineages. Prereq: 110.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)

494 Primate Behavior (3) Social organization and behavior of selected primates including group composition, size, and structure; patterns of mating; other social interactions, communication; and cultural behavior. Application of primates to vertebrate human ethology. Prereq: 110 or consent of instructor.

495 Human Paleontology (4) Introduction to human fossil record from the earliest human remains to the earliest representative of modern human form. Prereq: 110.

496 Biology of Human Variability (3) Introduction to human populations; human adaptation, biological features of major human races, relationships of major groups to one another. Prereq: 110. (Same as African-American Studies 496.)

499 Human Response to Environmental Stress (3) Explores the physiological perception of stress from the physical environment and the psychological, anatomical and behavioral responses to this stress.

ARCHITECTURE (133)

101 Introduction to Architecture (3) Scope and definition of architecture in relation to building industry, and allied design professions. Architectural design as a creative process. Orientation to courses and programs of the school. Coreq: 171. F

102 Visual Design (2) Principles of visual design and techniques of representation. Coreq: 172, Sp

111 Architecture and the Built Environment (3) An introduction to architecture and the built environment for non-architecture majors. Significance of our surrounding forces that create them. Creative aspects of design. Prereq: Survey of a course from local to global. Strategies for individual and collective involvement.


180 Introduction to Architecture (2) Introduction to the fundamentals of construction, materials and statics in a lecture / seminar format.

181 Introduction to Graphic Skills (4) Introduction to freehand drawing and orthographic techniques emphasizing visualization and simulation. The work will be explored and developed in the studio (4 credit hour studio).

182 Introduction to Basic Design (6) Introduction to basic design principles in two and three dimensions. The work will be explored in a seminar format and developed in the studio (1 credit hour seminar and 5 credit hour studio).

211 History and Theory of Architecture I (3) Architectural thought and ideas of building and community form. Ancient through High Renaissance in Italy, France and Spain. Prereq: History 151, 152, F

212 History and Theory of Architecture II (3) Architectural thought and ideas of building and community form. Renaissance, late Renaissance in Italy, France and Spain through the mid-twentieth century. Prereq: 211, Sp

213 History and Theory of Contemporary Architecture (3) Architectural thought in design pracloso in late twentieth century. Examples of contemporary works and review of theoretical issues. Prereq: 212, F, Sp

215 Architectural History/Theory I (3) Introduction to architectural form, ideas and traditions in a lecture/discussion format. Prereq: M. Arch Admission.

216 Architectural History/Theory II (3) Exploration of the ideas and forms of architecture in a lecture/discussion format. Prereq: M. Arch Admission.

231 Computer Applications in Architecture (3) Survey of the role of the computer in architecture, its potentials and limitations. Recent developments in computer graphics with specific applications and demonstrations. F, Sp

232 Introduction to Architectural Technology (3) Place of building technology in architectural design. Introduces concepts and theory of structures; building materials and construction; and environmental controls. F, Sp


281 Principles of Architectural Form (6) Principles of architectural form emphasizing building configuration and order. Design of simple buildings which explore possibilities of site, use, shape and color. (1 credit hour seminar and 5 credit hours studio). Prereq: 182 or equivalent.

282 Principles of Architectural Design (6) Principles of architectural design emphasizing site, function, circulation, climate, context and meaning of building (1 credit hour seminar and 5 credit hours studio). Prereq: 281.

312 Materials and Methods of Construction (3) Properties of interior and exterior building materials and their relation to construction methods and detailing. Theory of material selection and application and the role materials and methods play in the design process. Prereq: 232, Sp

323 Advanced Computer Applications (3) Computer applications in architecture with special emphasis on environmental control systems and/or structural calculations. Prereq: 231.


332 Architectural Structures II (4) Continuation of analysis and design of simple structures of steel, wood and concrete based upon specific loading requirements. Use of construction and building codes, handbooks and design tables. (Same as Civil Engineering 332 or equivalent.)

335 Structures in Architecture I (3) Introduction to the structural properties of materials, foundations and simple
Courses of Instruction/Art

201 Two-Dimensional Fabric (3) Mixed media approach for concepts. Based on dye/solvent transfer printing, direct/indirect dyeing, drawing/painting/media, hand/machine stitched fabric. May be repeated. Maximum 12 hours.

202 Two-Dimensional Fiber (3) Mixed media approach for woven imagery. Tapestry/non-tapestry methods, traditional/non-traditional media, small scale works. May be repeated. Maximum 12 hours.


209 Special Topics in Fiber and Fabric (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.


212 Drawing II: Life Drawing (3) Development of drawing and observational skills with special emphasis on structure and dynamics of the human figure and of the figure in environment. Prereq: 211. May be repeated. Maximum 6 hours.

213 Painting I: Introduction (3) Capacities of oil and acrylic painting on canvas. Prereq: 101, 103 for art majors; none for non-art majors.

214 Painting II (3) Techniques of expression in oil and/or acrylic. Prereq: 213 for art majors; 191-Painting for non-art majors. May be repeated. Maximum 6 hours.


216 Watercolor II (3) Capacities of transparent watercolor, with attention to individual exploration of surface, space, and concept. Prereq: 215 for art majors; Art 191-Watercolor for non-art majors. May be repeated. Maximum 6 hours.

219 Special Topics in Drawing/Painting (3) Student or instructor-initiated course offered at convenience of department to enhance and expand the painting, drawing, and watercolor curriculum. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

221 Ceramics I: Handbuilding (3) All ceramic handbuilding techniques including forming methods, glazing, clay preparation, firing, small and large scale pieces. Ceramic history through the ages.

222 Ceramic II: Throwing (3) Thrown ceramic forms including functional utilitarian pottery techniques, glazing and firing methods. Prereq: 221 for art majors; 191-Ceramics for non-art majors.

229 Special Topics in Ceramics (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

231 Photography I (3) Art of black and white photography. Field and studio shooting, history of photography, basic developing, and enlarging techniques.

232 Special Topics in Photography (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

244 Wood Sculpture I (3) Wood as sculptural medium. May include use of hand and power tools, carving, and construction.

245 Steel Sculpture I (3) Problems to introduce steel as a material for the creation of sculpture. Development of welding techniques begun in 244. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

246 Mixed Media Sculpture I (3) Use of two or more materials, and a variety of sculptural techniques, joined to create dimensional form. May include carving, modeling, molding, construction, and found objects.

249 Special Topics in Sculpture (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

251 Beginning Graphic Design I (3) Introduction to typography, layout and creative problem solving. Survey of graphic design tools, materials and techniques with emphasis on professionalism. Prereq: 101, 103, 151.

252 Beginning Graphic Design II (3) Continuation of typography, layout and creative problem solving; and introduction to production techniques with emphasis on professionalism. Prereq: 251.

256 Individual Projects in Graphic Design/Illustration (3) Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

259 Special Topics: Graphic Design/Illustration (3) Student or instructor-initiated course offered at discretion of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

262 Intaglio I (3) Metal plate intaglio printing in traditional and contemporary techniques of etching, softground, drypoint, mezzotint, aquatint, and photolithographing. May be repeated. Maximum 6 hours.

263 Lithography I (3) Stone and aluminum plate lithography applying traditional and contemporary techniques of etching, tusche, transfer methods, and state proofs. May be repeated. Maximum 6 hours.

264 Screen Printing I (3) Screen printing as a fine art medium including development and application of various basic stencils in compositional printing. May be repeated. Maximum 6 hours.

269 Special Topics in Printmaking (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

279 Special Topics in Art History (3) Student or instructor-initiated course offered at convenience of department. Prereq: Determined by department for individual topic. May be repeated. Maximum 12 hours.

291 Papermaking Workshop (3) Papermaking as a medium for two and three-dimensional art. Includes sheet forming, inking, framing, processing, and other related techniques. Emphasis on development of a personal form.

299 Special Topics in Graphic Design (3) Specialized topics related to contemporary graphic design, with emphasis on color theory and technique. Prereq: 101, 103.


311 Drawing III (4) Development of personal drawing techniques and concepts through class problems. Prereq: 212 and 312 or consent of instructor. May be repeated. Maximum 6 hours.

312 Drawing Portfolio Review (0) Review of prior work in drawing. Successful completion required prior to registration for junior and senior courses. Prereq: Consent of department. Satisfactory/No credit only.

313 Painting III (4) Individual expression with varied media on canvas. Prereq: 214 and 314 or consent of instructor. May be repeated. Maximum 8 hours.

314 Painting Portfolio Review (0) Review of prior work in painting. Successful completion required prior to registration for junior and senior courses. Prereq: Consent of department. Satisfactory/No credit only.

315 Watercolor III (4) Individual expression with varied watercolor media on paper. Prereq: 216 and 316 or consent of instructor. May be repeated. Maximum 8 hours.

316 Watercolor Portfolio Review (0) Review of prior work in watercolor. Successful completion required prior to registration for junior and senior courses. Prereq: Consent of department. Satisfactory/No credit only.

320 Ceramics Portfolio Review (0) Review of prior work in ceramics. Successful completion required prior to registration for junior and senior courses. Prereq: Consent of department. Satisfactory/No credit only.

331 Photography II (4) Individual expression in photography. Prereq: 331. May be repeated. Maximum 8 hours.


334 Photographic Techniques Workshop (4) Theories and practices of film exposure and development. Introduction to zone system. Prereq: 331.

340 Sculpture Portfolio Review (0) Review of prior work in sculpture. Successful completion required prior to registration for junior and senior courses. Prereq: Consent of department. Satisfactory/No credit only.

341 Sculpture II (3) Further exploration and development of sculptural concepts and materials. Prereq: 241 and 340 or consent of instructor. May be repeated. Maximum 6 hours.

342 Life Sculpture III (3) Advanced modeling techniques in clay and wax working from the figure. Includes casting a minimum of one piece. Prereq: 242 and 340 or consent of instructor. May be repeated. Maximum 6 hours.

343 Metal Casting II (3) Further exploration of casting methods for bronze and aluminum. Prereq: 342 and 340 or consent of instructor.

344 Wood Sculpture II (3) Extension of skills and techniques begun in 244. Prereq: 244 and 340 or consent of instructor. May be repeated. Maximum 6 hours.

345 Steel Sculpture II (3) Further exploration of construction in steel and other metals. Prereq: 343 and 340 or consent of instructor.

346 Mixed Media Sculpture II (3) Further problems in the sculptural use of two or more distinctive materials. Prereq: 246 and 340 or consent of instructor.

350 Graphic Design/Portfolio Review (0) Review of prior work in graphic design illustration. Successful completion required prior to registration for junior and senior courses. Prereq: 350 or consent of instructor. Satisfactory/No credit only.
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200 Special Topics (2-4) Student- or instructor-initiated course offered at convenience of department. May be repeated.

210 Drawing (2-4) Beginning to intermediate. May be repeated.

220 Ceramics (2-4) Beginning to intermediate. May be repeated.

230 Photography (2-4) Beginning to intermediate. May be repeated.

240 Painting (2-4) Beginning to intermediate. May be repeated.

250 Metal Design (2-4) Beginning to intermediate. May be repeated.

260 Fibers (2-4) Beginning to intermediate. May be repeated.

270 Fabric (2-4) Beginning to intermediate. May be repeated.

280 Enameling (2-4) Beginning to intermediate. May be repeated.

290 Wood (2-4) Beginning to intermediate. May be repeated.

400 Special Topics (2-4) Student or instructor-initiated course offered at convenience of department. May be repeated.

410 Drawing (2-4) Intermediate to advanced. May be repeated.

420 Ceramics (2-4) Intermediate to advanced. May be repeated.

430 Photography (2-4) Intermediate to advanced. May be repeated.

440 Painting (2-4) Intermediate to advanced. May be repeated.

450 Metal Design (2-4) Intermediate to advanced. May be repeated.

460 Fibers (2-4) Intermediate to advanced. May be repeated.

470 Fabric (2-4) Intermediate to advanced. May be repeated.

ART EDUCATION (141)

301 Foundation of Art Education (3) Basic philosophy and structure including directed learning activities in two and three dimensional design, art appreciation, and teaching methodology. Prereq: Admission to Teacher Education Program. F, Sp

302 Concepts of Drawing and Painting (3) Processes in teaching of drawing and painting including consideration of pertinent literature and research. F, Sp

303 Concepts of Sculpture and Crafts (3) Processes in teaching of sculpture and crafts including pertinent literature and research. Prereq: 301 and admission to Teacher Education Program. F

304 Concepts of Printmaking, Graphic Design and Lettering (3) Processes in teaching printmaking, graphic design and lettering including pertinent literature and research. Prereq: 301 and admission to Teacher Education Program. F

350 Field Experience (1) Tasks related to teaching and to teacher roles. May be repeated. Maximum 2 hours. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. Sp

400 Curriculum Planning and Teaching Strategies (3) Program development, instructional methods, professional literature, contemporary issues, simulation and micro teaching evaluation. Prereq: 301 and admission to Teacher Education Program. F

410 Pre-Internship Seminar (1) Orientation describes the policies and objectives of the internship program. Must be completed the term immediately preceding the internship. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. Sp

481 Internship I: Grades K-12 (3-6) Test of materials and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

482 Internship II: Grades K-12 (3-6) Demonstration of professional competence in planning, instruction and classroom management. Internship is completed in local public schools. Prereq: 481 and admission to Teacher Education Program. Satisfactory/No Credit only. Sp

490 Special Topics (3) May be repeated. Maximum 6 hours.

493 Independent Study (3) May be repeated. Maximum 9 hours.

ASIAN LANGUAGES (144)

131-132 Elementary Chinese I, II (3,3) Must be taken in sequence. F, Sp

151-152 Elementary Japanese I, II (5,5) Must be taken in sequence. F, Sp

161-162 Elementary Persian (4,4) Taped language program. Must be taken in sequence.

199 Japanese Language and World Business (2) The course will examine the importance of foreign trade at the local, state, and national level. An interdisciplinary team of faculty from the College of Business Administration and Liberal Arts will provide an overview of the content of language study and international cultural awareness. See the Director for further information. F

231-232 Intermediate Chinese I, II (5,5) Prereq: 131-132 or equivalent or consent of instructor. Must be taken in sequence.

251-252 Intermediate Japanese I, II (5,5) Prereq: 151-152 or consent of instructor. Must be taken in sequence. F, Sp

311-312 Chinese Literature in English Translation (3,3) Classical and modern literature. 312-Vernacular and modern literature. Writing-emphasis course.


331-332 Advanced Chinese I, II (4,4) Prereq: 231-232 or equivalent or consent of instructor. Must be taken in sequence.

351-352 Advanced Japanese I, II (4,4) Includes conversation, drill, and composition practice with native speaker as well as reading and translation. Prereq: 251-252. Must be taken in sequence.

431 Readings in Chinese Literature (3) Prereq: Mastery of intermediate-level of Chinese or consent of instructor. May be repeated. Maximum 9 hours.

490 Internship (1-15) Career-related experiences in the United States or abroad with permission of the Language & World Business Director. For Language & World Business majors only. Satisfactory/No Credit only.

ASIAN STUDIES (145)

101-102 Asian Civilization (3,3) Comparative study of the development of religion, social institutions, and culture in ancient India, China, Japan, and the Islamic world. 101-India and the Islamic World, 102-China and Japan. Writing-emphasis course.

121-122 Elementary Modern Standard Arabic I, II (5,5) Literary Arabic, language of the press, broadcasting, literature, and formal situations. Meets every day, three days with instructor and two with native informant in addition to language lab. Must be taken in sequence.

141-142 Elementary Modern Hebrew I, II (4,4) Taped language program. Must be taken in sequence. Enrollment by permission of instructor.

221-222 Intermediate Modern Standard Arabic I, II (5,5) Literary Arabic, the language of the press, broadcasting, literature, and formal situations. Meets every day, three days with instructor and two with native informant in addition to language lab. Must be taken in sequence. Prereq: 121-122 or equivalent or consent of instructor.

241-242 Intermediate Modern Hebrew I, II (4,4) Taped language program. Prereq: 141-142 or equivalent or consent of instructor. Must be taken in sequence.

261-262 Intermediate Persian (4,4) Taped language program. Prereq: 161-162 or equivalent or consent of instructor. Must be taken in sequence.

319 Islamic Literature in English Translation (3) Selections from the Koran, classical Arabic, and Persian poetry, and classical Arabic, Persian, and Turkish prose, including philosophy, mysticism, and belles-lettres.

321 Spoken Lebanese-Palestinian Arabic (4) Informal Arabic for use in daily life. Emphasis on appropriate response and understanding of cultural context. All work is oral, including exams, but grammatical analysis is based on standard (written) Arabic. Prereq: 121-122 or consent of instructor.

322 Advanced Modern Standard Arabic (4) Advanced grammar and readings in modern Arabic. Prereq: 221-222 or consent of instructor.

332 Classical Islam (3) Same as Religious Studies 332.

333 Islam in the Modern World (3) Same as Religious Studies 333.

471 Selected Topics in Asian Studies (3) Content varies. May be repeated. Maximum 9 hours.

491 Foreign Study (1-15)

492 Off-Campus Study (1-15)

493 Independent Study (1-15)